Transfer Pricing, Cost Advantage And Operating Profits Under Imperfect Competition: Theory And Application

by

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Abstract

This dissertation theoretically examines corporate transfer pricing, analytically explores the effects of transfer pricing analysis driven through different cost states on the corporate financial statements, and empirically documents some evidence via sampling all the listed deposit (commercial) banks whose stocks are traded in Istanbul Stock Exchange. It contends that cost advantages can positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments. In this aspect, cost advantage is suggested to be a key determinant underlying corporate transfer pricing and therefore corporate operating profits. Contribution of this study merits accounting and taxation territories among the others.

Keywords: transfer pricing, cost advantage, operating profit, financial statements, imperfect competition

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To my beloved parents: Mom, Dad & Brother

PART I: INTRODUCTION

This part includes five main chapters. The first chapter introduces the background, explains and discusses transfer pricing notion. The second chapter provides further motivation on transfer pricing. The third chapter identifies the scope and sets the objectives driving this dissertation. The fourth chapter presents the research methodology that is followed to perform this dissertation. Finally, the fifth and the last chapter describes the organizational structure of this dissertation.

CHAPTER 1─ BACKGROUND

"Technological change and financial deregulation have dramatically globalised financial markets. Financial firms have organised themselves to sell financial products 24 hours a day. This phenomenon of global trading challenges taxpayers and tax administrations to come up with a fair way of allocating and taxing the profits in each country where global trading is carried on."[1]

Transfer pricing is quite a technical parlance. Eden (1998) argues that, the price of any non-arm's length transaction encompassing transfers of goods, intangibles, or services among wholly or partly owned affiliates (e.g. parent, branch, subsidiary, liaison etc.) of a multinational enterprise points to a transfer price. In other words, transfer prices are the prices, where a business enterprise transfers physical goods, intangible properties (intangibles) or provides services to associated enterprises.[2]

The businesses may be called to be associated, if one of the companies (enterprises) participate directly or indirectly in the management, control, or capital of the other concerned enterprises (OECD Guidelines, 2001, article 11). Even though OECD devotes a particular emphasis to multinationals, transfer pricing regime may apply to any kind of enterprise, not only to multinationals.[3] In addition, transfer pricing is

[1] www.oecd.org
[2] See OECD (e.g. 1979, 1987, 1993, 1994, 1999, 2001 etc.)
[3] As the following chapters will have highlighted; what this dissertation argues, suggests, implies and eventually conjectures applies not only to multinationals but to any kind of business around. It is a factual fact that multinationals are different enterprises from other businesses since they have particular implications for transfer prices. The main reason is that multinational businesses have a plenty of affiliated liaisons or subsidiaries in several domiciles with different judicial regimes. This has certain consequences not only tax wide but also legal- and more importantly managerial wide. Yet, as I said,

interested in the pricing (valuation) of the transfer of goods, intangibles or services among the affiliates of a given business. Affiliation might be in the form of an association, branch, subsidiary, liaison, division (unit) etc.

The upper definitions suggest that, regardless or irrespective of a wholly or partly owned affiliate or liaison, transfer prices should in principle cover up the pricing and therefore the course of valuation concerning:

i) a non-arm's length transaction

ii) rendering, using, producing, procuring, marketing, selling, delivering or any other functional activities

iii) intangibles and services besides tangibles or physical goods

iv) associated enterprises, of any capacity, regularly found in an enterprise or a business.

The wording of a 'non-arm's length' transaction recalls a particular attention and indeed intuitive. A non-arm's length transaction is the transaction that occurs among affiliated or associated intra-firm divisions or intra-group companies or firms, where the transfer pricing issue becomes involved. Transfer prices need to be identified so as to value the intra-firm (transfer) transaction; i.e. non-arm's length transaction.

A non-arm's length transaction may be priced following different transfer pricing approaches. One of them for instance might be using market prices. Transfer pricing that incorporates market terms and conditions is referred to as arm's length pricing. The proponents of market-based transfer prices advocate that a certain, plausible and objective pricing (transfer) is to be gatherable, by referring to or approaching towards the prices established among other similar enterprises in the respective market. Technically, the pricing procedure of a firm should build on as if that transaction happened with/among other companies in the market. As the following chapters will examine, generally, the scholars agree that there are two prerequisites to follow a market-based transfer pricing scheme: (a) the transferred product should have a price in the market, (b) the market should be preferably perfectly competitive. This will lead to the valuation of the entire set of transferred goods or services of the firm in question in a

what may be inferred from this dissertation should be perceived as inferable to, rather generally acceptable for, a much broader definition of a business just than a multinational.

transparent market condition, where the competition is tough and prices are assumed to be given. Remember that pricing translates into valuation.[4]

Transfer price is the key consideration for both the taxpayers and tax administrations, owing to the fact that, it may provide us with a more proper level of tax base (i.e. taxable income), as conditioned in the OECD Guidelines (2001, article 12).[5] The success of tax administrations will significantly depend on if transfer pricing regime is followed in duly. These guidelines reserve the issues of transfer pricing, from the standpoint of the dealings or arrangements made and to be approved, among the associated (affiliated) enterprises functioning within the same tax jurisdiction or judgmental domiciles as well. The guidelines not only deal with national considerations or interests, but also regulate cross-border or international engagements. This is mainly because multinational enterprises operate in more than one country, therefore, any adjustment or modification conducted in one tax jurisdiction needs to be reciprocally made in the other tax-levied venues. It implies that, for instance, if a required spontaneous adjustment is not made at all, or inappropriately arranged, the concerning multinational group may face a danger of being taxed twice at least.[6] For this reason, an international consensus should be achieved in a systematic basis.

Being aware of such problems, the potential affairs of the members of the OECD have been specifically discussed, identified and resolved in the OECD 2001 Guidelines in a reasonably high and quality fashion. These recent guidelines which may be perceived as a revision and indeed a compilation of other previous reports have been embodied by the OECD Committee on Fiscal Affairs. The OECD Committee on Fiscal Affairs addresses the international transfer pricing and other taxation matters particularly as per multinationals and their transnational affiliates.

The OECD has registered a profound development satisfying taxation issues. In particular, an early report laying the foundations for an appropriate international taxation regime may be referred to as Transfer Pricing and Multinational Enterprises issued in the year 1979 elaborating the (ruling) benchmark of Arm's Length Principle.[7]

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[4] See particularly the literature reviews for this, where these approaches are explored in full-length on the basis of the scholarly investigations through a plenty of examples.

[5] Tax administration is a broad (master) concept. It is a generic term referring to all the authorized bodies responsible for implementing, organizing, collecting, enforcing and eventually auditing the taxation affairs.

[6] Known as double or multiple taxation

[7] The report as of 1979 is known as 1979 Report in the international taxation world and the decisions arrived as a consensus in this report were approved by the Committee on Fiscal Affairs in the year 1995

The other related reports are "…Transfer Pricing and Multinational Enterprises…, Three Taxation Issues[8] (1984), and Thin Capitalization[9] (1987)". A former guideline issued in the year 1993 has been criticized due to its limited scope, since it mainly looks out to the needs of the United States, therefore had been subject to a significant treatment.[10]

As a broad concept; credits, loans, and cost sharing arrangements all fall into the category of transfer pricing as well, which has not only been accepted by the members of the OECD, but even adopted by some other unifications such as APEC [Asia-Pacific Economic Co-Operation] (KPMG India, 2000). The global trends followed by some countries like the U.S., the U.K., Australia, Mexico, Brazil, South Africa, Ukraine may be pronounced, such that, these countries:

- either launched a detailed/common usage of transfer pricing Statute or
- tightened the current or existing transfer pricing regime[11] or
- are investigating the need for the process of formulating such laws, principles and standards.[12]

Transfer pricing must be treated carefully since some of the governments or national bodies counted right above need to finance or to raise funds for the purposes of covering public spending. This is perhaps due to having a tendency to support the individuals and/or businesses besides confronting a harsh going-down in their tax revenues. The governments should monitor and indeed watch out to satisfy certain requirements of their habitants and of private institutions, in the sense to scrutinize and revise (redesign) their transfer pricing regulations, instead of increasing the tax rates or ending up with new subject-matters to tax for instance.

The (inter)national transfer pricing regulations might be taken into consideration as initial destinations to entitle the usage of the arm's length principles and standards. For In this, a Dutch taxpayer for example, must document some official papers evidencing that, the transfer pricing method used is plausible within the nature of its major

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and published by the OECD Council in the same year. See the literature reviews for this, in particular refer to OECD 2001 Guidelines.

[8] Known as 1984 Report. See the literature reviews for this, in particular refer to OECD 2001 Guidelines.

[9] Known as 1987 Report. See the literature reviews for this, in particular refer to OECD 2001 Guidelines.

[10] For this, recall that the OECD 1993 Report is dubbed 1993 Report. See the literature reviews for this, in particular refer to OECD 2001 Guidelines.

[11] Through the enforcement of the punitive articles

[12] KPMG India (2000), @http://www.etinvest.com/ettax/kpmg.htm (12.12.2002)

course.[13] In doing so, affiliated transacting businesses are supposed to attest papers delineating an exhaustive examination on:

- functional analysis of the assets and risks borne (e.g. design, manufacturing, montage, R&D, outsourcing, purchase, distribution, marketing, advertising or promotion, transportation, financing or managerial functions etc.)[14]
- economical analysis of comparable transactions and comparable firms (e.g. geographical venue, market volume, competition spectrum, positions of buyer and seller, existence of comparable goods or services, transaction time, the level of demand and supply etc.)[15]
- financial analysis.[16]

Comparability analysis is an important issue in transfer pricing as the applicability chance of the arm's length principle relies on the fact that transactions between the affiliated (associated, related or controlled) transacting parties are comparable to those between the unaffiliated (unrelated, independent, uncontrolled or third) transacting parties. Comparability analysis is needed in the identification of comparable transaction. In this, terms that stipulate the transaction being the subject-matter of purchase or sale of goods or services between affiliated transacting parties should in principle be comparable to those stipulating similar transactions between the unaffiliated transacting parties. In a comparability analysis to be performed, apart from the factors to be considered that are stated above, we should also assess features of goods or services in comparison as well as business strategies of the transacting parties, such as enlargement of market share, risk mitigation or alignment, portfolio diversification, replacement and new product development and so on and so forth.[17]

Documentation in transfer pricing is quite important for developing countries as well. For example, Turkey recently adopted a new corporate income tax act, numbered as 5520. Before this new corporate income tax act has been passed from the parliament, the transfer pricing concept was implicitly involved in the former (repealed) corporate tax act (numbered as 5422) as 'concealed earnings distribution'. In the new corporate income tax act, we see that the transfer pricing issue has been expressly provisioned

[13] Koekkoek, H. (W.date), @www.mondial.net/mover/features/NL_NewRuling.asp (12.12.2002).
[14] An analysis of the functions performed (taking into account the assets used and the risks assumed) by associated enterprises in controlled transactions and by independent enterprises in comparable uncontrolled transactions. See Kökbulut, [n.d].
[15] See Kökbulut (ibid.)
[16] See Koekkoek, H. (loc.cit.)
[17] See Kökbulut (loc.cit.)

therein – 'distribution of concealed earnings through transfer pricing'.[18] It brings up several technical points. Inter alia, *onus probandi* as for the establishment of the price at arm's length is entirely left to taxpayers. The documents and calculations in building the price at arm's length will need to be kept. By virtue of this, the custody of those documents will be ensured as to document the required material evidence justifying the appropriateness and the validity of the book records (Kaymaz *et al.*, 2008).

The intuition underlying transfer pricing relies on some international taxation principles that govern taxation policies of the governments. They economically show how taxes should be levied on, therefore they are of importance for both transfer pricing regulators and practitioners. These international taxation principles got recognition from the scholars worldwide. Some argue that the principles that conduct international taxation regimes may be dubbed as the beliefs of fact, causation and rectitude (Krasner, 1983). These principles may be categorized as: *a) Inter-Nation Equity Principle* that identifies which jurisdiction is entitled to tax, *b) International Neutrality Principle* that ensures that the international taxation system do not disturb private decisions or options, *c) International Taxpayer Equity Principle* that achieves a fair treatment of taxpayers by the tax administrations.[19]

Inter-Nation Equity Principle suggests that businesses with affiliated enterprises or associations locating their operating bodies in different countries may bring out complicated judicious problems. At this point, in order to diagnose which jurisdiction or official domiciles have right to levy, inter-nation equity threshold must be precisely defined. There are two main sub-principles that drive inter-nation equity; i.e. the source and residence principles.

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[18] '*Distribution of concealed earnings through transfer pricing*' refers to the tax manipulation by means of distorting (changing) transfer prices, which is an illegal tax practice. When we examine the literature on the European tax law, we see that some countries, such as Germany, call this type of earnings strips as constructive dividends – " Verdeckte Gewinnausschüttungen ". The general application in the European tax law in the case of having such earnings manipulations is that, the aggregated amount of the manipulated earnings is treated as dividends that are added up to the (falsely) declared or reported earnings (taxable incomes) of the businesses. As a result, we end up with a new figure of earnings before taxes that sums the (falsely) declared/reported earnings, the manipulated earnings and the legal tax penalty. A tax penalty that usually appears as a punitive clause provisioned under local tax Statutes implies that, distribution of concealed earnings through transfer pricing is a case of tax evasion. This is one of the issues that tax administrations frequently need to tackle. The manipulated earnings, often known as *tax base differential*, is detected particularly by the official tax auditors (e.g. tax inspectors, revenue inspectors, revenue controllers etc.) after the inspection or oversight of the taxpayers (companies). Remember that company-wide tax base is the identical saying of 'earnings before taxes' or in taxation parlance, ' the taxable income '.

[19] Eden (1998, p.73)

The Source Principle, even though it may induce taxation systems to have problems such as income shifting (tax repatriation) or tax heavens[20], applies to the jurisdictions from which the income originates.[21] The jurisdiction that is the source of income may tax the business income generated within its territories, irrespective of whom tax due on business income is paid out to. Therefore, such countries are sometimes called *source* or *host* countries.[22] The source principle is also called *territorial principle*. The reason is that, revenues on interests or dividends are subject to tax treatment in the legal territory they breed. In this case, taxation is an affair that does not consider any residency or non-residency status.[23]

Unlike the source principle, Residence Principle takes into account the residency status of the taxpayers. It advocates that the taxpayers should be levied on their global revenue streams, irrespective of whether they result from domestic or foreign-oriented sources.[24] According to this principle, in order to mitigate or prevent any double or multiple taxation problems, a certain amount of tax credit might be granted on excessive overseas taxes.[25] The country where the owners reside and which is entitled to tax is coined as *residence* or *home* country.[26]

International Neutrality Principle suggests that business decisions of economic agents should not be affected by the rate and/or amount of the tax imposition.[27] Considering this, taxation authorities may levy such taxes on the taxpayers that their organizational structures, domiciles where the tax base is built, financing compositions, pricing, selling and marketing policies remain (materially) unchanged.[28] This principle has two major foundations: capital export neutrality and capital import neutrality.

According to Capital Export Neutrality, an investor is expected to be indifferent between domestic and foreign investments with the same pre-tax burdens. This implies that the tax rates should be identical for the investments with the same pre-tax return to be described as a ratio of net profit before tax/investment layout.[29] The net profit before

[20] Slemrod (1996, p.150)
[21] Eden (op.cit., p.551)
[22] Ibid.
[23] Jüttner (1998, p.477)
[24] Jüttner (op.cit, p.473)
[25] Ibid.
[26] Eden (op.cit., p.73)
[27] Ibid., p.74
[28] Ibid.
[29] Ibid., p.75

tax may be considered as a capital gain.[30] Capital Export Neutrality is called *locational neutrality* since the idea therein is that the preference of the taxpayer concerning the production (investment) location should not be influenced by tax matters. In order to achieve that, taxation in accordance with residence (worldwide) system may be consulted.[31]

Capital Import Neutrality stipulates that, whoever possesses the investment should not affect the taxes imposed on that investment. In this perspective, domestic and foreign investors located in the same judicial territory are expected to have equal after-tax returns from the same pre-tax investments, regardless of ownership rights.[32] As said early on, the capital export neutrality principle directly pertains to the source (territorial) principle. In other words, the income streams (revenue, profit etc.) are taxed at source and in the originating country, regardless of the residency status of the taxpayers.[33] The table below compiles international neutrality principles as the following.

Table 1.1: International Neutrality Principles

Capital Export Neutrality **(CEN)**	***Capital Import Neutrality*** **(CIN)**
1. Residence Principle	**1**. Source Principle
2. (to be combined with) Foreign Tax Credit Method	**2**. (to be combined with) Exemption Method
3. Capital Export Not Motivated By International Differences In Tax Rates	**3**. Capital Import Not Advantaged /Disadvantaged Compared To Domestic Investment
4. After-Tax Yields Are Identical Regardless Where One Invests, But Different After Tax Yields For Residents And Non-Residents	**4**. After-Tax Yields For Residents And Non-Residents Are Identical, But Different After-Tax Yields Among Countries

[30] A capital gain is the positive difference between a latter value of a capital and a former value it has. Positive price differentials in securities, for instance in the shares traded in stock exchange markets, may set an example in this. Notice that capital gain is not only the subject-matter of chattels but may also be the subject-matter of any fixed assets.
[31] Jüttner (op.cit., p.472)
[32] Eden (op.cit, p.75)
[33] Jüttner (op.cit., p.473)

5. Capital Will Flow To The Country That Promises The Highest Before- Tax Return	**5**. Capital Will Flow From High To Low Tax Countries
6. Results In Efficient Allocation Of Capital On Global Basis. **7**. Tends To Equalize Before- Tax Rates Of Return	**6**. Results In Efficient Allocation Of Capital. **7**. Tends To Equalize After-Tax Rates Of Return Among Countries

Source: Jüttner (1998, p.478)

As the upper table depicts, source principle works with capital import neutrality. That is, earnings after taxes both for residents and non-residents read same, but read different for the countries. Since capital will flow from high to low tax countries, we have an efficient alignment of capital with identical after-tax rates of return among the involving countries. On the other hand, residence principle works with capital export neutrality. In here, capital exports are not encouraged by international differences in tax rates and earnings after taxes amount same wherever the income streams originate, but amount differently in terms of residency status. Since capital will flow to the country with highest before-tax return, we have an efficient alignment of capital global wise, left with identical before-tax rates of return.[34]

International Taxpayer Equity requires that all the taxpayers resident in the same jurisdiction receive equal tax treatment, independent of the source of their income. Namely, if the pre-tax returns from foreign-source income and domestic income are the same, after-tax returns will be the same as well.[35] In order to understand what International Taxpayer Equity is, the concepts such as horizontal equity and vertical equity need to be well acknowledged.

Horizontal equity, the equal treatment of equals[36], stipulates all the taxpayers in similar economic circumstances be treated similarly. More specifically, if the tax base for two taxpayers is the same, the tax amount to be due would be the same as well since

[34] In contrary to *International Neutrality Principle*, National Neutrality Principle suggests that, capital is utilized best at home. Treating the foreign taxes to be due as an expense item will result in the alleviation of the burden imposed on the shoulders of the taxpayers. Thus, if one is to apply this principle on the taxation of foreign-based or source income streams, she may maximize her (national) income, independent of any foreign tax paid out. In principle, it should be possible to make reservations for such expense items on income statements of the affiliated firms, through making the necessary provisions in balance sheets for instance. See Eden (1998) for this.

[35] Ibid., p.551

[36] Eden (op.cit, p.75)

the tax rate to apply to these taxpayers will not change.[37] However, vertical equity, appropriate treatment of the unequals[38], mandates the taxpayers in different economic circumstances be treated differently. Thus, taxpayers with different economic viability (income streams) will pay different amount of taxes since the tax rate will change this time. It will then turn out that those taxpayers should pay not the same but the different tax amount.[39]

As the table 1 explicitly states, applying all the principles and taxation regimes at the same time, by definition, may induce multiple taxation problems, therefore there is a need for removing or at least lessen relieving those.[40] It is possible to develop some taxational techniques that lessen such concerns. Tax Credit, Exemption and Deduction Methods appear to be the ones that are frequently cited among them.[41] A tax credit method considers the enforcement of the residence principle, according to which, foreign-source business income generated from the transactions of the residents is subject to taxation.[42] Hence, a tax credit (incentive) is granted. The grant applies to withholding taxes to be due by the foreign affiliates/branches of the domestic firms to any foreign host country.[43] It is yet limited to the tax level of the home country.[44] A tax exemption method, as the name reads, is interested in enforcing source (territorial) approach and therefore exempts foreign-source income earned by residents (foreign subsidiaries, affiliates and branches of the residents' companies) and gives it back to the home country.[45] In deduction method, taxes that have already been paid in the source

[37] Ibid.
[38] Ibid.
[39] Horizontal and vertical equities may be confused by some, as they think that, they are the opposite. Indeed, they rather complement each other. In a regular taxation scheme (particularly in personal income taxes), there are different cascades, where as long as the cascades differ, tax rates will be different as well. Within a cascade, there will be no change in the applicable tax rates.
[40] Double taxation being one of the types of multiple taxation is a well-known problem in taxation world. In theory, it may happen economically or legally. It refers that the same subject-matter of tax (e.g. earnings, profits, capital gains, income streams, wealth, value-addeds, sales, consumptions, expenses, excises etc.) are taxed twice. As mentioned in this dissertation, one of the techniques to solve this problem may be drafting double-taxation agreements or arrangements among (at least two) countries that achieve a single taxation once appropriately enforced –besides tax credit, exemption and deduction methods.
[41] Ibid., pp.479-481
[42] Ibid., p. 479
[43] In this, taxpayers are taxed at source (once they realize income) and particularly used in developing or underdeveloped countries, where unregistered economy tends to rise. Thus, witholding taxes or taxes that work on a similar basis serve for making the unregistered economy small and get it to turn out to become relatively more registered economy. In return, the existing tax base enlarges, which is the idea underlying such taxation approaches.
[44] Ibid.
[45] Ibid., p.480

country are deducted from the respective business's worldwide income or income earned global wise.[46]

Being a part of international taxation regimes, transfer pricing regulators should take into consideration all the mentioned neutrality principles. When drafting transfer pricing rules, regulators should make sure that practitioners (taxpayers) are not having an unfair tax treatment. These principles are the safeguards of the prevention of any tax disturbance or violation. As already indicated, double taxation treaties are some of the well known arrangements to help achieve this goal as well. Transfer pricing regulations are construed like such contracts. Advanced pricing agreements (APAs) are for instance other types of contractual arrangements that *ex ante* stipulate the transfer pricing procedures between multinational enterprises and the representatives of the respective taxation authorities. Authorities that undertake such deals must ensure that there will not be any multiple taxation nor breach of the mentioned principles. The next section provides further motivation on transfer prices that will be helpful in the clarification of the scope, the objective and the contribution of this dissertation.

CHAPTER 2─ FURTHER MOTIVATION ON TRANSFER PRICES

This chapter provides additional background to transfer pricing foundation. In order to better cyrstalize the nature of transfer prices, we should also know what a multinational is. As the literature review part will discuss; OECD, the leading institution making (benchmarking) international transfer pricing regulations, has elaborated on the specifics of transfer pricing, in particular, in line with the nature of multinational enterprises (MNEs). As the next sub-chapter will also examine, transfer prices may be manipulated to minimize tax burdens by the taxpayers, particularly by the multinationals. Therefore, understanding multinationals will help us to better understand the transfer prices as well.

Before going into next section, I should stress that what this dissertation argues, suggests, implies and eventually conjectures applies to any kind of business enterprise, including multinationals. It is true that multinationals are different enterprises from other businesses since they have particular implications for transfer prices. The very reason, as the following discussions will debate, is that multinational enterprises have a plenty of other affiliated liaisons in several domiciles with different judicial regimes.

[46] Ibid., p.481

This has certain consequences not only tax wide but also legal- and more importantly managerial wide. Yet, as I said, what may be inferred from this dissertation should be perceived as inferrable, rather generally acceptable, for a much broader definition of a business just than a multinational.

2.1- Transfer Pricing: An Issue Underlying Multinational Enterprises

There is a close relationship between MNEs and transfer prices. Transfer pricing appears to be an issue that shapes not only the operations but also the strategies of MNEs. As already stated, multinationals are special types of transnational businesses that may pose some unique problems. An MNE may be coined as a private organization engaging in foreign direct investments.[47] Such engagements might record owning or controlling value-adding activities in more than one single country.[48] The central or parental company with its domestic/foreign affiliates, branches or liaisons could undertake production, manufacturing, procuring, marketing, selling, distributing etc. affairs all around the world.[49] It can have the form of a vertically-integrated setting, where semi-finished (intermediate) goods upstream affiliates produce are expected to be processed by downstream affiliates, or, it may also have the form of horizontally-integrated setting, where different affiliates generate out the same outputs (goods and services), but in variable markets.[50]

Remember that, foreign direct investment activities are the important economic transactions that may have significant weights in the balance of payments of the countries. The upper definition suggests that, foreign direct investments may register either in the shape of owning or controlling, or both. This for instance imply that, if a company is affiliated to another one running its (ordinary course of) business in another domicile, by either possessing that business or having some managerial claims on that, might be conceived as a company making a foreign direct investment. The wording domicile recalls a special attention. It refers to the legal residence or site of incorporation of the parent company.[51] Company residences are usually the venues of the permanent establishments. Controlling is a broad indicator for labeling a firm making a foreign direct investment and may read direct or indirect managerial claims outstanding.

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[47] See Eden (1998) for this.
[48] Eden (loc.cit.)
[49] Eden (loc.cit.)
[50] Eden (loc.cit.)
[51] Slemrod (1996, p.51)

Foreign direct investments may also be dubbed as the processes, through which, foreign residents obtain the ownership of assets, with the purpose of controlling the production, marketing, distribution or other functional facilities of companies in another country.[52] For a company to have strong legal claims pertaining to a certain firm, it should in principle have at least 10 % of the shares of that firm.[53] In 2008 World Investment Report (WIR) issued and published by UNCTAD, it is clearly stated that an equity capital stake of 10 % or more of the regular stocks or voting power for an incorporated business, or its equivalent for an unincorporated business is usually recognized as the threshold for the assets control. Such a shareholding will allow the foreing investor to pursue a lasting claim outstanding on the controlled business.[54]

WIR 2008 defines transnational corporations (MNEs) as incorporated or unincorporated enterprises encompassing parental businesses and their foreign affiliates. A parental business is described as the business controlling assets over other businesses in a host country. This is frequently in the form of holding a certain amount of equity capital stakes as mentioned above. A foreign affiliate is given as the businesses like branches, associates or subsidiaries in WIR. It may be an incorporated or unincorporated business where an investor, residing in another economy, holds an equity stake of 10 % at minimum.[55]

To WIR 2008, foreign direct investments should be considered as the investments relying not on short-term but long-term investments and a lasting stake (interest and control) by a resident individual or business in one economy which is usually known as foreign direct investor. Resident business usually refers to a parental (mother) entity. A foreign direct investment possesses three elements such as equity capital (e.g. shareholding), reinvested earnings (e.g. retained earnings), intra-company loans or debt transactions (e.g. short-term borrowing, long-term borrowing, funds lending).[56]

According to WIR 2008 statistics, some predicted 79.000 transnational corporations control some 790.000 foreign affiliates across the globe. Value-added activities (gross product) of foreign affiliates around explained 11 % of the worldwide GDP in 2007 in this, which indiates that their production keeps getting larger. As for the locational band

[52] Jüttner (1998, p.562)
[53] Jüttner (1998)
[54] World Investment Report 2008 by United Nations Conference on Trade And Development (UNCTAD): Transnational Corporations And The Infrastructure Challange
[55] Ibid.
[56] Ibid.

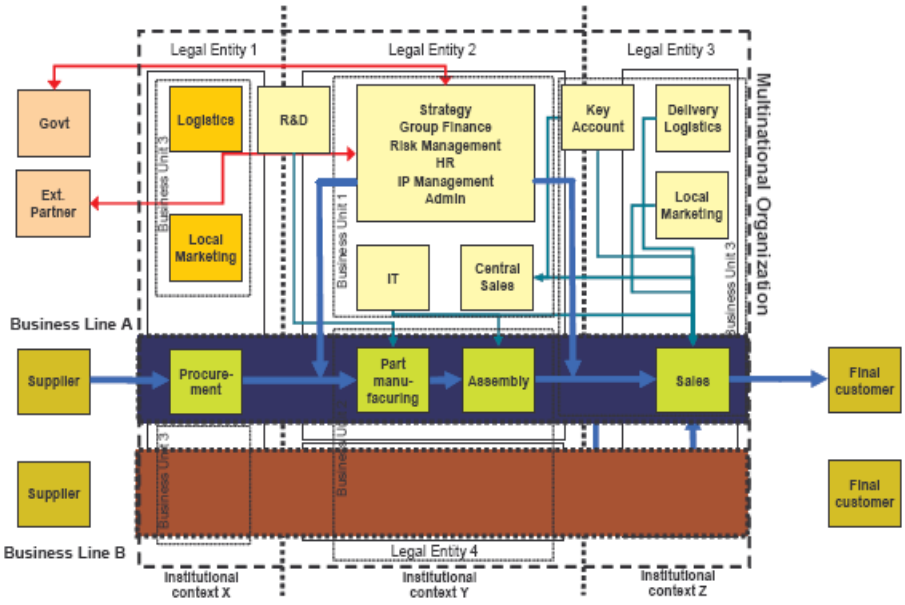
or the number of host countries for foreign affiliates, the largest transnational corporations, on average, own affiliates in 41 foreign countries. WIR also notices that the form and the extent of international diversification vary significantly among the businesses as there is a large set of home countries and operations.[57]

That the role of the MNEs has been increasing over the recent decades translates into an increased level of integration and cooperation of national economies and technological process, especially in the communication arena.[58] The arising issues regard particularly the difficulties confronted in professional life (e.g. determination/identification of the correct income, costs and expenses of a company within a certain jurisdiction).[59] Identification of the accurate income and expenses suggests a proper level of tax base (taxable income). This further implies that, failing in doing so might cause severe issues. Specifically, the MNEs can impose some particular problems for the respective local tax authorities. It may result from the nature they have, which may read as follows:[60]

- An MNE has its organizations (either owned and/or controlled by itself) located in several countries [i.e. having a serious burden on the official authorities]
- All MNEs are expected to maximize their profits in global- and after-tax sense [i.e. inducing conflicts among their other little firms operating in several domiciles]
- Since an MNE has common expenses (overheads) and resources, it may face a problem through allocating its income and expenses, particularly the costs. The figure below depicts the complexity of the transactional flows that may be observed in a regular MNE.

Figure 2.1: The Complexity of Transactional Flows in an MNE

[57] Ibid.
[58] OECD Guidelines (2001, p.P-1)
[59] OECD Guidelines (loc.cit.)
[60] Eden (op.cit., p.6)



Source: Brem and Tucha (2005)

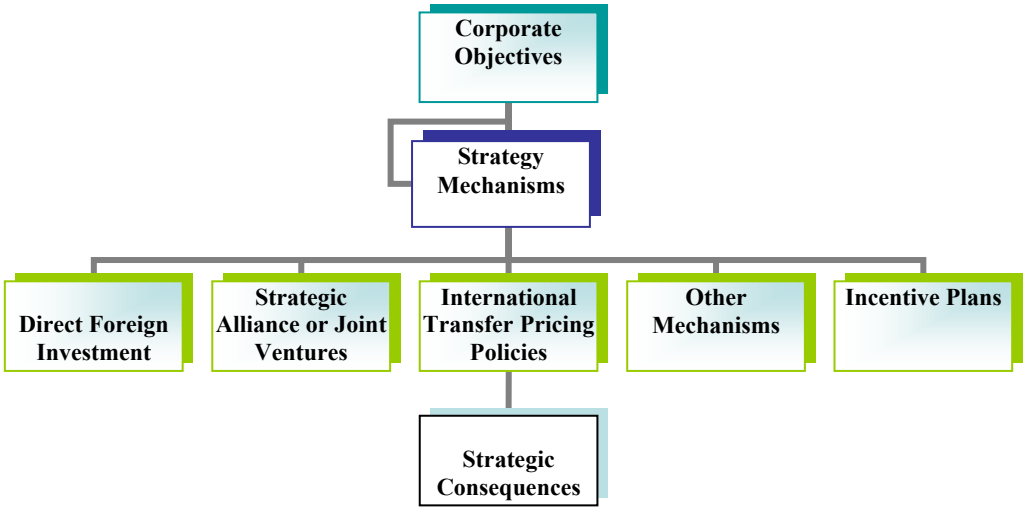
The problems MNEs may give a rise are not restricted with the upper bullets. They yet might induce some other severe questions falling into the table of cross-national borders or international considerations. These include hefty compliance costs, administrative costs, double or multiple taxation, tax-arbitraging activities, earning strips, tax repatriations (e.g. through the repatriation of profits, dividends, etc.) and so on and so forth.[61] MNEs are subject to a certain corporate tax rate applicable to their tax bases.[62] One may argue that, MNEs can make use of tax arbitraging activities under the form of a joint ownership, by means of profit-shifting for instance, usually from the countries with high tax-rates towards those with low-tax rates.[63] The profit shifting might be tempted by a deliberate judicious setting of prices of transactions or operations, among the affiliates of MNEs in some other ways, like getting become indebted in high-tax countries where a certain amount of interest expense may arise owing to a borrowing activity/facility.[64]

From an organizational standpoint, Cravens (1997) argues that corporate strategies are influenced by international transfer pricing policies. It suggests that setting transfer

[61] Refer to the literature reviews part.
[62] They also include a treatment of capital taxes, wealth taxes, value-added taxes, tax rates to be charged on interest incomes as well as other direct and indirect taxes, including minority interest income tax as well.
[63] Haufler (2001, p.131)
[64] Slemrod (op.cit., p.146). See also the next section for the particular real-life cases depicting some tax mitigation activities in the forms of a tax avoidance or a tax evasion.

pricing policies right is the key to a sustainable financial success of a regular MNE that makes FDIs across the globe. The figure below summarizes this as the following.

Figure 2.2: Relationship Between International Transfer Pricing Policies and Strategies of an MNE



Source: Cravens (1997)

The next section will clarify some different uses of transfer prices. As this chapter has argued, in spite of having illegitimacy problem, profit shifting through manipulating the transfer prices could turn out to be one of the taxation policies businesses may follow, and this is not a rare tax practice we see around. MNEs are one of those.

2.2- Transfer Pricing: A Tool To Establish & Repatriate (Manipulate) Profits

The concept *transfer pricing* is often confused with *transfer pricing (earnings) manipulation* or *manipulation (profit repatriation) through transfer prices*. These two phrases do indeed refer to the opposite territories and practices. This chapter will differentiate these two quite different uses of transfer pricing. We are not interested in the manipulation problem, as this dissertation shows (i) how transfer prices are established under imperfect competition when the businesses have cost advantages or do not have any cost advantages and (ii) whether the businesses under imperfect competition benefit from having cost advantage such that their operating profit figures are higher than the ones without any cost advantage.[65]

[65] We see that in the literature, the parlances such as companies, firms, business corporations, corporations, enterprises, business enterprises, business organizations, strategic business units (SBUs), operating unit, decentralized unit, decentralized operating unit, decentralized operating body, operating business or the like are all used interchangeably. The definition, the scope and the content of decentralization are presented in the following chapters. Unless otherwise stated; in the examinations, the term 'business(es)' particularly refer(s) to either intra-group firm(s), compani(es) belonging to a same

Transfer price, as a well-acknowledged international taxation jargon, needs to be identified by/on behalf of the taxpayer, set within the objective [e.g. market-based, cost-based, negotiation-based etc.] criteria and framework, as suggested before. Transfer prices, as the following chapters will show, are established on the grounds of optimization. The subsequent discussions will suggest that whether we use cost-based transfer prices, market-based transfer prices or any other, what we basically do as a company is to price (value) the product or service that is transferred among our intra-group firms or that we trade with the other market players (e.g. consumers, buyers, competitors etc.). Once a transfer price is established, the corporate profit figure is identified as well since it derives from transfer prices and (transfer) outputs that we provide with or are provided to.[66]

Some authors argue that transfer prices may serve as a tax arbitraging device which could be employed to change the international distribution of gross profits in their favor.[67] The tax arbitraging activities usually occur *from* the countries where the tax rates are relatively high *to* the countries where the rates are relatively lower. More precisely, transfer prices might be utilized by the companies as a tool to repatriate (manipulate) their profits. A transfer price manipulation or a manipulated transfer price is a transfer price distorted by the corporate taxpayers or their affiliates, so as to pay a less tax amount. A transfer pricing manipulation, which is an illegal tax mitigation practice, concerns falsely reported/declared taxable income and the resulting tax

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group firm or the market firm(s) that are assumed to make their transaction at arm's length terms in this dissertation. If the business is the market firm, since the transfer price will be the same as the market price in this case, implications deriving from the transactions of the given intra-group firms will be entirely applicable to those deriving from the transactions of the given market firms as well. The given market firms will price their internal transfers (transactions) at the prevailing market price. If otherwise stated, except for the examinations, the term 'business(es)' may generally refer to terms compani(es), firm(s), business corporation(s), corporation(s), enterprise(s), business enterprise(s), business organization(s) or to the ones that are of a similar meaning or usage, where they are all used interchangeably.

[66] One may argue that identifying the transfer prices that are established at the terms of definite endogenous (e.g. firm-specific) or exogenous (e.g. market) terms and conditions, we may achieve to optimize our tax debts (burdens) as well. In other words; transfer pricing, once built on economic rationale, might result in a tax optimization look which would be a legal or permissible practice. The reason is that the objectives of the companies are to maximize their profits. By virtue of optimization technique, maximization necessitates cost minimization. Therefore, taxes that are the costs for the companies are minimized as well. In this dissertation, we are not interested in showing how businesses may optimize their taxes. Rather, we are trying to figure out how to value a transferred product and how this relates to the degree of operating profit volumes of the businesses, given that they have cost advantages or suffer from the lack of any cost disadvantages oppositely.

[67] Haufler (2001)

repatriation.[68] A case on showing how profit of a multionational business can be manipulated with transfer prices is presented as follows.[69]

Suppose that a multinational enterprise has two companies; ABC and XYZ. ABC manufactures widgets and charges (standard) cost plus a 200 % markup on its sales of widgets to its affiliate XYZ. XYZ markets and distributes the widgets for a final sale at a price of 7 $ per unit. ABC's profits are taxed at 40 % and XYZ's profits are taxed at 20 %. Tariffs, transport- and any other costs are ignored. As the below table shows, repatriating (distorting/manipulating) the transfer price as much as 1 $ (4.5-3.5) decreases the level of the (corporate income) tax paid as much as 40 $ (= 320 $ - 280 $), from the perspective of the multinational group. In other words, the due corporate income tax that the multinational is mandated to pay out to declines. Therefore, the net profit after tax (NPAT) figure of the multinational increases from $680 to $ 720. In other words, the multinational will be better off once underinvoicing (the transfer pricing manipulation) has taken place.

Repatriating profits through the manipulation of transfer prices is a special case of tax evasion. In principle, the efforts outside the law to minimize (any) tax burdens are described as tax evasion.[70] Likewise, the parlance *tax evasion* per se means to evade the total tax amount one has to pay to the tax authorities in an illegal/legally-non-permissible way. Tax evasion may happen in several forms. The transfer pricing manipulation case we have just seen illustrates a tax evasion case. Or for instance, where a company declares/reports its passive (tainted) income as active income if any, there is a tax evasion.[71]

Like tax evasion, tax avoidance is usually meant to try to seek the ways of avoidance (relief) from any kind of tax imposed or levied for the purposes of minimizing tax burden. Unlike tax evasion, the procedure to make use of tax avoidance materializes in legally permissible ways. Specifically, a tax avoidance practice refers to avoiding to pay some taxes through exploiting the loopholes or gaps found or even expressly provisioned in the respective taxation regulations or other legally binding arrangements. In other words, in tax avoidance, taxpayers are given discretion.[72]

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[68] Remember the concealed earnings discussion (distribution of concealed or hidden earnings through transfer pricing) for this. See footnote supra 18 therefor.
[69] Eden (1998)
[70] Seldon *et al.* (1979)
[71] Jüttner (1998)
[72] Seldon *et al.* (loc.cit.)

Table 2.1: Transfer Price Manipulation Reduces Overall Tax Burden: A Tax Evasion Case			
Ex Ante Situation (Transfer price is $ 4,5)	**ABC**	**XYZ**	**The Group Firm (MNE)**
Output	200	200	200
Per-Unit Cost	$1,5	$0.5	$2
Unit Cost of Imports		$4,5	
Total Cost	$300	$1000	$400
Price	$4,5	$7	$7
Total Sales Revenue	$900	$1400	$1400
Earnings Before Taxes	$600	$400	$1000
(Corporate Income) Taxes Paid	$240	$80	$320
Net Profit After Taxes (NPAT)	$360	$320	$680
Ad Hoc Situation (Transfer Price is $ 3,5)			
	USCO	**MEXCO**	**Multinational Enterprise**
Output	200	200	200
Per-Unit Cost	$1,5	$0,5	$2
Unit Cost of Imports		$3,5	
Total Cost	$300	$800	$400
Price	$3,5	$7	$7
Total Sales Revenue	$700	$1400	$1400
Earnings Before Taxes	$400	$600	$1000
(Corporate Income) Taxes Paid	$160	$120	$280
Net Profit After Taxes (NPAT)	$240	$480	$720

Source: adapted from Eden (1998, p.24)

The legitimate statements allowing or encouraging the use of tax avoidance might be implicit or explicit, which does not matter in their effects. Whatever the case, the taxpayers are not subject to any punitive legal enforcement for they seek to exploit the tax advantage on the enforcement of a tax avoidance practice. The reason, as said before

is that, unlike tax evasion, tax avoidance is a legal (justified) instrument/practice serving for the tax optimization goals the taxpayers want to accomplish.

I will now give a tax avoidance case. Tax avoidance may happen in several ways. One of the well-known examples of tax avoidance techniques pertains to inventory valuation. We know that corporate inventories may be evaluated using first-in first-out method, last-in first-out method, simple average method, weighted average method etc. Consider that Delta Merchandising Co. sells a special engine for automobiles. Suppose that the economy where Delta operates is in a high-inflationary state. Suppose also that the respective tax Statute that Delta is supposed to follow proposes that companies may evaluate their inventories using any of the following two methods at their discretion: First-in First-out (FIFO) or Last-in First-Out (LIFO). The Accounting Head of Delta is willing to know which inventory valuation method to exercise. The criterion she will use to do so draws on tax advantage. In other words, she will decide to choose one of the inventory valuation methods, looking at the due tax burdens to be resulting from their enforcements.

From the table down below, we see that the merchandising transactions of Delta start from May 9, 2008 through September 30, 2008. Cost of Goods Sold (COGS) figure obtained under the FIFO valuation method amounting 8.046 $ can be calculated in two ways. The first way, an indirect approach, is to subtract the value of the ending inventory [6.859 $] from the value of the aggregate inventory available for sale [14.905 $]. COGS is then found as 8.046 $ that is equal to 14.905 $ ─ 6.859 $. A second way is to directly evaluate the inventories (goods) sold given their purchasing prices. Accordingly: 4130 units are the total inventories sold. Since the first incoming unit is supposed to go out first under FIFO, COGS will be the product of [(700*1,75) + (950*1,75) + (350*1,75) + (750*2) + (650*2) + (350*2) + (380*2,75)] making a dollar value of 8.046. Notice that the value of the ending inventory found under FIFO amounts 6.859 $ corresponding to ending 2.120 units.

Table 2.2: Delta Merchandising Co. Inventory Valuation With FIFO For The Year 2008

Date ('08)	Transac.	In			Out			Inventory	
		Quant.	Unit Cost ($)	Total ($)	Quant.	Unit Cost ($)	Total ($)	Quant.	Total ($)
May 9	Beg.Inven.	2.000	1,75	3.500				2.000	3.500

Table 2.2: Delta Merchandising Co. Inventory Valuation With FIFO For The Year 2008									
Date ('08)	**Transac.**	**In**			**Out**			**Inventory**	
		Quant.	**Unit Cost ($)**	**Total ($)**	**Quant.**	**Unit Cost ($)**	**Total ($)**	**Quant.**	**Total ($)**
May 10	Purchased	750	2	1.500				2.750	5.000
May 20	Sold				700	1,75	1.225	2.050	3.775
May 22	Sold				950	1,75	1.663	1.100	2.112
Aug 2	Purchased	1.000	2	2.000				2.100	4.112
Aug 7	Purchased	600	2,75	1.650				2.700	5.762
Aug 14	Sold				350	1,75	613	2.350	5.149
Aug 18	Sold				750	2	1.500	1.600	3.649
Aug 18	Purchased	500	3	1.500				2.100	5.149
Sep 3	Purchased	950	3,3	3.135				3.050	8.284
Sep 7	Sold				650	2	1.300	2.400	6.984
Sep 18	Sold				350	2	700	2.050	6.284
Sep 20	Purchased	450	3,6	1.620				2.500	7.904
Sep 30	Sold				380	2,75	1.045	2.120	**6.859**
Inventory Available For Sale		**6.250**		**14.905**					
Cost of Goods Sold [**COGS**] amounts **8.046 $**; **Ending Inventory** amounts **6.859 $**									

In the case of LIFO, the same business firm with the same data will have the following appearance. As one can see from the table underneath, the Cost of Goods Sold (COGS) item differs due to the enforcement of different inventory valuation methods. Unlike that of FIFO, COGS figure obtained under the LIFO valuation method amounts 9.654 $. As we did before, we can calculate this figure in two ways. Indirectly, COGS is gathered to be equal to the difference between the value of the aggregate inventory for sale and the value of the ending inventory. That is, COGS is obtained as 9.654 $ which is 14.905 $ ─ 5.251 $.

Directly, COGS could be gathered through evaluating the inventories (goods) sold given their purchasing prices. But the procedure for pricing them is the opposite of what we did for FIFO method. 4130 units are the total inventories sold, which must be the same as before. Since the last incoming unit is supposed to go out first under LIFO, COGS will be the product of [(700*2) + (50*2) + (900*1,75) + (350*1,75) + (750*1,75) + (650*3,3) + (300*3,3) + (50*3) + (380*3,6)] making a dollar value of 9.654. The value of the ending inventory found under LIFO amounts 5.251 $

corresponding to ending 2120 units. Notice that there is an inverse relationship between the ending inventory and cost of goods sold. We can contend that the higher (lower) the COGS, the lower (higher) the value of the ending inventory will be.

Table 2.3: Delta Merchandising Co. Inventory Valuation With LIFO For The Year 2008

Date ('08)	Transac.	In			Out			Inventory	
		Quant.	Unit Cost ($)	Total ($)	Quant.	Unit Cost ($)	Total ($)	Quant.	Total ($)
May 9	Beg.Inven.	2.000	1,75	3.500				2.000	3.500
May 10	Purchased	750	2	1.500				2.750	5.000
May 20	Sold				700	2	1.400	2.050	3.600
May 22	Sold				950	2 $ (for 50 units) 1,75 $ (for 900 units)	1.675	1.100	1.925
Aug 2	Purchased	1.000	2	2.000				2.100	3.925
Aug 7	Purchased	600	2,75	1.650				2.700	5.575
Aug 14	Sold				350	1,75	613	2.350	4.962
Aug 18	Sold				750	1,75	1.313	1.600	3.649
Aug 18	Purchased	500	3	1.500				2.100	5.149
Sep 3	Purchased	950	3,3	3.135				3.050	8.284
Sep 7	Sold				650	3,3	2.145	2400	6.139
Sep 18	Sold				350	3,3 $ (for 300) 3 $ (for 50 units)	1.140	2.050	4.999
Sep 20	Purchased	450	3,6	1.620				2.500	6.619
Sep 30	Sold				380	3,6	1.368	2.120	**5.251**
Inventory Available For Sale		**6.250**		**14.905**					
Cost of Goods Sold [**COGS**] amounts **9.654 $**; **Ending Inventory** amounts **5.251 $**									

We know that Delta has sold on the dates of May 20, 22; August 14, 18; and September 7,18 and 30 in the year 2008. But we can not calculate its sales revenue since we are not given any selling prices. Assume that Delta realizes a sales revenue of 10.000 $ for its selling transactions for the period of five months in between May 9, 2008 and September 30, 2008. Assume also that the applicable corporate tax rate is 20 %.

Below do I present the income statement of Delta Merchandising Co. supposing also that any other income or expense item as zero. As to be seen from the table, earnings

before taxes is the taxable income that is arrived deducting the interest expense and other expenses from the operating profit. It is the corporate tax base on which Delta will pay an income tax. Operating profit is the resulting figure of gross profit, netted of operating expenses. Gross profit is the product of net sales revenue which is netted of COGS amount.

Table 2.4: Condensed Income Statement of Delta Merchandising Co. Under FIFO For The Period of May 9, 2008 ─ September 30, 2008 (in $)	
1. Sales Revenue	10.000
2. Cost of Goods Sold (COGS) (-)	8.046
3. Gross Profit/Loss (Operating Income) **[=1-2]**	1.954
4. Operating Expenses (-)	0
5. Operating Profit **[=3-4]**	1.954
6. Non-Operating Income	0
7. Non-Operating Expenses (-)	0
8. Ordinary Profit/Loss **[=5+6-7]**	1.954
9. Extraordinary Income	0
10. Extraordinary Expenses (-)	0
11. Earnings Before Taxes (Taxable Income) **[=8+9-10]**	1.954
12. Corporate Taxes To Be Due (% 20)	**391**
13. Net Income (Profit) After Taxes (NPAT) **[=11-12]**	1.563

The income statement of Delta under LIFO is as the following. Apparently, both the calculations and accompanying tables suggest that, the Accounting Head at Delta will choose LIFO over FIFO since it will allow Delta to have a lower pre-tax income figure (earnings before taxes). 'Earnings before taxes (EBT)', the taxable income, is the tax base Delta will declare to the respective tax administration. Once LIFO method is exercised, Delta will pay a lower corporate income tax (69 $) relative to that of FIFO (391 $).

Table 2.5: Condensed Income Statement of Delta Merchandising Co. Under LIFO For The Period of May 9, 2008 ─ September 30, 2008 (in $)	
1. Sales Revenue	10.000
2. Cost of Goods Sold (COGS) (-)	9.654
3. Gross Profit/Loss (Operating Income) **[=1-2]**	346
4.Operating Expenses (-)	0
5. Operating Profit **[=3-4]**	346
6. Non-Operating Income	0
7. Non-Operating Expenses (-)	0
8. Ordinary Profit/Loss **[=5+6-7]**	346
9. Extraordinary Income	0
10. Extraordinary Expenses (-)	0
11. Earnings Before Taxes (Taxable Income) **[=8+9-10]**	346
12. Corporate Taxes To Be Due	**69**
13. Net Income (Profit) After Taxes (NPAT) **[=11-12]**	277

Another well-known example of tax avoidance technique is on depreciating corporate assets. Fixed assets are exposed to depreciation. There are several depreciation techniques that allow businesses to consummate their fixed assets or worths differently. Consider now that Delta Merchandising Co. is a large business that buys and sells a special engine for automobiles. It realizes a sales revenue of 10.000 $ in the year 2008. Consider also that respective tax Statute that Delta is supposed to follow allows businesses to opt for two methods for depreciating their fixed assets at their discretion: Straight-Line or Declining Balance. The Accounting Head of Delta needs to know which depreciation method to exercise. The criterion she will use to do so relies upon some significant tax advantage that the business might benefit from and would hence be better off, in return for the method to be employed. Delta does not earn any other revenues than sales revenue nor incur any other costs than depreciation costs in 2008. It is a corporate taxpayer and will be taxed at 20 % out of its year-end profits.

Suppose that Delta acquires a fixed asset worth of 50.000 $ with an economic (useful) life of 10 years in the year 2007. The tax laws say that if businesses decide to follow straight-line or normal depreciation approach, the depreciation rate is % 10 [(1/10)*(100)]; if they decide to depreciate their fixed asset using declining balance, the depreciation rate doubles the rate on straight-line and therefore amounts % 20. The accounting staff is required to calculate and show the value the fixed asset will have at the end of its first year (2008).

Table 2.6: Comparative Income Statement of Delta Merchandising Co. For The Period of 1.1.2008 – 31.12.2008 (in $)

	Straight-Line	**Declining Balance**
1.Operating Income	10.000	10.000
2.Operating Expense	5.000 [=50.000*0.1]	10.000 [=50.000*0.2]
3.Operating Profit **[=1-2]**	5.000	0
4.Earnings Before Taxes (Taxable Income or EBT)	5.000	0
5.Corporate Taxes To Be Due (%20)	**1.000**	**0**
6.Net Income (Profit) After Taxes (NPAT) **[=4-5]**	4.000	0

The upper comparative income statement of Delta that are prepared in a condensed form clearly shows the depreciation expense figures of Delta given the methods to be employed. Notice that depreciation expenses will appear as operating expenses since they are general administrative expenses. In terms of taxation advantage, Delta will prefer declining balance over straight-line depreciation. It is even such that once the fixed asset is to be depreciated using declining balance, delta will not pay any corporate taxes at all. The taxation results, meaning the amount of total taxable incomes taxpayers are willing to declare and the amount of taxes they are willing to pay to the tax administrations, may remain unchanged irrespective of whether or not taxpayers follow legal (tax avoidance) or illegal (tax evasion) way of tax mitigation. However, the way how tax mitigation is conducted significantly matters from the standpoint of legitimacy. Namely, the legal consequences of avoiding or evading taxes differ. As indicated

already, having a tax avoidance has not any legitime sanctions since it is legal. On the other hand, the operations performed under tax evasion are legally void since tax evasion is an illegal matter.[73] The next section sets the scope, identifies the objectives and presents the contribution of this dissertation.[74]

CHAPTER 3– SCOPE & OBJECTIVES

As the preceeding chapters have suggested, transfer pricing is a multi-dimensional concept with very different aspects and uses. Among these, we have seen that transfer pricing can be deployed as a tool to manipulate profits or earnings through repatriating or shifting them, which falls into the territory of tax evasion. This is a profit or earnings-shifting issue. Done this way, it has certain legal consequences (sanctions) that have accounting- and taxation-related implications among the others. It has been stated that a tax base differential that arises due to manipulation practices should be added up to the figure of declared (reported) taxable income of taxpayers (businesses) in addition to a certain amount of legal compensation. The nature or the technicality of that compensation relies on the underlying punitive tax clauses provisioned in the respective (local) tax laws or the Statutes of the judicial territory in question.[75] How transfer pricing can be used to manipulate the corporate earnings or to optimize the taxes by minimizing the tax bases falls outside the research question and therefore the objective this study is in the pursuit of achieving.

Besides the literature on profit-shifting, the transfer pricing literature in this study has touched on a number of issues. These are the ones such as the goal congruence problem of intra-firm divisions or intra-group firms, decentralization, delegation of authority, the effectiveness of transfer pricing methods (e.g. cost-based, market-based, negotiation-based etc.), the appropriateness or the relevancy of the transfer pricing methods, private information, information asymmetry, performance evaluation, intra-company discounts, capacity constraints, rent-shifting, formula apportionment or even enforcement of the arm's length principle.[76]

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[73] For this, refer to footnote supra 18.

[74] Refer to the methodology chapter for an extensive clarification on objectives and contributions in addition to a detailed examination of the methodology used in this dissertation.

[75] For a detailed investigation on this subject-matter, refer particularly to the application part of this dissertation where the effects of taxational analysis as regards dealing-outside-the arm's length range on the financials of the corporations are comprehensively examined.

[76] See the literature reviews part where a number of studies on transfer pricing is examined.

The objective of this dissertation which draws on a new idea is quite different from the previous transfer pricing literature that has been concised in the upper passages. Corporate governance structures or the skills of the businesses are different from each other. Some have good or decent governance mechanisms while some others do not. This is a real-life issue we became aware from the scandals of global businesses such as Enron, Arthur Andersen, Worldcom etc. As the literature reviews part investigates, a notable amount of the scholarly investigations has suggested that the better or higher the governance quality, the less the corporate financing or funding costs. This is a cost advantage for the businesses whose governance structures or skills are good or at least relatively better than the businesses without such skills. I believe that a cost advantage will bring together a profit advantage as well, as it may affect the corporate transfer pricing patterns (establishments). The opposite will also hold in that a cost disadvantage implies a profit disadvantage as the role the corporate transfer pricing patterns play will then be the other way around.

As the general research framework presented in the methodology section depicts (table 4.1); the premier objective of this research is to accomplish to *theoretically*, *analytically* and *empirically* show that cost advantages can positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments. Accordingly, theoretical examination will appear in the section of 'theory part' which is put into the borders of the research part III, analytical and empirical examinations will appear in the section of 'application part' which is put into the borders of the research part IV of this dissertation. The setting of imperfect competition is particularly considered. There are two strong reasons therefor. First, as imperfect competition market types are by far more frequently observed than perfect competition markets they better explain the real-world realities. Second, the related literature treats transfer pricing as a research strand regularly in imperfect competition setups due to their commonness and complexities among the others. Stiglitz (1997) acknowledges this factual fact as the following: " There is limited competition in many markets. In imperfectly competitive markets, firms are aware that how much they sell, or other actions they take, may affect the price they receive. In many cases, firms must think strategically, considering how their rivals may react to their actions."

The reason underlying the research idea is that the functional parameters of the businesses that are the main covenants of the value of transfer price rely on the nature of the cost patterns. More clearly, that the businesses have increasing cost structures (cost disadvantage) or rather declining cost structures (cost advantage) changes the transfer pricing and the corresponding transfer output figures. In other words, a change in the value of transfer price will necessitate a change in the value of operating revenues (incomes) and costs (expenses) items and therefore will influence the corporate operating profit volumes. Further, the effect on the corporate operating profit volumes will also expand samewise to the bottom line figures of the corporate financials, " earnings before taxes " and hence " net profit after taxes ".

There are sub-objectives to achieve this master objective. One of them is primarily geared towards demonstrating that transfer prices of the businesses under imperfect competition can be set up differently, if those businesses have cost advantages or not. Showing this, the other one is geared towards further demonstrating that under imperfect competition, businesses with cost advantage benefit from having those advantages such that they register higher operating profits than those without cost advantage. As mentioned, recording higher operating profits also suggests to record higher earnings before taxes and therefore to record a volume of higher net profit after taxes, ceteris paribus.

The objectives stated in the upper passages are the operational (main) objectives that closely relate to the research idea and therefore characterize the general research framework or design of this study. Contributing to the literature is undoubtedly among the technical objectives underlying this dissertation that builds on the proper, accurate and adequate satisfaction of the research question.[77] The transfer pricing literature that has been extensively reviewed in the literature reviews part (Part II) or specifically presented in the operational (contributive) parts of this research (Part III and Part IV) is silent on considering the probable relations or interactions between the cost advantages of the businesses and their transfer prices. As the research idea is new, the contribution of this study on transfer pricing to the field of expertise, accounting and taxation among the others, is original and rich in its content.

This research being a comprehensive thesis work aims to make some important contributions to accounting and taxation, by (i) introducing the concept of cost

[77] As already referred to, detailed explanations on objectives can be found in the methodology chapter.

advantage and demonstrating that it is a key determinant of corporate transfer pricing and therefore corporate operating profits under imperfect competition, (ii) relating transfer pricing to the funding or sourcing costs, (iii) showing the effects of transfer pricing analysis driven through different cost states on the financial statements of the businesses and (iv) documenting some evidence from Turkish Banking Industry on confirming the results obtained under the preceeding (theoretical and analytical) contributions. To the best of my awareness, this dissertation is an early one to scholarly demonstrate the positive effects of cost advantage on the corporate operating profits on the transfer pricing axis. I will further specify some technical contributions as the following.

Firstly; as to be inferred from the research idea, the theoretical investigation in this work quite differs from the previous studies ranging from Cook (1955), Hirshleifer (1956), Bierman (1959) to Abdel-khalik and Lusk (1974), Thomas (1980), Eccles (1983 and 1985), Göx (2000), Baldenius *et al.* (2004), Baldenius and Reichelstein (2006), Amerighi (2006) or to Korn and Lengsfeld (2007) etc. This research is an early one, to my knowledge, to literally embed 'cost advantage' concept in to the corporate transfer pricing analysis.

Despite a very few, there are some studies in the literature that show the effects of the nature of the costs of firms on their transfer pricing results, meaning their transfer prices and transfer outputs. For instance, it was first Hirshleifer (1956) who made a formal transfer pricing analysis. Thomas (1980) showed that firm divisions may be willing to maximize their solo profits but not to maximize the profit volume of the entire firm which he defines as the central office (headquarter). In other words, it will be naïve to argue that the divisional managers will always try to maximize their solo book profits by producing in such a level which is the optimum one for the whole business. Hence, the goal incongruence (incompatability) problem that we are familiar with from the principal-agency settings has moved to the transfer pricing territory. However, these studies or any others did not explicitly consider the effect of cost advantage or disadvantage on corporate transfer pricing nor on corporate operating profits nor on corporate financials (financial statements). Their focus was rather on only showing goal incongruence problem arising due to decentralization, which is another research strand. Apart from providing the application, this dissertation makes a theoretical analysis of

transfer pricing under imperfect competition; monopoly and oligopoly markets succeedingly.

Concerning the monopoly market, two intra-group firms are considered as businesses. One of them, the financing business, is a monopoly being the only seller of the transferred product (fund supply or provision) in the market; the other one, the purchasing business, is the monopsony being the only purchaser of the transferred product (fund supply or provision) in the market. As to the oligopoly competition, two banking firms that compete on quantities or outputs (the amount of fund supply or provision) are considered as businesses. In this, two different oligopoly competition versions are given; i.e. Cournot and Stackelberg games. Banking firms belong to the same group firm, similar to the monopoly market, and are the only ones competing in the market. Therefore they are market firms as well. This study is an early one to theoretically show how different cost states, particularly the absence or the existence of cost advantage, may be decisive on the establishment of transfer prices and corresponding transfer outputs and therefore on the level of the corporate operating profit figures.[78] In this aspect, solutions to the transfer pricing problems in the imperfect competition settings given in this research are original.

Secondly; unlike the other studies, in this research, the product transferred between the intra-group firms in the setting of monopoly, or the product transferred between the intra-group banking firms and sold in the market in the setting of oligopoly is not a physical nor a tangible good. It is a financial service product (fund) that one of the transacting parties (e.g. financing business being the intra-group firm in monopoly) lends and the other one (i.e. purchasing business being the intra-group firm in monopoly) borrows. This is the consideration that the transfer pricing literature has been hitherto ignorant of. This technical contribution also implies that, there is not any intermediate good in such settings that one of the intra-group firms is supposed to produce or the other intra-group firm is supposed to finalize or sell out for a further processing. Thirdly; the costs of the intra-group firms are defined as average unit operating costs, not as manufacturing or distributing costs as did some early scholars (e.g. Cook (1955), Hirshleifer (1956), Abdel-khalik and Lusk (1974), Thomas (1980) etc.) consider. Fourthly; this dissertation is an early one to use the parlance of 'cost advantage' in the context of transfer pricing. Even though cost concept was examined as

[78] Refer to supra footnote 65.

a part of the transfer pricing analysis, it was not formally engineered into the establishment of the transfer prices as directly cost advantage or disadvantage up until now.

Although this research is in the pursuit of discovering the business profit results or the implications of having cost a advantage, it is however definitely not interested in studying the reasons underlying cost advantage. In this respect, it is also not interested in exploring corporate governance nor its direct effects on corporate transfer pricing or operating profits. That would obviously be a different study. It rather takes it granted or given that corporate governance might be a strong reason arising cost advantages for businesses. Therefore, this research uses governance as an assumed factor to generate cost advantage or induce cost disadvantage. The assumption posits that businesses with good governance structures realize (operating) cost advantages relative to the others that have insufficient governance qualities.

One of the reasons to embed governance into our analysis as an assumed factor for the cost advantage issue is because of its scope. As the following chapters will show, corporate governance is an enormously broad notion including almost all perspectives. Drawing on different axes, a decent governance system indicates a number of micro (e.g. firm-specific) or macro (e.g. economic, regulatory, financial) attributes such as high disclosure, high transparency, decent accounting principles/standards/practices, strong stakeholder rights, decent legal systems, decent legal enforcement, independent boards, not blocked but diffused ownerships, high economic development, high economic growth, competitive markets, sizeable shareholders, high quality information, viable monitoring and internal control system, absence or existence of agency problem, transaction costs and so on and so forth. In this dissertation, governance relies rather on firm-specific attributes.

In such a wide definition, it is also possible to find for instance scale economies which might be another technical reason for cost advantages. Theory states that scale economies that might reason from division of labor or specialization (e.g. higher managerial skills, better know-how[79]) may reduce costs of the firms (e.g. manufacturing costs) as it would be possible to produce more economic units with the same amount of costs figure. In other words, from the production efficiency viewpoint, businesses benefiting from scale economies advantage will obtain more economic utility with

[79] Higher managerial skills, better know-how etc. do already signal a good governance at least in part.

respect to the others. Governance by definition suggests a less incontracting problem, therefore better legal enforcement and lower transaction costs. On the other hand, it also suggests higher quality internal governance structures, control and monitoring mechanisms as well as reasonable segregation of duties and responsibilities. Among the others, these will create independence on performing the firm's business operations as well as adequate division of labor and specialization. Therefore, as better or higher governance quality increases firm efficiency, it will imply scale economies as well.

The other reason to incorporate governance into our analysis is because of its compatability with the literature on funding costs of the businesses. In this research, corporate funding costs are assumed to be the only corporate operating costs. Investigating the related literature, we see that the literature is silent in studying the effect of operating costs nor of funding costs, or making a comprehensive business (accounting) cost analysis, on the transfer prices and the financials of the businesses which this dissertation does. However, there is a number of literature (accounting, economics, finance etc.) that contends that good corporate governance translates into a reduced degree of corporate funding (sourcing) costs or costs of capital. This means that good governance generates cost advantages and implies a reduction in corporate operating costs as funding or sourcing costs are the same with and thereby the exclusive operating costs in this study.

Fifthly; through making comprehensive analytical applications and documenting empirical evidences using fresh firm-level data, this dissertation is also an early one, to my knowledge, to explicitly study cost advantage, transfer pricing and corporate profits in one common setting. Analytical application includes taxational examination as well, where the remedy comes from following the international transfer pricing arrangements the OECD advocates as a leading transfer pricing institution. As the general research objective is to demonstrate that cost advantages can positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments, the main objective of the empirical application is to crystalize the 'cost advantage' effect on the businesses' operating profits. Public deposit banks that are listed in Istanbul Stock Exchange are sampled to represent the businesses, and the effect of having cost advantage on the degree of the bank's profit which is bank's interest spread is analyzed in first place. Bank interest spread is the bank's (unit) operating margin or profit arising from satisfying main or

ordinary course of business for (deposit or commercial) banks which is intermediation activity.[80] ANOVA is conducted in testing this question.

The main research question driving the intuition and the guidance of this dissertation is hence conceived as the following:

Do cost advantages positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments?

Presenting the general research framework as well as detailed explanations and further clarifications on objectives, the next section examines the methodology in depth.

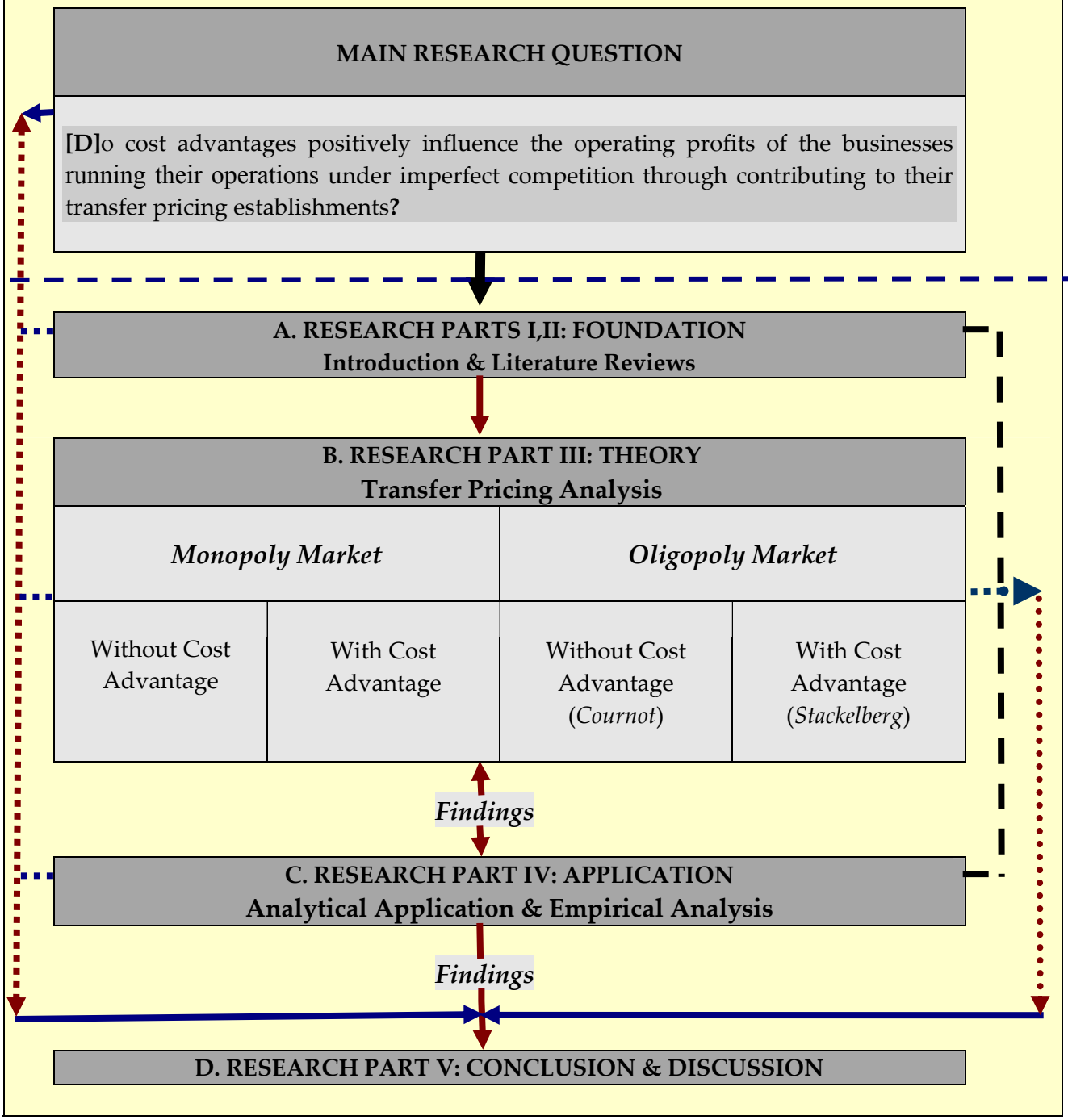
CHAPTER 4– METHODOLOGY

This chapter presents the methodology that has been followed in performing this dissertation. The preceeding discussions have stated that the main (master) objective of this dissertation is to show if cost advantages positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments. In order to completely address the research question, this dissertation is designated in five parts.

As table 4.1 on the general research framework illustrates; research parts I and II establish the foundation to build the theory on and make applications to. Part I undertakes significant functions that serve to establish the theoretical foundation. Besides providing the territory (scope), specifying the objectives, presenting the methodology and the structure of this dissertation, Part I makes sure that we have (i) the necessary background to fully grasp what a transfer pricing means, (ii) motivation to drive this research, (iii) opportunity to better differentiate and cyristalize the transfer pricing issue through the examinations of different aspects and (iv) adequate formation, knowledge, substructure and equipment to accomplish a scholarly robust study.

[80] Refer to supra footnote 65 for this. Unless otherwise stated; in this dissertation, main course of business and ordinary course of business are used interchangeably. Both refer to businesses' performing their main operating activities or transactions. In order to facilitate a smooth coherence among theoretical, analytical and empirical examinations, main or ordinary course of business covers sales costs or cost of sales only, in terms of costs. Sales costs will be the only operating costs. Operating costs therefore do not include other important operating cost items such as General and Administrative Expenses (e.g. personnel expenses), R&D Expenses, Marketing, Selling & Distribution Expenses etc. In other words, they are assumed to be zero (0).

Table 4.1: GENERAL RESEARCH FRAMEWORK



Coupled with part I, part II is an investment venue for delivering a proper, accurate, satisfactory and eventually a consistent research so does this dissertation strive for. Investigating the literature at length, part II makes a thorough preparation forming the basis for conducting this study. As highlighted already, as the research idea is new to the field, this dissertation is an early one, to my knowledge, to examine the question

whether cost advantages positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments or not. In addressing this issue (research question), transfer pricing notion is particularly reviewed considering the strands or bodies of research particularly in theory and legal strands. For one thing, comprising the relevant empirical documentations that have been made in the field as well, an extensive review of the scholarly studies theorizing transfer pricing is presented in a rich mix of bonds.[81]

For another, providing the core international legal literature that the OECD Guidelines constitute together with an abundant number of accompanying (numerical) cases, the given legal strand on transfer pricing reveals the legitimate basis transfer pricing foundation draws on and presents concretely how it should be enforced. The issues such as arm's length principle, functional analysis, arm's length range that are discussed over there are examined within the framework of transfer pricing methods. Showing the legal enforcement is of importance to this dissertation as the application part relies also on that as well as surely on theoretical analysis.

Transfer pricing analysis being the backbone of this dissertation makes an in-depth theoretical investigation building on the prior parts. As the upper research framework delineates; transfer pricing analysis (Part III) theorizing the research question is the conclusive part in founding the theory, through completing Part I and Part II. Part III construes the basis that the application part (Part IV) leans on. It can therefore be said that theory and application are the two inter-connected bonds embodying this study.

Employing the specific findings and results gathered from the theoretical foundation in general and the theoretical analyses in particular; Part IV makes a comprehensive application, both analytically and empirically. Part IV serves to perform three main operating functions of this dissertation. Firstly, it analytically shows the effects of transfer pricing analysis on the financial statements of the businesses that are theorized on the preceeding chapters.

Secondly, the analytical setup does not only cover the accounting context but also examines the taxational setting that is of salience to the financial statements of the businesses. As discussed in the previous sections and to be examined particularly in the

[81] The *literature reviews part* which is Part II is not the entire literature followed in this dissertation. It rather provides the general literature framework that this research builds on to help robustly demonstrate its research objective. Notice that in each of the research parts, all the specific or the related literatures in addition to the ones found in Part II are provided.

literature reviews, 'the arm's length' notion is the forefront issue that the OECD considers as 'indispensable' in transfer pricing practices. Thirdly, sampling all the public deposit banks whose stocks are traded in Istanbul Stock Exchange, it makes an empirical investigation documenting that what the theoretical and analytical analyses infer is consistent with the (stylized) facts of the real world as well. I will first start from presenting the methodology followed for the theoretical examination as it preceeds the applicational one.

Concerning the theoretical setup of this dissertation, transfer pricing analysis is made. Agreeing with Bailey (1994), as different from the literature to be cited below, I theorize transfer pricing analysis besides presenting numerical cases. Theorization building on the designated models makes sure to generalize the validity of the findings and the results obtained from theoretical investigations, which apply to all the theoretical chapters, including the transfer pricing study under perfect competition.

Although perfect competition case is theoretically examined and numerically exemplified as well, transfer pricing analysis is performed considering particularly monopoly and oligopoly markets, both of which set examples of imperfect competition or rivalry market types. As the general research framework in table 4.1 depicts, I am trying to figure out and demonstrate how corporate transfer prices are influenced (contributed to) by businesses' cost advantages. Monopoly and oligopoly markets are treated from this perspective. Corporate transfer prices refer to transfer prices of the given transacting businesses. Transfer pricing analysis shows that corporate transfer prices differ in terms of firms' having cost advantages or not. More clearly; corporate transfer prices vary under the absence or the existence of cost advantage in imperfect competition setting. In this context, I argue that operating profits of the businesses[82] that have cost advantages should be higher than those of the businesses having non-cost advantages, which makes sense. This also suggests that businesses with cost advantage will have a higher 'earnings before taxes [EBT]' volume and therefore a higher 'net profit (income) after tax [NPAT]' volume, ceteris paribus.

Some businessess have certain strengths relative to the other players in the market that make them have significant cost advantages. There could be a number of causes underlying such strengths. We know that, one of the well-known reasons could be that (corporate) governance systems, structures or practices of businesses may prove to be

[82] Refer to the supra footnote 65.

better or more decent than those of others, including particularly their competitors. As the preceeding chapter has mentioned and as particularly the literature reviews part will have discussed and contended, better corporate governance generates cost advantages to the businesses, among its other effects. In order to study whether cost advantages positively affect the operating profit figures of the businesses under imperfect competition via contributing to their transfer pricing establishments, we first need to incorporate cost parameters into a function that produces transfer prices and transfer outputs. Transfer outputs are the outputs that quantify the transfers made within a group (parental) firm. They are the total numbers of supplies or the provisions that are transferred to other affiliated operating bodies or parties (intra-group firms) within the group.

As the preceeding chapter has mentioned, Hirshleifer (1956) was the first who made a formal transfer pricing analysis. His work is acknowledged as a seminal transfer pricing study. The scholar posited that transfer prices in monopolies, unlike perfect competition markets, may be subject to different establishments. Assuming that there are two divisions in a firm, manufacturing and distributing departments, transfer price of the buying or purchasing unit [distributing division] will be identical to what the marginal cost volume of the supplying firm unit [manufacturing division] is. This is a quite different result than the one that may be gathered under perfect competition, in which transfer price is set at a point where the marginal revenue reads equal marginal cost.

Thomas (1980) analytically showed that firm divisions can maximize their profits at the expense of their central office (headquarter). Following Hirshleifer (1956), Thomas envisaged two firm divisions, a manufacturing and a distributing division. Manufacturing division that is the supplier of the transfer output acts as internal monopoly and distributing division acts as internal monopsony –so did Hirshleifer suppose before. Thomas demonstrates that transfer prices, transfer outputs, total profits, divisional (segmental) book profits do all vary for both the transacting divisions besides the central office *along* increasing, horizontal and decreasing cost states.

Recently, Baldenius *et al.* (1999a) consider market-based transfer prices coupled with intra-firm discounts arising owing to cost variances between external and internal

selling transactions.[83] The scholars argue that if the supplying firm division exerts a monopoly power over the other intra-firm divisions, cost differences do not explain the nature of the discounts applying to intra-company transactions. Conducting a sensitivity analysis, they conjecture that transfer prices that are set relying on market conditions may have a good performance as long as discount offers are established at an optimal fashion. Baldenius *et al.* (1999b) suggest that negotiated-based transfer prices may prove to be more useful than cost-based transfer prices.[84] They note that as buyer investments are of key significance to the firm and the selling business division has a lacking flexibility, a standard cost-based transfer pricing scheme, rather than negotiated-based one, may yet be employed as an efficient pricing tool.

More recently, Baldenius *et al.* (2004) show how managerial and taxational objectives of a business organization may be combined in the context of transfer pricing. Studying the pricing patterns of multinationals, the scholars suggest that optimal transfer prices can be obtained through weighting pre-tax marginal cost and the favored price that is embodied under the arm's length terms. Göx and Schöndube (2004) argue that in the state where one can not monitor the transfer prices, it may be possible to achieve firm commitment through distorting the agency problem. Buus (2006) suggests that an optimal transfer price may be obtained at the axis of average cost of the supplying intra-firm division together with a certain amount of mark-up volume. Baldenius and Reichelstein (2006) argue that if the internal corporate transfers are priced at the prevailing market value, a double marginalization state may occasion. The scholars advocate that given a capacity constraint, total company profits may go up through a moderate discount.

As to be realized from the upper concise discussion, regarding the monopoly chapters, for the bilateral monopoly model, I follow Hirshleifer (1956) and Thomas (1980) who contemplated two transacting divisions in a firm, one product supplier (acting as monopoly) and one product purchaser (acting as monopsony).[85] However,

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[83] As the following chapters are to identify, market-based transfer prices are the prices that are set considering the terms and the conditions of the market where the transacting parties might operate together with the market firms.

[84] As the following chapters are to discuss, negotitated-based transfer prices are the prices that the transacting parties collectively (ex ante) decide through negotiating the terms of the transfer transaction. Cost-based transfer prices are rather the prices that are built considering the cost structures or specifics of the parties involved in the transaction.

[85] Monopoly models built in this research refer to bilateral monopolies where there is only one seller (monopoly or monopolist) and only one buyer (monopsony or monopsonist) in the market. Hence, 'monopoly' wording designated for "without and with cost advantage cases" will be interchangeably used

transacting parties in the setting of monopoly in this study are financing business (F) and purchasing business (P) that are not firm divisions but intra-group firms. In Hirshleifer and Thomas, as the transferred good is the physical product, manufacturing division has manufacturing costs and distributing division has distributing costs. In this study, the transferred product is a (financial) service product, particularly fund, as fund or money is the subject-matter of the intra-group firms' trade (transfer). The financing business being the monopoly lends fund to the purchasing business. Therefore, we do not have any manufacturing nor distributing but do have funding or sourcing costs here, for both the intra-group firms. Besides, unlike Thomas whose cost specification is naïvely reliant of unit costs, the costs of the transacting intra-group firms (contractual parties) in the monopoly chapters of this research are average unit operating costs that may be decomposed into fixed and variable operating cost portions –so does the same apply to the oligopoly chapters.

An operating profit will only be obtainable once operating revenue (price) and operating cost figures are known. As the following chapters will show, operating costs are assumed to boil down to fixed and variable costs as cost of sales typically involve both non-variant (constant) and variant cost items. Besides, it does not make sense to think of a real business with zero fixed operating costs. Therefore, functions are specified in terms of operating revenue or costs since this study seeks to demonstrate that cost advantages have a positive effect on the operating profits of the businesses under imperfect competition through contributing to their transfer pricing establishments.

Monopoly chapters that concern the transfer pricing arrangement in affiliated intra-group firms are mainly examined in two veins: (i) monopoly market without cost advantage and (ii) monopoly market with cost advantage. Examination starts from monopoly market without cost advantage case. Concerning 'monopoly market without cost advantage' discussion, cost functions of both the businesses being differentiable everywhere are assumed to be increasing. This is to make sure that none of the intra-group firms has any cost advantage over the other, as the objective of this discussion is to show how transfer prices are established in monopoly markets when there is no cost advantage for any of the businesses involved. In order to conduct a transfer pricing investigation, we need to establish two functions that characterize the nature of the

as the wording of 'bilateral monopoly' where financing business is the monopolist (monopoly) and purchasing business is the monopsonist (monopsony).

group firms; i.e., a revenue (price) and cost function. As costs are average unit operating costs, revenues of the firms are defined as average unit operating revenues (prices).[86]

Following the resolution Hirshleifer (1956) and Thomas (1980) advocated, the transfer price and output of the purchasing business being the monopsony are established relying on the costs of the financing business being the monopoly. Accordingly, the purchasing business will equalize its net revenues to its marginal costs at such an output level that is optimal to the financing business. Reciprocally, the financing business will equalize its revenues to its marginal costs at the output level being optimal to the purchasing business. As a result, both the firms have two different optimal transfer prices and outputs. Neither Hirshleifer nor Thomas give a common solution that satisfies both the businesses. After providing optimal transfer prices and output outcomes for each of the transacting businesses, I show the common equilibrium result that employs the bargaining (negotiation) technique. Assuming that the intra-group firms have equal bargaining powers, the transfer price and the output at the equilibrium are obtained by halving the sum of the individual transfer prices and outputs, which makes sense.

Concerning 'monopoly market with cost advantage' discussion, so as to provide the comparability *with no cost advantage* monopoly chapter (monopoly market without cost advantage), the intra-group firms and the nature of the transaction remain unchanged. That is, the financing business being the monopoly yet lends money or fund to the purchasing business being the monopsony. The objective of this discussion is to show how transfer prices are established in monopoly markets when at least one of the intra-group firms has cost advantage over the others. As in the case of monopoly market without cost advantage, cost functions of both the group firms are assumed to be differentiable everywhere for the purposes of optimization. However, the cost function of the financing business is assumed to be decreasing while the cost function of the purchasing business is assumed to be increasing. The reason is to achieve the given objective, through making sure that the financing business has cost advantage over the purchasing business. Similar to the case of monopoly market without cost advantage, revenue (price) function which is common for both the group firms is specified on the

[86] Remember the previous discussions. This dissertation is the early one to incorporate the idea of cost advantage to the transfer pricing models. Neither Hirshleifer (1956) nor Thomas (1980) nor any other transfer pricing study to my knowledge did expressly consider cost advantage or disadvantage in the establishment of transfer prices like this study.

basis of (average unit) operating revenue (income) as the individual cost functions draw on (average unit) operating costs which are firms' funding or sourcing costs.

The principal venue for the cost advantage in this research, as stated before, has been given as corporate governance, owing to its broad scope and compatability with the literature. In the 'monopoly market with cost advantage' state, it is assumed that the corporate governance structure of the financing business is better than that of the purchasing business.[87] As the literature reviews suggest, the scholars usually contend that better corporate governance reduces cost of capital. Cost of capital which is the sum of cost of debt capital and cost of equity capital is the same as cost of funding or cost of sourcing.[88] In order to make sure that a cost (dis)advantage is in the place, I define the subject-matter of the main (ordinary) course of business of the intra-group firms as fund transfer –so does the same apply to the banking firms examined in the setting of oligopoly competition.[89] Namely, the financing business transfers (lends) fund to the purchasing business for the satisfaction of its purchasing need. When this is the case, operating cost of the intra-group businesses will be nothing but the cost of funding. Hence, a better or a decent degree of corporate governance will result in an immediate decrease in operating cost.

Following the solution that I make for the case of monopoly market without cost advantage, the transfer price and the output of the purchasing business that is the monopsony are found building on the costs of the financing business acting as monopoly. In this case, again, the purchasing business that has cost disadvantage will set its net revenues to its marginal costs at the output level being optimal to the financing business that has cost advantage. The financing business with cost advantage will set its revenues to its marginal costs at the output level that is optimal to the purchasing business with cost disadvantage. As in the preceeding case, both the group firms have two different optimal transfer prices and outputs. However, inspite of the fact that the competition setting (monopoly) where those businesses interact remains the same, the level or the value of the prices and quantities is different from the ones obtained under the preceeding case. It is due to cost advantage.

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[87] An extensive review on corporate governance is provided in the literature reviews chapters of this dissertation.

[88] Unless otherwise stated; in this study, funding costs, sourcing costs, financing costs, cost of capital are all used interchangeably.

[89] Refer to supra footnote 77 for this.

In parallel to the solution I follow for the earlier monopoly case; after obtaining the optimal transfer prices and transfer outputs for each of the transacting parties, the financing business (F) and the purchasing business (P), I show the common equilibrium result employing the bargaining (negotiation) technique. Assuming that the participating intra-group firms have identical bargaining powers (strengths), the transfer price and the output at the equilibrium are found through halving the sum of the individual transfer prices and outputs. Presenting the model construction, the below table shows the methodological steps followed for making the theoretical investigation concerning monopoly market.

Table 4.2: Model Construction: Monopoly Market

A. Functions Definition: No Cost Advantage

- The average unit operating revenue (price) function: $P(R) = \alpha - \psi q$
- The average unit operating cost function of the financing business: $C_f = \beta + \gamma q$
- The average unit operating cost function of the purchasing business: $C_p = \beta + \gamma q$
- Costs are everywhere differentiable such that $C_f' > 0, C_p' > 0$

The Financing Business: The Monopoly	**The Purchasing Business: The Monopsony**
Optimal Transfer Price**:** $f\{P(R),C_f,C_p\}$ Optimal Transfer Output**:** $f\{P(R),C_f,C_p\}$	Optimal Transfer Price**:** $f\{P(R),C_f,C_p\}$ Optimal Transfer Output**:** $f\{P(R),C_f,C_p\}$

- *Common-Solution For Transfer Price*: [(Transfer Price of The Financing Business) + (Transfer Price of The Purchasing Business)]/2
- *Common-Solution For Transfer Output*: [(Transfer Output of The Financing Business) + (Transfer Output of The Purchasing Business)]/2

B. Functions Definition: Cost Advantage

- The average unit operating revenue (price) function: $P(R) = \alpha - \psi q$
- The average unit operating cost function of the financing business: $C_f = \beta - \gamma q$
- The average unit operating cost function of the purchasing business: $C_p = \beta + \gamma q$
- Costs are everywhere differentiable such that $C_f' < 0, C_p' > 0$

The Financing Business: The Monopoly	**The Purchasing Business: The Monopsony**
Optimal Transfer Price**:** $f\{P(R),C_f,C_p\}$ Optimal Transfer Output**:** $f\{P(R),C_f,C_p\}$	Optimal Transfer Price**:** $f\{P(R),C_f,C_p\}$ Optimal Transfer Output**:** $f\{P(R),C_f,C_p\}$

- *Common-Solution For Transfer Price*:[(Transfer Price of The Financing Business) + (Transfer Price of The Purchasing Business)]/2
- *Common-Solution For Transfer Output*: [(Transfer Output of The Financing Business) + (Transfer Output of The Purchasing Business)]/2

As the upper table shows, the costs of both the intra-group firms transacting under monopoly market are the average unit operating costs that are specified as fixed and variable operating costs. At the former state " No Cost Advantage ", as none of the intra-group firms is assumed to have any cost advantage, both their cost functions tend to increase. Cost functions are symmetrical in here. However, at the latter state " Cost Advantage ", as the financing business being the monopoly is assumed to have better corporate governance structure than the purchasing business being the monopsony, its cost function tends to decline while the cost function of the purchasing business keeps increasing like before. Cost functions are asymmetrical in here.

As stated already, in order to demonstrate if cost advantages or disadvantages relate to the operating profit figures of the intra-group firms via structuring transfer pricing, revenue (price) function and cost function are defined as operating revenue (price) function and operating cost function respectively. From accounting theory, we know that sales revenue and cost of sales are the main operating items (accounts) of the businesses. Assuming that the intra-group firms earn one source (piece) of revenue or income which is the sales revenue and bear one source (piece) of expense which is the cost of sales simplifies and indeed empowers the strength of the theoretical analysis, as the calculations become more concrete and tractable.

The next theoretical investigation in this dissertation pertains to the oligopoly competition which is another market falling into the table of imperfect competition types. As different from monopoly market where the involving parties are intra-group firms belonging to the same group firm and only transact with each other; in oligopoly chapters, the parties involved are the intra-group banking firms belonging to the same group firm and not only transact with each other but to the market. In this respect, they are market competitors (firms) as well.

Generally speaking, looking at the prior studies, we see that the literature is silent on transfer pricing in oligopolies. More correctly, like monopolies, the number of the scholarly investigations on oligopolies is quite slim. Among these, arguing that the affiliates of a multinational business face competition and that the delegation of authority and the nature of competition influence the role transfer price plays, Schjelderup and Sorgard (1997) investigate profit repatriation (shifting) through transfer pricing. The scholars suggest that if the liasons or the affiliates of a multinational business run their operations under the terms of oligopolistic competition, the multinational group (parental company) may deviate from maximizing its profit figure. The nature of the competition as well as the taxes and the tariff rates will be the ones to characterize the transfer price charged to the intra-firm products.

Showing that transfer prices may be exploited as a rent-shifting tool by a partially decentralized multinational with one competitor in the market, Zhao (2000) argues that the value of transfer price may be subject to variation depending on if the product of the rival firm is intermediate or finalized, and on if the rival firm is diffused. He posits that when the rival firm is getting decentralized and integrated, the value of the transfer prices will decline. Assuming that there is a multinational with two affiliates that are located in different countries, Nielsen *et al*. (2001) argue that given the terms of oligopolistic competition, the profit repatriation problem through transfer prices does not vanish even though the formula apportionment approach, rather than a separate accounting approach is followed. The scholars show that formula apportionment approach even rises profit repatriation practices that multinationals may tempt.

More recently, building up a symmetric two-country model where two multinational businesses compete on quantities and have a tendency to manipulate their transfer prices, Amerighi (2006) demonstrates that once the enforcement is getting stronger, corporate tax rates rise up at the equilibrium. This relation reads stricter when the trade costs decline as a result of sufficient trade liberalization. Studying the transfer prices of multinational firms under asymmetric oligopoly that are decentralized, Komoriya (2007) suggests that it is the source of cost difference that is decisive on cascading the competing firms in line with efficiency. The scholar finds that the mark-up ratio of the more efficient firm is higher than that of the less efficient firm. These findings are applicable when it is assumed that there is a significant difference between the corporate

tax rates of the domestic and host countries. The scholar contends that, if the difference is not significant, suggested results will turn completely to be the opposite.

As to be realized from the upper discussions, like in monopolies, there is no study that investigates the effect of cost advantages on transfer prices and therefore on the operating profit figures of the businesses neither in oligopolies. The original methodological procedure that has been followed for monopoly chapters therefore applies to oligopoly study. Accordingly, oligopoly chapters are examined in two settings in this dissertation: (i) oligopoly competition without cost advantage and (ii) oligopoly competition with cost advantage. Examination starts from oligopoly competition without cost advantage case.

Concerning 'oligopoly competition without cost advantage' discussions, in order to conduct a transfer pricing investigation in oligopoly, I identify two functions specifying the nature of the affiliated intra-group (commercial or deposit) banking firms as revenue (price) function and cost function. To ensure that cost (dis)advantage is in the place, I define the subject-matter of the main (ordinary) course of business of the competing banks as fund supply or provision –so does the same apply to the intra-group firms examined in the setting of monopoly market. Particularly, bank L and bank F lend or provide fund to the market (e.g. individual customers, institutional clients etc.). As the cost of funding is the operating cost of the competing banks, their revenue function is defined on the basis of operating revenue. In lieu of this, costs of banks are meant to refer to average unit operating costs and revenues are to average unit operating revenues.

Both the cost functions of the banks (bank L and bank F) that are assumed to be differentiable everywhere for the optimization purposes are assumed to be increasing. This is to make sure that none of the banking firms has any cost advantage over the other, as the objective of this discussion is to show how transfer prices are established in oligopoly markets when there is no cost advantage for any of the competing intra-group banks involved. The properties of the Cournot game as a well-acknowledged version of oligopoly market competition are then exploited to conduct this theoretical investigation as it suits the case. Accordingly, banking firms are assumed to compete under the terms of Cournot competition where firms with similar capacities or capabilities do compete on quantities or outputs. In this case, banks, bank L and bank F, whose corporate governance structures or skills are assumed to be the same, compete on not the transfer

price but the transfer output (the amount of fund provision). Put differently; it is assumed that there is no significant difference among the corporate governance structures of the competing banking firms, therefore none of the banks has any cost advantage over the other. As the Nash equilibrium solution under Cournot reveals that there should be one price and two (identical) quantities, I show that the transfer price for the competing banking firms equals one single price which is the market price. In this case, unlike monopoly market, transfer price will be the market price as market price is available and intra-group transaction is assumed to happen at arm's length terms. Since banking firms belonging to the same group firm are assumed to be the only ones competing in the market, they are market firms as well.

As for the 'oligopoly competition with cost advantage' discussions, in order to provide the comparability, the nature of the transaction besides the banking firms remains unchanged. Both the banks, bank L and bank F, provide funds the market needs. Like the preceeding case, cost functions of both the banks are assumed to be everywhere differentiable for the optimization purposes. And revenue (price) function which is common for both the banks is given in terms of (average unit) operating revenue as the banks' cost functions are expressed in terms of (average unit) operating costs.

Stackelberg model, rather than any other oligopoly models (e.g. Cournot model, Betrand model, Dominant Firm model, Sweezy Kinked Demand model, Cartel model etc.), is conceived as appropriate to control (model) this particular state where the existence of cost advantage shapes the transfer pricing establishments quite differently than the absence of any cost advantage. In Stackelberg competition or game, firms with different capacities or capabilities might have an opportunity to compete on quantities or outputs, which attributes them an operating advantage over their competitors (e.g. Pindyck and Rubinfeld (2001)). I particularly follow the Stackelberg model with sequential game and assume that bank L entered the market before bank F did, therefore, bank L with cost advantage becomes the leader while bank F with cost disadvantage remains as follower. Recall that Stackelberg model being one of the conjectural variation models entitles us to see what happens if at least one of the competing (banking) firms may behavior strategically (e.g. Mathis and Koscianski (2002), Nicholson (2005) etc.). Thus, the banking firm with cost advantage becomes the firm to make the first move.

Providing such an equilibrium solution that commonly satisfies both the banks, I show that the transfer price for the competing banking firms (market firms) equals one single price which is the market price. As in Cournot, transfer price will be the market price since market price is available and intra-group transaction is assumed to happen at arm's length terms. This solution (one price and two differing quantities) is consistent with what the Stackelberg oligopoly model postulates to us. I also show that due to cost advantage, there occurs a huge difference between the (transfer) outputs of the competing banking firms unlike those in Cournot where the outputs are identical.

In order to ensure that cost (dis)advantage for the competing banks is in the place, I define the subject-matter of the main (ordinary) course of business of the banking firms as fund supply or provision. The objective of the discussion concerning 'oligopoly with cost advantage' is to show how transfer prices are established in oligopoly markets when at least one of the competing banking firms has cost advantage over the others. Because of this, there is a need to guarantee that one of the banks (bank L) has cost advantage over the other bank (bank F) since its corporate governance structure is assumed to be good enough and significantly better than that of its competitor. Accordingly, unlike the preceeding case where both the cost functions of the competing banks are assumed to be increasing, the cost function of the bank L is assumed to be decreasing while the cost function of the bank F is assumed to be increasing. As a result, the operating cost (cost of funding) of bank L with better corporate governance structure or skill will be less, relative to that of bank F. In other words, bank L will be the transacting party that realizes operating cost saving.

Table 4.3: Model Construction: Oligopoly Competition

A. Functions Definition

No Cost Advantage: Cournot Game

- The average unit operating revenue (price) function: $P(R) = \alpha - \psi Q$ where $Q = \sum q_l + q_f$
- The average unit operating cost function of the bank L: $C_l = \beta + \gamma q_l$
- The average unit operating cost function of the bank F: $C_f = \beta + \gamma q_f$
- Costs are everywhere differentiable such that $C_l' > 0, C_f' > 0$

Bank L	Bank F
Optimal (Nash-Solution)	Optimal (Nash-Solution)
Transfer Output**:** $f\{P(R),C_l ,C_f\}$	Transfer Output**:** $f\{P(R),C_l ,C_f\}$

Optimal (Nash-Solution) Transfer Price**:** $f\{P(R),C_l ,C_f\}$	
B. Functions Definition **Cost Advantage: Stackelberg Game** ▪ The average unit operating revenue (price) function: $P(R) = \alpha - \psi Q$ where $Q = \sum q_l + q_f$ with $q_l \neq q_f$ ▪ The average unit operating cost function of the bank L: $C_l = \beta - \gamma q_l$ ▪ The average unit operating cost function of the bank F: $C_f = \beta + \gamma q_f$ ▪ Costs are everywhere differentiable such that $C_l' < 0, C_f' > 0$	
Bank L: The Leader	**Bank F: The Follower**
Optimal (Nash-Solution) Transfer Output**:** $f\{P(R),C_l ,C_f\}$	Optimal (Nash-Solution) Transfer Output**:** $f\{P(R),C_l ,C_f\}$
Optimal (Nash-Solution) Transfer Price**:** $f\{P(R),C_l ,C_f\}$	

Presenting the model construction, the above table shows the methodological steps followed for making the theoretical investigation on oligopoly competition. The costs of both the banks transacting and competing under oligopoly competition are again the average unit operating costs that are specified as fixed and variable operating costs. At the former state " No Cost Advantage " where the duopoly banks compete under the terms of Cournot Game, as none of the banking firms is assumed to have any cost advantage, both their cost functions tend to increase. Cost functions are symmetrical there. In contrary, at the latter state " Cost Advantage " where the duopoly banks compete under the terms of Stackelberg model with sequential game, as bank L becoming the leader is assumed to have better corporate governance structure than bank F remaining as the follower, its cost function tends to decline while the cost function of bank F keeps increasing like before. Cost functions are asymmetrical over there. Notice also that as the Nash transfer pricing solution yields only one transfer price that is market-based, unlike two transfer prices, there is one single transfer price value for both the states. Despite a single transfer price, there are two transfer outputs for both the states.

In order for demonstrating if cost advantages or disadvantages relate to the operating profit figures of the competing banks through framing their transfer pricing patterns, revenue (price) function and cost function are defined as operating revenue (price) function and operating cost function respectively. Assuming that the banks earn only

one source of revenue or income which is the sales revenue and bear only one source of expense only which is the cost of sales will simplify and strengthen the theoretical analysis, as the calculations become more concrete and tractable that way –so does the monopoly case.

As the models and numerical examples are compatible in the chapters concerning the theoretical investigations, this dissertation entitles the comparison of the findings and results in a simultaneous fashion. Namely, the models in this dissertation are methodologically designated in such a way that for instance, it is possible to compare the results obtained under 'monopoly market without cost advantage' state with 'monopoly market with cost advantage' state, or to compare the results obtained under 'oligopoly competition without cost advantage' state with 'oligopoly competition with cost advantage' state. This is done to clearly mark the direct role of cost advantage on transacting businesses.

The objective of this dissertation, as highlighted several times, is to theoretically, analytically and empirically show if cost advantages positively affect the operating profits of the businesses under imperfect competition through contributing to their transfer pricing establishments or identifications. As the upper passages have discussed at length, the parts pertaining to the theoretical foundation [Part I/II/III] are construed to demonstrate how transfer prices and transfer outputs or quantities of the businesses running their operations under different imperfect competition market settings are drawn when they have cost advantages or not (disadvantages). As the research framework depicts, the application part [part IV] which interacts with and therefore follows the preceeding parts building the theoretical foundation is designated to scholarly validate three main operating venues.

First, the application part aims to analytically show the impacts of the transfer pricing analysis on the financial statements of the businesses under imperfect competition. Second, it analytically aims to show the taxational effects of transfer pricing analysis on the corporate financial statements, in the light of the OECD treatment. These two applicational discussions draw on the results and the implications that the theory chapters point to. Thirdly, through sampling all the public deposit banks whose stocks are traded in Istanbul Stock Exchange (ISE) for the years in between 2004 and 2008, the application part aims also to empirically document if cost advantages positively influence the operating profits of the businesses running their operations

under imperfect competition. The empirical objective has also been stated to verify if businesses (banks) with cost advantage realize higher operating profits (interest spreads) than the ones (banks) without cost advantage. Therefore, it could be said that the empirical investigation is to confirm the findings and the results obtained from the analytical and the theoretical examinations. I will first start with discussing the methodology followed for the analytical applications which are quite comprehensive studies relying on the outcomes obtained from the theoretical treatment of transfer pricing problem as just highlighted.

In order to clearly show the effects of the transfer pricing analysis on the financial statements (i.e. income statement and balance sheet) of the businesses which will allow us to control for operating profits, it is first needed to well define what an operating profit refers to, from the accounting standpoint. The reason is that when operating profit figures of the businesses are obtained, we will have their income statements. Once income statements are established using the outcomes gathered from the numerical cases presented in the theoretical analyses, balance sheets will also be established as income statements complement them.

Operating profit figures that derive from the main source of operating activities are the profit numbers the businesses realize on performing their ordinary course of businesses. For instance, for commercial or deposit banks, an operating profit refers to the income surplus that they earn on the satisfaction of their main piece of activities. Operating profit for those banks which is the difference between operating income and operating expense may be found as subtracting the interest expenses paid to the depositors (operating expense) from the interest revenues received from the loan holders (operating incomes) among the others. In other words, the ordinary course of business for deposit banks is to grant loans through collecting deposits.

From a cost standpoint, since operating profit equals sales revenue netted of operating costs (i.e. cost of sales and other operating expenses), a less value of operating costs will result in a higher value of operating profits. In other words, the businesses with cost advantage will have higher operating profits as their operating costs will decline, which is what this dissertation advocates.[90] Down below explain I further

[90] Remember that as the main operating activity of the given businesses is fund provision or supply in this research; equivalently, as money or fund is the transferred unit and as there is no another piece of costs, operating costs will be identical to funding or sourcing costs.

technicalities that derive the methodology and entitle us to examine the effects of theoretical transfer pricing analysis on the financials of the businesses studied in this work.

The algorithm of operating profits relies on two bodies: (i) revenues (incomes) and (ii) costs (expenses). As we know; operating profit, an income statement item, is the corporate gross profit figure netted of operating expenses. Gross profit does literally refer to the operating income figure of the businesses since it reveals such an income amount that the businesses realize in association with their activities in performing their main course of businesses. Gross profit item may be obtained as the difference between sales revenue and cost of sales figures of the businesses. Since sales revenue is the product of the price and quantity, finding out transfer prices and transfer quantities or outputs will yield the figure of sales revenue. If we know the average unit operating cost figures that rely on main operating transactions of the businesses, once multiplying it with transfer output, we will also obtain the cost of sales as it incurs due to the businesses' performing their main or ordinary operating activities.

It has been mentioned that setting out or defining the cost figures of the businesses on the basis of average unit operating costs helps better operate in the simplification of the analysis and in making sure that the results are more tractable. In order to secure these, two assumptions are needed. Firstly, assuming that there is not any other kind of costs involved, cost of sales which is the main operating expense item will be the only costs the businesses will bear accordingly. Secondly, assuming also that there is not any other kind of revenues accrued, total revenue items of the businesses will comprise solely the sales revenues (operating income). Hence, the difference between sales revenues and cost of sales will yield the net operating income figure which is operating profit *per se*.

Table 4.4: Effects of Transfer Pricing Analysis on The Corporate Financial Statements: Monopoly And Oligopoly Markets

APPLICATION STEPS
A. The Profit Construction
1a. Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost

(Operating Expense)
1b. Operating Profit = [TR] – [TC] which may be rewritten as
1c. Operating Profit = [TP*q] – [C*q]

B. The Preparation of The Financial Statements

2. Income Statement Preparation
3. Transforming Income Statement Accounts to Balance Sheet Accounts
4. Balance Sheet Preparation

The upper table illustrates the methodology and the methodological steps (orders) followed for conducting the first-leg of analytical application. As these steps apply equally to the intra-group firms transacting under monopoly and to the intra-group banking firms transacting and competing under oligopoly, it is possible to show the effects through one unique table. Apparently, TR stands for the total (sales) revenue [operating income] of the intra-group firms and the intra-group banking firms, TC for the total cost volume [operating expense], TP for the transfer price, q for the corresponding (transfer) output and C for the average unit operating cost volume. Notice that transfer price and output figures used in calculations are concomitantly obtained from the model construction tables from above. In other words, table 4.4 derives from table 4.2 drawn for the intra-group firms transacting under monopoly and from table 4.3 drawn for the intra-group banking firms transacting and competing under oligopoly as well. This is because analytical application sits right at the theoretical findings, as indicated early on several times.

Table 4.4 further says that once the operating profits are found, the next step is to prepare the income statements. This is doable now owing to the two things. For one thing, we know the sales revenue figure (TR) which is the operating income and the cost of sales (TC) which is the operating expense. For the other, we assumed that both the intra-group firms and the intra-group banking firms earn one source of operating revenue or income which is the sales revenue and incur one source of operating expense which is the cost of sales. Therefore, as all the other components of the income statements that are non-operating items (accounts) read 0, the net profit or income after taxes will be equal to [(Operating Profit) * (1- Corporate Tax Rate)]. The reason is that operating profits will be identical with the earnings before taxes (EBT) volume.

Remember that as EBT constitutes the corporate tax base, it is the taxable income out of which the intra-group firms or the intra-group banking firms will be liable to pay out (corporate) income taxes to the tax administration when due.

The next step is to transform the relevant income statement items into the corresponding balance sheet accounts and prepare the corporate balance sheets which complete the financial statements cycle. Table 4.5 says that the relevant income statement accounts to be embedded into the balance sheets of the intra-group firms or the intra-group banking firms are (corporate) income taxes and net income (profit) after taxes (NPAT). As these accounts will have different names when converted to the balance sheet, income taxes will read 'provision for taxes' and net income (profit) after taxes will read 'net profit for the period'. Both the accounts will appear in the passive side of the balance sheets. In particular, provision for taxes will go to the *liability* and net profit for the period will go to the *owner's equity* portions of the balance sheets. These two special accounts, known as income summary or final accounts, do come from corporate income statements and are the ones completing the corporate balance sheets.[91]

Table 4.5: Transforming Income Statement Accounts Into Balance Sheet Accounts

Income Statement Accounts	***Corresponding Balance Sheet Accounts***
(Corporate) Income Taxes	*Provision For Taxes*
Net Income (Profit) After Taxes (NPAT)	*Net Profit For The Period*

The reason for the above operation is that, as we know from accounting theory, unlike income statements that are dynamic financial statements pertaining to a certain period of time (i.e. time interval), balance sheets are the static financial statements pertaining rather to a certain point in time. In other words, income statements reveal the financial performances of the businesses and balance sheets reveal their financial positions. Therefore, both the financial statement types (financials) complement each other. Notice that like income statements, balance sheets of the intra-group firms or the intra-group banking firms are hypothetically established except for the numbers calculated.

The analytical application in this study aims also to show the taxational effects of the transfer pricing analysis on the corporate financials, which is the second-leg of the

[91] This implies that the preparation of the corporate income statements preceeds that of the corporate balance sheets as particularly tables 4.4, 4.5, 4.6 and 4.7 all point to.

analytical application. I examine the taxational effects in two chapters: (i) dealing at the arm's length and (ii) dealing outside the arm's length. In the respective chapters, as the market price that is comparable to (applicable to be benchmarked as) the internal or corporate transfer price will be available, I concentrate on justifying the taxational effects of the transfer pricing analysis on the financial statements of the transacting affiliated intra-group banking firms, bank L and bank F that compete under oligopoly. A single market price will be available out there since the banks transacting with each other are the market competitors and thereby make transactions to the market as well. As the discussion over there is generalizable, the results are also not only applicable to the intra-group banking firms competing under oligopoly but to any other business types around.

Table 4.6: The Taxational Effects of Transfer Pricing Analysis on The Corporate Financial Statements: Dealing At The Arm's Length

APPLICATION STEPS

A. The Profit Construction: No Amendment

1a. Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)
1b. Operating Profit = [TR] – [TC] which may be rewritten as
1c. Operating Profit = [TP*q] – [C*q]

B. The Preparation of The Financial Statements: No Amendment

2. Income Statement Preparation
3. Transforming Income Statement Accounts to Balance Sheet Accounts
4. Balance Sheet Preparation

Table 4.6 depicts the methodology and the methodological steps followed particularly for showing the taxational effects on the corporate financial statements in the case of *compliance with* the arm's length principle. As to be seen, dealing at the arm's length necessitates no change in any steps to pursue for the profit construction and therefore for the preparation of the financials, as the value of the transfer price will not be amended in there. This is because the businesses have been assumed to make

their dealings (transactions) at the terms the arm's length principle stipulates. As to be set out in the following parts, the OECD Guidelines that are the leading benchmarks in applying the transfer pricing suggest that there is no need to make any transfer pricing adjustment (amendment) as long as the dealings of the businesses (contractual parties) fall into the nature (terms) of the arm's length conditions in the markets those parties run. The businesses or the contractual parties are the intra-group banking firms in this case. Therefore, not any pricing modification needs to be made out there. Absence of transfer pricing modification implies that the taxable incomes (tax bases) of the businesses, the EBT volumes, remain unchanged. Notice that the procedures applying to the upper table maintain the procedures that apply to table 4.4 above.[92]

'Dealing outside the arm's length' state which is the notable one relaxes the assumption that the dealings of the involving or the controlled businesses, the intra-group banking firms, are not at arm's length any more. In other words, the dealings of the businesses (contractual parties) fall outside the nature (terms) of the arm's length conditions in the markets those parties operate. For instance, if the arm's length range for a certain product (e.g. funds) in a market is set between 10 $ (the minimum market price) and 20 $ (the maximum market price), but the transfer price the controlled party considers is 5 $, its dealings are stated to fall outside the range. This will be indeed a legitimate statement as it has a *de jure* venue from the standpoint of tax laws or Statutes. The reason is that, the transaction of the controlled party who is under review by the tax administrations through the transfer pricing audit process is not compatible with the third or independent party's terms and conditions in that case. Put differently, it breaches or violates the arm's length principle.

In this, what needs to do is to move the detected transfer price (5 $) to a point that is acceptable and found in the arm's length interval ranging from 10 $ to 20 $. The new value of the transfer price changes according to the Statutes of the territories (countries) with the taxation authorization. As the usual practice tends to set the new transfer price value somewhere in the middle of the arm's length range, in this case, the latter value of the transfer price the respective controlled party will have to apply for this particular transaction will be such a value which averages the sum of all the values ranging from 10 $ to 20 $. This value might be a median or a statistically more robust value as well.

[92] Refer to the literature reviews for an extensive definition, scope and content of the arm's length principle and for seeing what it suggests when to practise transfer pricing methods that are applicable when market prices are available.

Thus, the transfer pricing differential calculated along this value, the amended or adjusted figure, is added up to the former transfer price value which is 5 $.[93] In case there is a single market price that is considered to be a benchmarking transfer price (arm's length price) for the internal business transaction, it is taken like the mid-point of the arm's length range. Thus, the transfer pricing amendment is to be made right up to that value. This holds for this dissertation.

Apart from the specifics of the simple example given above, the need to amend the transfer prices towards the mid- or the median point at the arm's length range or the specified arm's length point presupposes modification or adjustment in operating profit figures and therefore in income statements and balance sheets of the businesses. This is because the taxable incomes (tax bases) of the businesses, the EBT volumes, will be subject to change, immediately following the adjustment of the transfer price value. Table 4.7 below illustrates the methodology and the methodological steps followed particularly for showing the taxational effects on the corporate financial statements in the case of *breach* or *violation* of the arm's length principle.

Table 4.7: The Taxational Effects of Transfer Pricing Analysis on The Corporate Financial Statements: Dealing Outside The Arm's Length

APPLICATION STEPS

A. The Transfer Pricing Reconstruction: Need For Amendment

1. Adjusting The Transfer Prices (LTP): The Former Transfer Price (TP: f{P(R),C_f ,C_p}) + Price Differential Levied in Compliance With The Arm's Length

B. The Profit Reconstruction: Need For Amendment

2a. Adjusting The Operating Profit: Operating $Profit_{new}$ = [LTR] – [LTC] that may be restated as
2b. Operating $Profit_{new}$ = [LTP * q] – [C * q]

C. The Re-Preparation of The Financial Statements: Need For Amendment

3. Adjusting The Income Statement: New Income Statement Preparation
4. Transforming The Adjusted Income Statement Accounts to Balance Sheet

[93] Refer to page 17 and footnote 18.

Accounts
5. Adjusting The Balance Sheet: New Balance Sheet Preparation

In the upper table, Operating $Profit_{new}$ refers to the latter (adjusted) operating profit figure, LTR to the latter (adjusted) total (sales) revenue which is operating income or revenue, TC to the total cost volume which is operating expense, LTP to the latter (adjusted) transfer price, q to the corresponding (transfer) output and C to the average unit operating cost volume. As there is no change in quantities (transfer output), the functions such as TC or C whose covenants are quantities are not subject to any adjustment. The changes rather happen in the functions reliant of transfer prices such as TR.

Like the former case where there was no need for transfer price amendment, in this case, we yet build on the procedures applying to table 4.4. However, unlike the former case, application steps that are methodologically taken to control for the changes in the state of dealing outside the arm's length, are repeated from the beginning to the end. The above table depicts the orders in showing the taxational effects when to deal (make transaction) outside the identified range. In rebuilding the procedure, in line with what the upper discussion has examined at length, transfer price value that is obtained following the model construction is reconstructed in first place, which is followed by the reconstruction of the operating profit figure. The next and the last master step (C), which concerns the repreparation of the financial statements in the light of the adjusted operating profit figure, (i) reshapes the income statement, (ii) converts or translates the amended income statement accounts into the balance sheet accounts and (iii) eventually prepares a new balance sheet through adjusting the former balance sheet by means of the transformed financial statement items.

Finally, an empirical investigation is performed using firm-level accounting data from Istanbul Stock Exchange (ISE) of Turkey to see whether the results gathered until there are consistent with the stylized facts. As explained before, the main objective of this examination being the third-leg of the application part is to empirically document that businesses (banks) with cost advantage realize higher operating profits (interest spreads) over their market competitors that are the businesses (banks) without cost advantage or with cost disadvantage. Sampling all the thirteen public commercial (deposit) banks whose stocks are traded in ISE for the period from the first quarter of

the year 2004 through the first quarter of the year 2008, the dependent variable of the study is defined as bank interest spread (credit margin).

Spread definition differs across scholars. For instance, there are studies adopting the spread definition as a version of return on assets (e.g. Ho and Saunders (1981), Kunt and Huizinga (1999), Barth *et al.* (1997), Abreu and Mendes (2001), Kaya (2002) etc.). There are studies relating bank spread to transaction costs (e.g. Angbazo (1997), Allen (1988), Saunders and Schumacher (2000), Afanasieff *et al.* (2001) etc.). For the definition used in empirical analysis in this study, I follow Brock and Suarez (2000) and Kaya (2001) who draws on Montes and Landa (1999) for the idea; and for the use of data on a quarter basis, I follow Eroğlu (2001) among the others. Accordingly, I define the spread as the difference between loan interest rate (selling price) and deposit interest rate (purchasing price). Such a definition will prove to be useful as it delivers profitability emanating from performing main or ordinary operating activities at foremost. Bank interest spread which is the premium to cover up or satisfy the cost of intermediation activities and therefore known as *pure banking spread* in the literature originates from the conduct of main deposit banking operations. In other words, it reveals unit operating margin or profit for a deposit or commercial bank. The table below summarizes the methodology followed to perform the empirical analysis.

Table 4.8: Empirical Analysis: Evidence From Turkish Banking Industry

SAMPLE	**Size**	**Period**
	All The Listed Public Deposit Banks (13)	From The First Quarter of 2004 to The First Quarter of 2008
DATA	**Nature**	**Source**
	Firm or Micro-Level (Bank-Specific) & Quarterly	Bank's Financial Statements Obtained from Istanbul Stock Exchange (ISE)
COST ADVANTAGE HYPOTHESIS	**Testing Method to Employ**	
Banks with cost advantage realize higher or wider interest spreads (credit margins) than the ones without cost advantage	*ANOVA*	

Recall that the main objective of the empirical examination, in accordance with the main research objective, is to empirically document that businesses with cost advantage realize higher operating profits over the businesses without cost advantage or with cost disadvantage. Because (deposit) banks are the sampled businesses; the above hypothesis, dubbed *cost advantage hypothesis*, is geared towards understanding the role of (funding) cost advantages on the degree of bank's operating profits (interest spreads or credit margins). It predicates that the banks [businesses] that have cost advantage realize higher or wider interest spreads or credit margins [operating profits] than the ones without cost advantage.

As both the theory and analytical application chapters will demonstrate in the following parts, cost advantages rise the corporate profit figures through lowering their unit funding costs and enlarging their transfer outputs. This indicates that having a cost advantage increases the passive side of the banks with cost advantage, since liabilities due to expansion in deposits and owner's equity due to enlargement in net profit for the period (NPAT in income statement) will both go up. Therefore, total assets have to increase as well. This may also be confirmed from the enlargement in transfer outputs which are loans (funds) banks are willing to offer to the market. In other words; enlargement in outputs that are bank loan volumes directly indicates grow-up in asset size, as loans are the most important active accounts itemized in the balance sheets of the deposit banks. This advocates that funding cost advantage is the one leading the asset size to get higher. Namely, larger asset sizes suggest lower funding (operating) costs and therefore point to the existence of cost advantage. I employ ANOVA in testing cost advantage hypothesis as it allows a comparison between the two groups. Following Ho and Saunders (1981), I divide the sample into two partitions in terms of asset sizes in order to understand the cost effect on credit margins or interest spreads which are nothing but the bank's operating profits.

Although it is not the main objective of the empirical investigation and hence of this research, a multiple regression analysis is also performed in estimating the margin through building a multiple linear regression model. For this purpose, consistent with Ho and Saunders (1981), Angbazo (1997) and Barajas *et al.* (1999) etc., a set of regressors that are exclusively firm-level variables (bank-specific factors) is employed in the model. Several hypotheses, called *spread hypotheses*, are proposed and tested over there. The next chapter describes the structure of this dissertation along all the parts and the main chapters

involved.

CHAPTER 5– STRUCTURE OF THE DISSERTATION

This dissertation is divided into five research parts which consist of twenty (20) main chapters. Presenting the introduction and surveying the literature, the part I and II establish the foundation to make a comprehensive, complete and accurate scholarly investigation. Part III conducts a transfer pricing analysis that theorizes the research question and serves for the satisfaction of the research objectives. Part IV makes an in-depth and at-length application that draws on the transfer pricing theorization in the setting of absence or existence of cost advantage considerations. Part V makes an exhaustive conclusion.

Including this chapter, part I comprises chapters on background, further motivation on transfer prices, scope and objectives and methodology. In the further motivation on transfer prices chapter, different aspects of transfer pricing are presented. Transfer pricing is there for instance shown to be an issue closely regarding multinationals and to be employed as a tool to establish and repatriate (manipulate) corporate profits. Part II includes chapters on the reviews of transfer pricing studies, legal strand and the relevant streams of governance intersecting the research question.

Transfer pricing review puts forth particularly theoretical transfer pricing works with different perspectives scholars have explored so far. These range from taxational issues to managerial concerns. Legal review that is utilized in making the arm's lengh application at cost advantage axis provides chapters on background, the arm's length principle, functional analysis, the arm's length range and transfer pricing methods. Legal analysis is followed along the real-life transfer pricing examples. This dissertation argues that it is the governance quality that creates cost advantages for firms. Therefore, corporate governance literature is surveyed as well, where theory on governance is explored following the presentation of definition and scope. More importantly, the literature contending that governance reduces costs and therefore generates cost advantages is also provided particularly from accounting aspect. A discussion concludes the literature reviews part. Notice that these literature reviews or surveys present the general framework. In the operative parts of this dissertation, part III and part IV, the related or more specific literatures besides this general literature are also provided in the course of performing the examinations, including the empirical study as well.

Part III which establishes the backbone of this study conducts a theoretical transfer pricing analysis under imperfect competition market types as well as showing the transfer pricing implications for what happens if we have perfect competition instead. Therefore, consisting of four main chapters, part III starts to discuss transfer pricing in perfect competition. It then examines monopoly market without cost advantage and with cost advantage states respectively, where there are two intra-group firms providing fund to each other. Financing business acts as a monopoly and the purchasing business acts as a monopsony, both of which have equal bargaining powers in setting the transfer prices and transfer outcomes. Financing business is the one utilizing cost advantage in the cost advantage state. The theoretical examination proceeds with oligopoly markets where there are two intra-group banks, bank L and bank F, providing fund to the market and belonging to the same group firm. As with monopoly, there are two cost states there. In oligopoly competition without cost advantage state, both the banks compete in Cournot type of competition. In oligopoly competition with cost advantage state where bank L is the one being the first mover and having a cost advantage over bank F, banks compete in Stackelberg competition setting. The last chapter discusses the theoretical findings. It suggests a framework that facilitates the establishment of a common equilibria set for the involving transacting parties, the intra-group firms, operating in monopoly. In return for the suggested resolution mechanism, it eliminates the duality or goal incongruence problem between the group firms.

Part IV is the other operative part complementing the work part III delivers. It performs an exhaustive application building on the results and the suggestions the theorization infers. Including four main chapters, part III first shows the influence of theoretical transfer pricing analysis on the financial statements of the intra-group firms running their operations in monopoly market. Effects are shown considering monopoly market without and with cost advantage states. Similarly, the effects of transfer pricing analysis on the financial statements of intra-group banking firms under oligopoly competition are examined in the context of the absence and the existence of cost advantage states each.

Followingly, taxational effects of theoretical transfer pricing investigation on the corporate financial statements from the aspects of dealing at and outside the arm's length. Taxation implications are presented for both the intra-group banking firms as the market price is available and therefore it is possible to substitute it for the corporate

transfer price. Part IV concludes with another important applicational chapter which is the empirical analysis. Sampling all the public deposit banks whose stocks are quoted in Istanbul Stock Exchange for the period from the first quarter of the year 2004 through the first quarter of the year 2008, empirical study documents that cost advantage matters in the determination of the bank interest spreads. This is another major contribution of this dissertation as bank interest spreads are the unit operating margins of banks that are the operating profits resulting from the performance of the main or ordinary course of depository banking businesses and can be considered as a proxy for capturing transfer prices as well. Therefore, in other words, empirical documentation significantly and robustly suggests that cost advantage positively influences the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments.

Part V is the last part finalizing this study. It concludes the dissertation through providing overall results, presenting managerial or practical implications, uncovering the limitations and suggesting some directions for a future transfer pricing research. Hence, exhaustively investigating the literature, the next part presents the overall literature reviews, starting from prior transfer pricing works.

PART II: LITERATURE REVIEWS

This dissertation aims to show that, due to different transfer prices and transfer (corresponding) outcomes/quantities, the businesses with cost advantage have higher operating profit figures relative to those of the other businesses that do not have such advantage. Once a cost advantage takes place, operating profits are subject to change since the level of the corporate transfer prices and the aggregate amount of quantity of the goods produced or of the services delivered will be different.

Remember that operating profit is the profit of the firm that is generated through the firm's main/ordinary course of operations, netted of its operating costs/expenses. As operating profit is a product of transfer prices and quantities, a change in transfer price and/or quantities will result in a change in the degree of operating profits. In particular, an operating profit is defined as the difference between operating income (e.g. sales revenue) and operating cost/expense (e.g. cost of sales etc.). The application part of this dissertation (e.g. effects of the transfer pricing analysis on the financial statements of the firms) makes a detailed investigation of this concept.

A low (high) amount of operating cost/expense that suggests high (low) operating profit implies a low (high) amount of cost of capital. Cost of capital by definition reveals the level of cost of funding/sourcing for the firms or businesses. This funding may be in the form of financing with own sources or with the foreign sources (leverage) or usually of both. Financing with own sources refers to owner's equity partitions of the firms' balance sheets, which is cost of equity capital. Financing with foreign sources refers to short- and long-term liabilities partitions of the firms' balance sheets, which is cost of debt capital and known as leverage in the literature.

Surveying the related literature, we see that there is no literature investigating the effect of costs of funding nor the operating costs on the transfer prices of businesses which this dissertation does. There is also no literature studying the effects of governance mechanisms/structures/skills/practices on transfer prices, in terms of operating profits. There is though a literature studying corporate governance which has tremendiously been broadened and advanced in the recent years. There is also a literature examining the influence of governance skills or mechanisms on the cost of capital volumes of the businesses. Therefore, starting from the related transfer pricing literature, I will continue with presenting the legal strand in the literature along with the special transfer pricing cases that will particularly help us in understanding the arm's length (taxation) implications. Although this research is not interested in exploring the reasons underlying cost advantage, I will then follow the governance literature, so as to infer some implications for a complete and exhaustive achievement of the objective of this dissertation.[94] To be more precise; I will examine the related governance studies that may help us out to have some venues to transfer prices and hence to operating profits. I will benefit from the related existing literature so as to conclude that governance creates cost advantages for businesses.

[94] As explained in the introductory part, this dissertation takes it granted or given that corporate governance might be a strong reason arising cost advantages for business corporations. Therefore, this research uses governance as an assumed factor to generate cost advantage for or induce cost disadvantage to firms. The assumption posits that the businesses with good governance structures realize (operating) cost advantages relative to the others that have insufficient or inadequate governance qualities.

CHAPTER 6– TRANSFER PRICING

" The transfer price is the intemal value placed on a raw material, good, or service as it moves from one related organizational entity to another within a consolidated corporate group. Transfer prices may apply to departments, divisions, subsidiaries or affiliate business units. Transfer pricing is an accounting convention which is receiving an increasing amount of public concern. Much of the attention focuses on how multinational firms employ transfer pricing to avoid paying income taxes. Importantly, it is increasingly apparent that attempting to minimize the tax burden is only one of the objectives of an international transfer pricing strategy." [95]

As explained in the introductory part of this dissertation, transfer pricing is a detection technique employed by official decision-makers (such as tax administrations) to monitor the earning flows of the businesses. Having a rigor economics basis, transfer pricing issue has remained as a hot topic occupying accounting, taxation and tax law areas in particular. Dating back to the middle of the last century and even before (e.g. Barone, 1935; Lewis, 1946; Hirshleifer, 1956 and 1964; Henderson, 1966; Gould, 1960; Edwards and Bell, 1961; Dopuch and Drake, 1964; Chambers, 1966; Arrow, 1959 and so on), debates on transfer prices keep going on over different spectra (e.g. Eden, 1998; Ault, 1992; Chandler and Plotkin, 1993; Dunning, 1993; Haufler, 2001; Mintz, 1992; Mossner, 1998; Sterling, 1996; Wassermeyer, 2001 etc.). As with in many other application areas, OECD has been a leader institution to guide on transfer prices in every member country all over the world. With the incorporation of these benchmarking rules into the markets, the decisions arrived at these meetings have become the major yardsticks, rather leading prescriptions, that the transfer pricing practitioners across the globe have been closely following. I will now examine the transfer pricing literature as follows.

Cook (1955) argues that transfer pricing is an issue decentralization may bring up. Decentralization can cause the decentralized divisions to maximize their own profits at the expense of the entire business. Therefore there is a need for a proper transfer price policy mechanism to be executed. Such a mechanism could prevent the decentralized

[95] Cravens (2007)

divisions from behaving opportunistically and might identify the degree to which the companies could decentralize.

Cook suggests that there are five different ways of pricing intra-company transfers: (a) market-based pricing, (b) cost-based pricing, (c) cost-plus based pricing, (d) combination systems and (e) (free) negotiation-based pricing. The scholar contends that when the market price is available for the transferred product, it should be used in first place. If a real market option does not exist, a market-based transfer pricing can not be used since it will not be a reliable indicator any more. In this, each case should be considered as unique so that the intra-company product or service should be priced through tailoring to match and satisfy the needs and the features the company may have.

Concerning cost-driven pricing, Cook notes that a pricing based on standard costing might arise conflicts of interest since it will give different economic incentives to reduce costs for instance. The scholar argues that opportunity cost-based pricing, albeit hard to gather, might perhaps be the best choice. Further, he argues that pricing at costs may mislead the management about its competitive or relative efficiency position in the market or in various industries the company operates. This is a strict conjecture since Cook believes that it is true irrespective of whether the company is decentralized or not.

Cook thinks that a cost-plus return on investment, despite having the similar problems of a cost-based pricing, may prove to be beneficial since it will force the management to take into account the return on investment. Therefore, it should be considered as a form of a market-based transfer pricing of intra-company transactions. As with cost-driven transfer pricing, Cook does not favor the pricing with negotiation either. One reason is that negotiation will be costly since it will take a significant amount of executive time. Further, negotiated prices can cause the financial reports prepared by divisions to be misleading.

Dean (1955) discusses the way decentralization may be made more effective. He suggests that a system which utilizes profit centers and competitive transfer prices can achieve an effective decentralization structure for the decentralizing company. Dean defines decentralization as setting up of almost autonomous operating divisions within a company. In terms of transfer pricing, Dean argues that competitive transfer pricing that is based on negotiation at arm's length bargaining reveals the best transfer price in terms of not only making a meaningful measurement of economic performance but of being a correct economic solution for the corporate management problem.

For the negotiation to serve a success, Dean suggests the following. Firstly, prices of all transfer in/out of a profit center, company division or autonomous unit, needs to be set up through negotiation between sellers and buyers. Secondly, negotiators need to have access to the entire data on alternative sources/markets as well as access to public/private information regarding market prices. Thirdly, sellers and buyers need to have a complete freedom on dealing outside the firm. Dean contends that a competitively negotiated transfer prices fortify the independence of operating divisions, meaning profit centers. The transfer pricing approaches except for a competitively negotiated transfer prices, such as published market prices, marginal cost, full cost-plus, sales-minus or traditional prices, are rather arbitrary, therefore may distort the economic performance of the company.

Being probably the most influential scholar in the field, Hirshleifer (1956) is accepted to be one of the earliest advocates, rather the founder of, the formal transfer pricing institution. The reason is that Hirsheifer has formally developed a transfer pricing theory which is known as Hirshleifer's approach. Hirshleifer's approach that constitutes the basis of many transfer pricing theoretical investigations is the key to the understanding of the idea of this dissertation. Therefore, before going any further, I want to first thoroughly mention what Hirshleifer's approach posits.

Hirshleifer noted that profit centers being separate divisions within the businesses have emerged as a result of aiming to capture the benefits deriving from decentralization in decision-making. He tried to set such pricing scheme that is needed to value the firm-wise (intra-firm) exchanged products in a way to maximize the profit figure of the entire firm. Hirshleifer argued that the firm profit may be maximized through the maximization of the individual/divisional units. He advocated that, knowing this is the way leading to the identification of the activity level within the firm divisions, of the performance evaluation for each of the divisions and of the level of the aggregate profit the entire business (overall firm) realizes.[96]

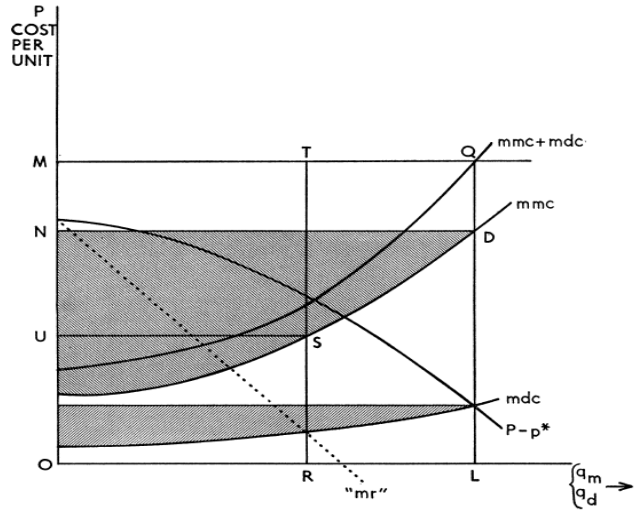
As different from Cook (1955) and Dean (1955), Hirshleifer suggests that, market prices will be the correct transfer prices in the literally competitive markets, where the transferred goods/services are produced at the competitive terms –e.g. perfect

[96] In the transfer pricing literature, firm divisions, like intra-group firms, are the strategic business units of the firms or the businesses that have discretion to decide to a certain degree and that aim at maximizing their profits along cost minimization. This may even occasion at the expense of the other firm divisions, intra-group firms or the headquarter per se. Refer to the supra footnote 65 for this.

competition.[97] On the other hand, if the market is imperfectly competitive such as monopolies, oligopolies, monopolistic competitions; or, if not any market exists for the transferred product (e.g. no intermediate markets), transfer prices should rely on the valuing at marginal cost or somewhere between market price and marginal cost. The figure below illustrates the establishment of a joint level of output for a firm, where the market is competitive for the final product.

In the following figure, q_m and q_d stand for the quantity/output levels of the manufacturing and distribution divisions respectively. Hirshleifer argues that the firm-wise best solution will be obtained through the combination of q_m and q_d at such an output where P, the price of the final product, sums the marginal manufacturing cost of the manufacturing division, *mmc*, and the marginal distribution cost of the distribution division, *mdc*. The lower shaded area points to the profit volume of the firm distribution unit while the upper shaded area represents the profit figure of the firm manufacturing unit. As long as P is equal to OM in the figure, the vertical distance, OL will read the level of the optimum output.

Figure 6.1: Determination of The Best Joint Level of Output



Source: Hirshleifer (1956)

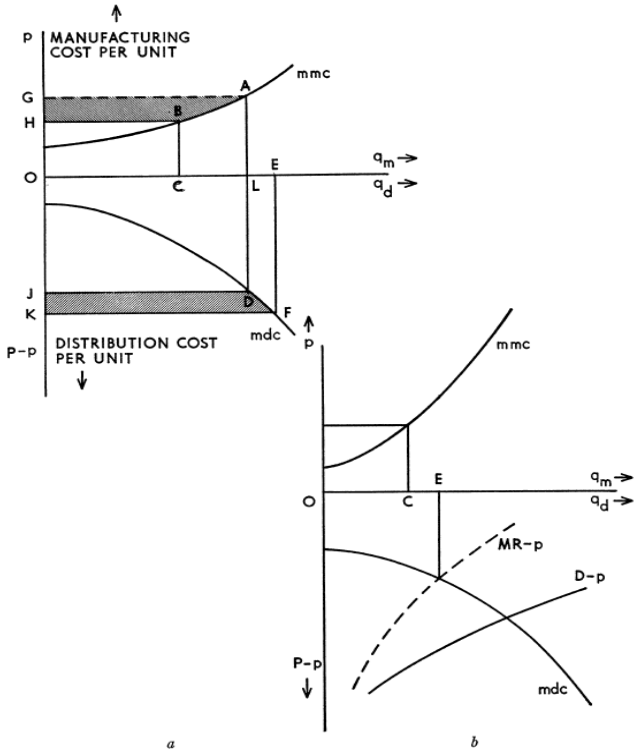
The upper figure further tells that, as long as marginal manufacturing costs outweigh average variable costs; transfer price, p*, will equal to the marginal manufacturing costs, *mmc*. On the other hand, the marginal revenue, mr, that is tangent to the

[97] Dean argued that negotiated competitive prices will reveal the accurate transfer prices while Cook suggested that market-prices should be followed as pricing the transferred product.

difference (margin) between P and p*, will make sure that marginal distribution cost, *mdc*, will correspond to P – p*.

If we relax the assumption that a unique joint output level should be satisfied for the involving firm divisions and suppose that each firm division has a full leeway (decentralized) on determining their own output levels, the transfer price, p*, will be equal to p so as to achieve an intra-firm trading. In the figure 6.2(a) below, manufacturing cost per unit is measured upward across the Y-axis while distribution cost per unit is downward measured. In this case, p* will equal to p.

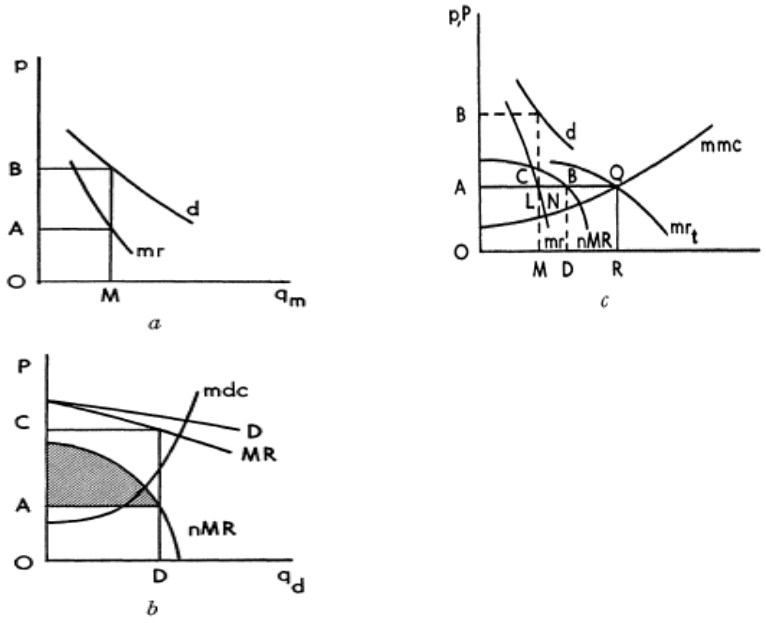
Figure 6.2: Best Divisional Levels of Output: Competitive Intermediate Market



Source: Hirshleifer (1956)

Hirshleifer suggests that we do not need to assume the existence of market competitiveness for the supplied final product. If we assume that the distribution division has a sloping demand curve as in the figure 6.2(b) above, it will produce at OE where the marginal distribution cost, mdc, will be the same as the difference between the marginal revenue, MR, and the price, p. In the case of imperfectly competitive intermediate market, irrespective of the degree of the competitiveness for the final product, the transfer price will be set equal to the marginal manufacturing (producing) cost of the seller division. The figure illustrating this establishment is given as below.

Figure 6.3: Solution for Imperfectly Competitive Market



Source: Hirshleifer (1956)

The upper figure tells that, the distribution division will determine the net marginal curve and produce where the transfer price, p*, is equal to net marginal revenue, nMR. Manufacturing division will produce at the point where marginal manufacturing cost crosses over marginal revenue, mr_t. The price it charges, p, will always be higher than the transfer price, p* as the figure 6.3(c) suggests. Notice that mr_t sums *mr* and *nMR*.

Bierman (1959) considers the issue of pricing intra-company transfer as a problem of decentralization. He notices that even though decentralization is expected to serve for the maximization of both the division's and the firm's profits, it does not have to be necessarily so. The divisional/unit manager may behave strategically to maximize her own profit volume. The scholar argues that intra-company transfers could be valued using (i) market price, (ii) marginal costs, (iii) variable costs, (iv) full costs and (v) negotiated price.

In case it is available, Bierman argues that, market price should be considered as the best method for pricing intra-company transactions from the standpoint of measuring performance of the selling division. If not any market price is easily available to obtain, a negotiated price may be used alone. Negotiation process may be backed up with an arbitration procedure. The scholar concludes that there is no one best approach of

transfer pricing. Further, he contends that the larger the significance of the intra-divisional transfer, the more unreliable the measures for the divisional incomes will be.

Table 6.1: Transfer Pricing Methods For Different Uses	
Use	**Method of Transfer Pricing**
Performance Measurement	Market price if available; if not, negotiated price
Decision Making	Marginal costs if available; if not, variable/differential costs
Financial Accounting (for reporting purposes in line with generally accepted accounting principles (GAAP))	Full Cost of Product

Table 6.1 above summarizes the suggestions Bierman makes. In there, decision making refers to (a) make/buy, (b) pricing of the final product/service, (c) the output/quantity level, (d) capital budgeting decisions and decisions to drop the products, which are general kinds of decisions for the company. Notice that for financial accounting purposes, Bierman suggests that intra-company transactions should be priced on full cost (of the product) basis. Accordingly, transfer price will reflect all the costs apportioned to a product, including fixed overheads –unlike variable costing. As to be seen in the following discussions of this dissertation, in full cost (absorption costing) system, all types of costs that the company records are incorporated or embedded into the establishment (calculation) of its profit figures (e.g. operating profit, earnings before interest and taxes, earnings before taxes, net profit after taxes etc.). Contrary to a full cost system, in variable costing system, not all the costs that accrue in a given period, but only the variable costs are considered when building the company profit. In the latter, overheads are by definition excluded from the production costs and hence from the cost of final product sold figure.

Contemporary transfer-pricing methods may be categorized as administered and negotiated. Administered transfer pricing approach, as the name suggests, implies the direct involvement (e.g. rulings, arrangements, supervision etc.) by the top management of the firms. On the other hand, a negotiated transfer pricing stipulates that

unit/divisional managers have a freedom to negotiate on, if intra-company transfers take place, the quantity to be transferred and the payment for the transfer.[98]

As the definition states and as the entire dissertation implies, transfer pricing is broad in terms of its effects. One of the research bodies that has emerged has cultivated on the corporate organizational structures. From Lawrance and Lorsch (1969), Watson and Baumler (1975), Otley (1980) to Hopwood (1983) and Jones (1985), it has been contended that management accounting and control discipline should be cooperatively examined with organizational behavior. The scholars including Watson and Baumler (1975), Williamson (1979), Eccles (1983, 1985), Spicer (1988), Van der Meer-Kooistra (1994), Colbert and Spicer (1995) or such elaborated on organization wide transfer pricing issues. The scholars such as Rockness and Shields (1984), Grabski (1985), Merchant (1985), Anthony (1988), Merchant and Manzoni (1989), Shields and Young (1993), Anthony and Govindarajan (1995), Berry *et al.* (1995), Kim and Mauborgne (1996), Chow *et al.* (1999), Simons (2000), Ahrens and Chapman (2004) or some others worked on management control systems. They have all argued that transfer prices can be deployed as a corporate tool to achieve an effective organizational (governance) structure.

Brem and Tucha (2005) consider transaction cost economics on accounting for the mainstream transfer pricing in multinational businesses. Discussing the right intracompany transfer price, the scholars borrow the idea of the reorganization structures of multinationals along the corporate value chains. They argue that the mainstream transfer pricing originating from the arm's length principle reads an inappropriate pricing mechanism for the globalized multinational enterprises. They suggest that an entrepreneurial coordination may yield the best performance space for pricing (valuing) corporate activities and for making the accurate markup and residual profits' allocations across the involving value chains.

More recently, a paper by Cools *et al.* (2007) investigates management control structures coupled with the transfer pricing consideration in multinational enterprises. In the theoretical model the scholars suggest, transfer pricing tax compliance is presented with single set of transfer prices, where they pose the questions such as 'how prices are set', 'who is involved', 'what information is used', 'when the prices are set' or 'how the conflict is managed'. The scholars embed two alternative discussion points to their

[98] Vaysman (1998)

model, a *management control system design* and a *management control system use*. The management control system design involves organizing controls, planning controls and evaluating/rewarding controls. The management control system use entails coercive/enabling use, internal transparency, global transparency, flexibility and repair issues. However, there was not any robust link established between management control systems and organizational structures in view of transfer prices.

Pfeiffer and Wagner (2007) try to understand the effectiveness of transfer prices (internal markets) relative to budgets (hierarchies) in the setting of a conventional incomplete contracting model. The reason in doing so is to see how the given structures provide a priori investment and ex post intra-firm trade incentives. The scholars demonstrate that as long as there is a robust affirmative complementarity among the outside markets, budgets will outweigh the prices. Robustness of the complementarity is decisive on stating that the involving firm may build an internal market or set a hierarchy to manage decentralized decisions.

The study by Pfeiffer and Wagner (2007) particularly shows that once the complementarity linkage between the selling and supplying market is strictly positive, uninformed central management might optimally be able to coordinate inter-divisional trade with the budgets. Complementarity is measured with respect to the beta factor incorporated in the linear regression analysis. The scholars notice that if the degree of complementarity among the outside markets rises up, transfer prices per se, will register a dysfunctional value in a systematically increasing manner. They address the question if the central management ought to build tight or loose standards to motivate its managers. Specifically, they suggest that transfer prices, ex ante, should be established at a point that corresponds to the expected costs in terms of the investment decision of the production unit. Concerning the firm's organizational structure, the scholars argue that if the central management decides to employ a transfer price mechanism, we should expect a profit centre structure. On the other hand, if the central management considers the budgets as a more appropriate pricing policy, we would rather face a cost center framework.[99] The scholars such as Eccles and White (1988), Milgrom and Roberts (1992), Brickley *et al.* (1995), Kaplan and Atkinson (1998) and Joskow (2004) considered specialized/proprietary goods and services for the state of vertical integration in this.

[99] See Grossman and Hart (1986), Hart (1996), Holmström and Tirole (1989), Williamson (1985). For the timing of using a particular organizational structure, refer to Brickley *et al.* (2004) among the others.

The transfer pricing literature that has been shortly mentioned up until here is not the one this dissertation is interested in. This dissertation does not attempt to establish any transfer pricing setup for various kinds of organizations nor develop any management control system for the businesses with different transfer prices and organizational backbones. The objective of this dissertation is rather to show that under imperfect competition, the businesses with cost advantage should have higher operating profits than the businesses without any cost advantage. The mathematical reason for this is that transfer prices and corresponding (transfer) outputs of the businesses with cost advantage are different from those of the other businesses who suffer from the lack of any cost advantage. There is no literature (directly or indirectly) examining this nor any research body that studies the effect of cost advantage on transfer prices. This dissertation is an early one to do that. Therefore, I will rather investigate the main transfer pricing research strand that has evolved in terms of decentralization or strategic price establishments. The reason is that the intra-group banking firms (oligopoly) or the intra-group firms (monopoly) whose transfer pricing behaviors will be examined in the following chapters are to be assumed to be decentralized bodies who are entitled to make transactions among each other or with the parties outside their firms when available. I will also cite the transfer pricing studies in terms of transfer pricing approaches; i.e. transfer pricing with cost-based, market-based, negotiation-based etc.

Examining the behavioral effects of establishing the transfer prices by the corporate top management, Kassicieh (1981) investigates international intra-company transfer pricing context. Considering Shulman (1966), Greene (1969), Arpan (1971) and following Horst (1971), Niekels (1976) and Merville and Petty (1978); Kassicieh (1981) studies the matters that are important for the identification of the transfer prices of multinational businesses. The scholar builds a model of transfer pricing incorporating all the significant parameters that specify the profit figure of the businesses, encompassing economic externalities and interdependencies like nonlinear cost functions and functional relationships among the transfer prices, supply and demand. The scholar advocates that transfer prices that should be perceived as uncontrollable by the corporate divisions/liasons should be stipulated by top management. Dopuch and Drake (1964) use a mathematical approach to solving transfer pricing problem. Solomons (1965) suggests that when there is a competitive market and the buying division can freely access to its use, a market-based transfer price should be used. He

argues that if the market is not competitive or rather imperfect and if the transfers do not have a significant effect, a negotiation-based transfer pricing relying on a standard full cost plus a return on capital mark-up should be followed (McAulay and Tomkins (1992)).[100]

Abdel-khalik and Lusk (1974) make a synthesis of transfer pricing concept and approaches. They argue that there is a need for an internal pricing system if the cost of the transfer commodity is a significant covenant of the final product and if profitability is a viable consideration when to assess performance of the divisions or intra-firm units. In this context, it should be recognized that inappropriately driven transfer prices may distort resource allocation. Anthony *et al.* (1984) advocate that if there is no an external market for the good or service produced by the intra-firm divisions, the transfer pricing should rely on standard cost plus an allowance for profit. They further propose that if the good or service that is internally transferrable can be externally purchasable or sellable, the transfer price should be made based on a competitive value. On the other hand, Kaplan and Atkinson (1989) conjecture that if we have a perfectly competitive market, the transfer price should be the market price that is netted of costs of sales, distribution and debt collection. If we have an imperfectly competitive market, the transfer price should instead read the value emanating from a negotiation procedure (McAulay and Tomkins (1992)).

Amershi and Cheng (1990) examine a decentralized firm with headquarter and two divisions, a producing division and distributing division. Producing division produces an intermediate product that the distributing division further processes and sells it out to the market. Amershi and Cheng build a general model of mechanism design that allows intra-firm resource allocation relying on accounting information. The scholars find that the resource allocation mechanism may de facto work as a transfer pricing mechanism, irrespective of whether the resource transfers happen among profit or cost centers.

Edlin and Reichelstein (1995) build a negotiated transfer pricing model, a bilateral monopoly, where divisional managers are allowed to make specific (irreversible) investments geared towards rising the value of intra-firm trade. The upstream and

[100] See McAulay and Tomkins (1992) for relying transfer price on various motives. These are *functional necessity motive*, *economic motive*, *organizational motive* and *strategic motive*. The functional necessity refers that transfer pricing arises as a result of decentralization; the economic motive suggests that transfer price may be used to ensure an efficient allocation of resources; the organizational motive implies that transfer price may be benefited to enhance integration and differentiation within the decentralizing corporations and lastly, the strategic motive, is meant that strategy may affect or be affected through accounting mechanisms.

downstream divisions are assumed to run in separate markets, except for an intermediate good. The intermediate good that is supplied by the upstream division to the downstream division is too specialized. There is no external market therefor. The scholars show that intra-firm trade evaluated through a negotiated transfer pricing will result in efficient outcomes given that the divisional managers can draft contracts arranged as fixed-price before any investment takes place. They further suggest that even though the terms of these contracts are probably subject to renegotiation after a new piece of information is released, they yet endow the divisions with an adequate protection for the investments they may be planned to make.

Building a model of cost-based transfer pricing, Vaysman (1996) considers (i) the costs and benefits of delegating decisions through transfer pricing and performance assesment and (ii) the performance of cost-based transfer pricing. His model has a framework where all the divisional managers have private (superior/asymmetric) information than top management. The scholar suggests that divisional performance evaluation that is conducted on a cost-based transfer pricing structure may make the firm gather an optimal level of profit. This is the case where divisional/unit managers are capable of conveying the private information they have to the members of top management of the company. The scholar argues that if the unit managers are unable to communicate their superior information to the top management, a managerial compensation scheme that draws on pricing the intra-firm transactions with a cost-based system makes the company to realize higher expected profits, than the state where top management of the firm makes all the decisions itself given the reports delivered by divisional managers.

Schjelderup and Sorgard (1997) argue that the affiliates of a multinational firm face competition and that the delegation of authority and the nature of competition affect the role played by transfer price which serves as a strategic and tax saving device. In their analysis, Schjelderup and Sorgard (1997) embed the delegation of the authority and strategic interaction to the microeconomics of transfer pricing which gives implications on profit repatriation through transfer pricing. They suggest that if the affiliates of a multinational enterprise engage in an oligopolistic competition, it could make sense if the multinational group sweeps away its incentives from maximizing the overall profits of the multinational depending on whether the rivals of the multinational in the market may react to at the favorable terms. Technically, this could happen once the

multinational establishes the transfer price at the central level and delegating decisions on quantities/prices to its locational affiliates. As a result of the strategic interface of the multinational, the transfer price charged to the intra-firm traded goods will be specified by the competition nature besides the tax and tariff rates.

Jie-A-Joen and Sleuwaegen (1997) investigate multinational firm behaviour under different tariff and tax rates, by showing the effects of strategic interaction. The scholars provide static and comparative-static test results of a strategic interaction model they developed and compare them with the ones obtained under monopoly. Thus, they show how the differences in optimization findings may be influenced through the degree of transfer price, in the treatment of government policies on transfer pricing and of the transfer pricing regime. The effect of strategic interaction upon the effectiveness of tax and tariff policies is measured relative to the changes in consumer surplus, government revenues, employment level as well as the balance of payments of the concerning countries. The scholars argue that the multinational enterprises may manipulate the transfer prices so that the activities of their market competitors could be materially influenced. This influence is specified with varying tax and tariff rates.

Cravens (1997) considers the transfer pricing as a strategy for the multinational businesses. She argues that transfer pricing, in an international setting, might be utilized to be a way to achieve the goals of the business and hence generate some strategic spillovers. The paper by the scholar investigates the findings by a survey about the executives of the US-based multinationals describing (international) transfer pricing objectives and strategies of the firms they are executing. The study particularly treats the effect of transfer pricing on the business performance and questions the tie building the transfer pricing effectiveness on the realization of the goals of the business. The scholar suggests that corporate executives feel that transfer pricing influences the measures of the business wise performance.

Following Eccles (1985) and Spicer (1988), Cravens (1997) argues that transfer pricing is a strategy more than a procedure. The scholar says that this aspect of transfer pricing refers to the viability of transfer pricing in the global business strategy as well as the business performance. Further, she argues that the transfer pricing method used by a business, – e.g. the comparable uncontrolled price method (CUP), the resale price method (RP), the cost-plus method (C+), the transactional net margin method (TNMM), the profit split method (PS) –, gives an accurate idea on uncovering how any business

performs a transfer pricing strategy. The scholar suggests that once transfer pricing is used for achieving multiple objectives, the effectiveness of transfer pricing becomes a more important issue for the performance of the success of the entire business entity. She concludes that transfer pricing should be regarded as an effective strategic tool that is a key to the overall company success, rather than an accounting or taxation consideration to satisfy.

Vaysman (1998) builds a model of negotiated transfer pricing with private divisional information in view of decentralization. He envisages a firm having a compensation system that considers divisional performance evaluation and negotiated transfer pricing. In order to incorporate managerial negotiations, the scholar uses a dynamic bargaining model. He conjectures that as the firm may develop managerial compensation schemes and bargaining grounds, the transfer pricing framework that can be established in negotiated basis entitles to obtain the upper bound on the level of ad hoc profits.

Baldenius *et al.* (1999a) study market-based transfer prices along the intra-company discounts. They notice that given the existence of discounts, companies often price their internal (intra-firm) transactions at the outside market prices. These discounts are the immediate consequences of the cost differences between external and internal selling transactions. The scholars argue that when the supplying corporate division exerts a monopoly power that is available at the external market, one should not consider cost differences as explaining the attractiveness of the discounts on the intra-company transactions. Indeed, coercive application of the discounts does shrink the segmental profit the selling corporate unit realizes, while enhancing the segmental profit volume of the purchasing corporate unit. Putting the terms that might trigger the entire corporate profit, the scholars make a sensitivity analysis of the degree of optimal discounts. They conjecture that market-based prices with an optimally selected discount offer may perform good.

Perceiving risk-sharing procedure among the firm divisions as a special attribute of negotiated transfer pricing, Anctil and Dutta (1999) investigate negotiated transfer pricing together with segmental (divisional) versus firm-wide performance assessment. Anctil and Dutta's framework is such that a company that has two divisions makes a contractual agreement with the two managers to run the divisions while getting involved in interdivisional trade. Anctil and Dutta assume that the firm divisions are run by risk-averse managers. They argue that the divisions may rise up the aggregate surplus

through investing in costly relationship-specific transactions. The aggregate surplus is the natural consequence of interdivisional trade, of whose terms are stipulated by the negotiations the managers convene.

The above scholars further assume that contracts provisioning managerial compensation claims are linear functions of corporate- and division-level profits. They conjecture that as long as the compensation of the managers relies on their segmental profits, they will invest less than the volumes obtained under the first-best state. Besides; they suggest that even though the compensation contracts that are contingent on company wide profit volumes might per se trigger first-best investments, they yet expose an additional risk on the shoulders of the managers who are risk-averse. Hence, Anctil and Dutta suggest that the optimal linear compensation contractual arrangements will be stipulated through both the specific (divisional) and generic (corporational) covenants.

The studies by PwC (1984), Eccles (1985), Shelanski (1993) and Tang (1993) advocate that when there is not any external market for the intermediate product in question, since there will not be any price at arm's length, two versions of pricing appear as reasonable options to us: a negotiated transfer pricing and cost-based transfer pricing. Baldenius *et al.* (1999b) examine negotiated versus standard cost-based transfer pricing. They investigate the effectiveness of the alternative transfer pricing approaches through an incomplete contracting model. They argue that transfer pricing can be employed to satisfy two essential things: (i) to lead intra-company transfers and (ii) to generate incentives resulting in divisional upfront investments such as R&D, Machinery & Equipment, personel training.

The above scholars suggest that negotiation-based transfer prices, because of hold-up problems, will cause divisional managers to come up with lacking investment incentives. Preventing the hold-up problems, cost-based transfer prices will though induce disturbances in intra-company transfers. The scholars conclude that a negotiated-based transfer price may suggest a better alternative mechanism than a cost-based pricing scheme. However, there might be some cases where the opposite appears to be the fact. For instance, when buyer investments are of signifance to the firm and the selling corporate unit lacks of sufficient flexibility, standard cost transfer pricing scheme may record a more efficient pricing alternative than pricing with negotiation

merit. Notice that the reason for the inadequate flexibility might be the legitimate enforcement of the standard cost reports.

Drawing on the model by Bond (1980), Dawson and Miller (2000) study the way how transfer prices in decentralized multinational businesses react to the changes in the level of the international corporate effective tax rates. The pricing approach Dawson and Miller adopts is a transfer pricing established through negotiation merit. As Horst (1971) already contended, the negotiated transfer pricing outcome reverts back to the outcome obtained under perfect information with centralized decision-making.

Dawson and Miller argue that if the top management of the business achieves to effectively communicate with the divisonal managers or if the top management conducts a successful non-monetary reward scheme for the purposes of satisfying a viable cooperation with the divisional managers, the results to be gathered under imperfect information will approximate to the ones to be obtained under the availability of perfect information. This implies that centralized decision making dominates the decentralized decision making (negotiation wise), once we have varying tax rates. Further, when the arm's length is effectively applicable, centralized decision-making might yield a boundary solution while decentralized decision-making might suggest an interior solution. This is because outcomes derived from decision-making are directly compatible with intra-company trade. Notice that boundary solution refers to the vector of arm's length, on the other hand, an interior solution is the solution that reads outside the identified arm's length range for the transfer of the specific product of any business in question.

Zhao (2000) presents a model with a partially decentralized multinational firm that has one rival firm in the market. Zhao shows that transfer pricing may be used as rent-shifting instrument multinational firm could employ to battle its competitor. The reason is that the central offices of the multinational firm benefits from transfer prices in managing its subsidiaries. Given the product the rival firm produces such as intermediate good, final good or both, the value of the transfer price might be specified. Specification will also depend on if the rival firm is integrated or diffused. The scholar argues that decentralization and competition coupled with an entirely integrated rival lead to reducing the transfer prices. Notice that Zhao assumes that the central office of the multinational firm should always follow the resulting transfer price which is known by the rival firm(s).

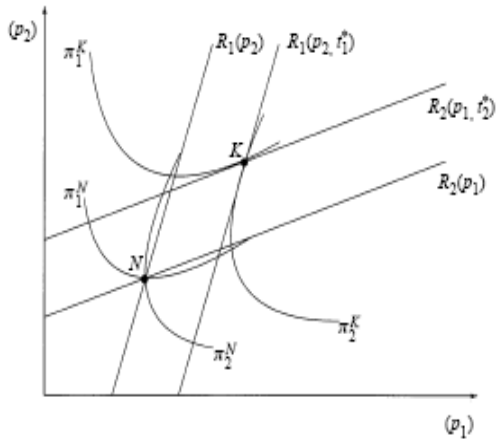
Göx (2000) examines transfer price as a strategic instrument in segmented businesses with duopolistic price competition. He argues that as long as transfer prices are observable, the central offices of the competing duopoly firms will charge such a (strategic) transfer price that is above the marginal cost of the intermediate good. This will result in the managers' acting like not harsh but softer competitors in the market for the finalized goods. On the other hand, when one can not observe the transfer prices, strategic transfer pricing will not be an equilibrium any more, implying that, the optimality will happen at a point where transfer price is equal to the marginal cost of the intermediate product.

The above scholar advocates that using an absorption costing system, it is possible to see the degree of transfer prices, bigger than or equal to marginal cost since the absorption costing system will reveal the transfer price through a public commitment. As a result of this, the arising profit volumes at the equilibrium significantly outweigh the profit volumes that may be obtainable on the basis of marginal cost-induced transfer pricing scheme.[101] Among the propositions made by the scholar are (i) the optimal transfer price exceeds the marginal cost of the intermediate product and (ii) the final product market equilibrium induced by strategic transfer pricing cannot be imitated by a mandated price scheme.

The figure below shows strategic transfer pricing equilibrium that the scholar obtained. Notice that the figure derives from the proposition suggesting that the final product market equilibrium led by strategic transfer pricing cannot be dublicated by a mandated or an obligated price scheme. In other words, both the competing firms strictly prefer decentralization over centralization as it is not possible to accomplish a collusive market outcome by means of a centralized decision ruling.

Figure 6.4: Strategic Transfer Pricing Equilibrium

[101] As shortly mentioned in the preceeding discussions; absorption costing, unlike variable costing, is a full costing technique in accounting where all the cost figures that a business incurs in a given period are recorded as the cost (expense) items in its financials.



Source: Göx (2000)

In the upper graph, N represents the common equilibrium under centralized decision making, $R_1(p_2)$ and $R_2(p_1)$ refer to the reaction functions of the firms, K to latter equilibrium with the latter reaction functions of $R_1(p_2,t^*_1)$ and $R_2(p_1,t^*_2)$. Notice that N, the common equilibrium, is achieved by the intersection of $R_1(p_2)$ and $R_2(p_1)$. Likewise, K, the new equilibrium being set after the decentralization, is arrived at the intersection of the new reaction functions, $R_1(p_2,t^*_1)$ and $R_2(p_1,t^*_2)$. Notice also that, as suggested early on, the new profit levels of the competing firms, π_1^K and π_2^K, are apparently higher than the previous profit levels of the firms which are π_1^N and π_2^N.

Lambert (2001) comprehensively explores the agency theory and its application to the main questions pertaining to accounting. He argues that transfer pricing structures like performance measurement systems, accounting and budgeting systems, decision support systems influence the quality of the interaction between people and organizations. Knowing this is important to the measurement of the firm-wide performance. He believes that having a multi-agent setup will let us examine the role of incentive problems on the resource/cost allocation between the agents and the mechanics of transfer pricing among the subdivisions of the firms. A multi-agent model will allow to see hierarchies, job design and task allocation issues that rely on a close interplay between organizational structures and managerial accounting.

The above scholar argues that transfer pricing is quite similar to the capital budgeting procedure. The reason is that what is transferred as a resource in the capital budgeting process is the capital per se, whereas the transferred resource in the transfer pricing vein is the intermediate product. In capital budgeting, the resource transfer happens between central offices of the firm and its divisions. On the other hand, in

transfer pricing, the resource transfer occurs between the upstream firm division to the downstream firm division.[102] The scholar argues that unlike what the neo-classicals have contended, setting transfer prices at marginal costs will not always lead to optimal results. For instance, when agents may make relation-specific investments reducing the marginal cost of production, or when those agents make the investments increasing the marginal revenue of the product as in the case of an end-unit department, it will not be optimal to equalize the transfer prices to the marginal costs. Saying the marginal revenue, the scholar refers to net realizable value of the product.

In the paper by Lambert, the reason for non-optimality is explained on the grounds of allocation. If the firm divisions have to share the benefits but to bear the full costs, they will tend to underinvest. The underinvestment problem relates to the noncontractability, meaning the incomplete contracting issue.[103] The scholar argues that the transfer price among the firm divisions is not a real transfer of money but an accounting denominator that appears on their books. Lambert believes that a dual pricing system could write off the problems traditional transfer pricing structures may induce. In particular, dual pricing systems might be used to prevent goal incongruence problem through providing proper incentive mechanisms that may result in the collusion of the firm managers (division heads). A dual pricing mechanism suggests that prices that upstream division charges be different from the ones downstream division is charged to. The scholar also notices that cost allocation is a matter of transfer pricing in some sense.

The scholars such as Capithorne (1971), Horst (1971), Samuelson (1982), Halperin and Srinidhi (1987), Harris and Sansing (1998) investigated the influence of varying tax rates as well as transfer pricing arrangements regulating pricing and production decisions.[104] Smith (2002) and Sansing (1999) examined how the current US transfer

[102] See Antle and Epen (1985) and Antle and Fellingham (1997) for the capital investment models that reckon on the transfer pricing study by Harris *et al.* (1982). Harris *et al.* study an organization with a principal, an upstream and N downstream divisions. There is an intermediate good, work-in-process, to be supplied by the upstream firm affiliate that obtains the capital from the principal. Once the upstream divivision is done with delivering the intermediate product to the downstream division, the downstream division finalizes the good in the work-in-process and sells it to the consumers in the market. In their model, the scholars assume the existence of private information in all the departmental heads. Private information concerns the knowledge on not the absolute but the relative effort productivities and the supply of firm resources.

[103] To further see the incentive problems for the corporate divisions that are inclined to make upfront investments for enhancing their marginal profitabilities, refer to Alles and Datar (1998), Sahay (1997), Sansing (1999), Baldenius *et al.* (1999), Baldenius (2000) etc.

[104] Baldenius *et al.* (2004)

pricing regulations shape the investing incentives of the businesses.[105] Halperin and Srinidhi (1991) studied the allocative distortions in the decentralized businesses along the tax issues. Narayanan and Smith (2000) studied the effect of taxes and alternative market structures on the transfer prices that are expected to be achieved. Hyde (2002) shows that internal company transfer prices might be isolated from prices at arm's length, where the local corporate division establishes the taxational and managerial transfer prices. Baldenius *et al.* (2004) try to find a way to merge managerial and taxation objectives in the vein of transfer pricing. Specifically, the scholars investigate the transfer pricing behavior of multinationals in the case when individual corporate divisions are exposed to varying taxation regimes, particularly different income tax schemes.

Following Hirshleifer (1956), Baldenius *et al.* (2004) argue that the optimal internal transfer price ought to be a weighted average of the pre-tax marginal cost and the best preferred price at arm's length. Examining the effectiveness of alternative transfer pricing rules in the world of cost- and market-based transfer pricings, for the purposes of taxation, the scholars assume that the pricing business is able to separate its internal transfer price from the (third-party) price established at arm's length terms.

The upper mentioned scholars propose that when the supplying corporate division/unit sells the concerning intermediate (transferred) product to the outsiders, the external price should be considered to proxy for the arm's length price. They contend that concerning internal corporate performance evaluation, businesses should not price their intra-firm transactions at the arm's length price as long as the supplying corporate unit is monopoly in the external market. Furthermore, they conjecture that through the imposition of intra-company discounts, the adjustments, business entities may mitigate problems occurring due to concomitant double marginalization and thus achieve some cost (tax) savings along the varying income tax rates. The scholars argue that intra-company discounts might be optimized, being specified on the divisional income tax rates and the market parameters.

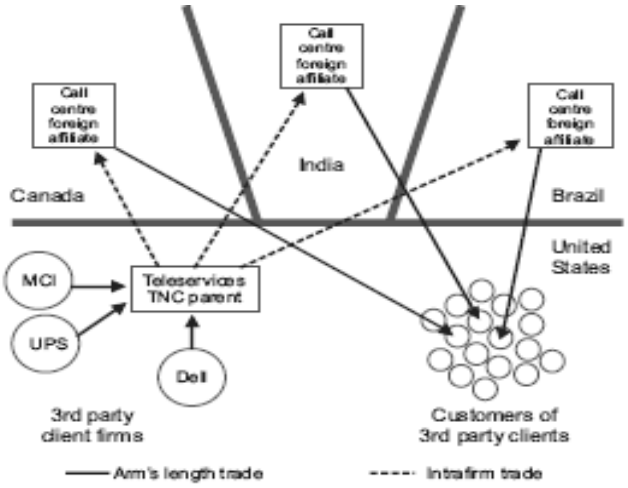
Investigating strategic transfer pricing in the setting of risk/effort averse divisional corporate managers, Göx and Schöndube (2004) argue that the agency problem might let the transfer pricing be employed to utilize commitment in the case where the transfer prices are not observable. This is because transfer prices will be built above marginal

[105] Ibid.

cost for removing the agency problem; namely, there will not be any space for the strategic pricing usage. Removing the agency problem is also meant to be resoluting on the compromising balance between risk and incentives. Following Machlup (1967), Hart (1983) and Schmidt (1997), the scholars conjecture that the optimality of managerial authority will rely on the risk premium besides the competition intensity in the market for products. This conjecture draws on the supposition that the pricing decision is delegated to the manager who is risk-averse and on the dual functionality of transfer prices –incentive apportionment and optimality at the edge of marginal costing. The scholars highlight that the delegation of the pricing decision and the corresponding degree of transfer price will be the one to decrease the competition intensity.

Eden (2005) brings an economic approach to the transfer pricing of offshored business services while examining the implications from the rapid growth in the offshored business services. She conducts a case study of transnational businesses in teleservices industry. The particular reason to go over teleservices industry concerns its nature. Basically, Eden is aware that, the businesses in the teleservices industry have foreign liasons supplying inbound and outbound call services to their (third party) clients. She states that the firms functioning in this industry are of both vertically and horizontally transnational business types. She concludes that a went-for-cost or priced-at-cost approach is the proper way of finding out the correct transfer prices in the telecommunication business. The scholar models the teleservices transnational corporation (TNC) as follows.

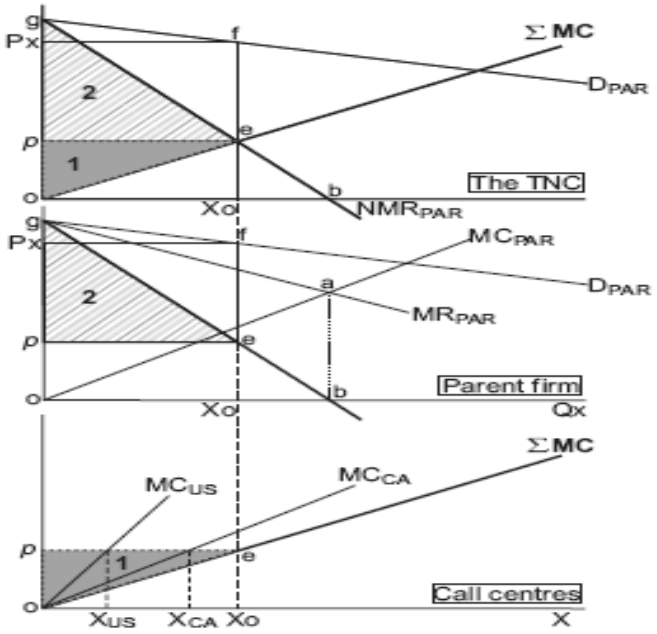
Figure 6.5: Modelling a Teleservices TNC



Source: Eden (2005)

Eden assumes that a teleservices TNC has a parental firm, PAR, located in the US and two call center affiliates (wholly-owned), the USCO and the CANCO. The USCO refers to the affiliate in the US and CANCO to the affiliate in Canada. She also assumes that both the affiliates provide the same type of services to the customers of the third party clients. Among the other assumptions of the model are (i) the demand curve of the parental company, D_{PAR}, is downward sloping, (ii) all third party clients are charged the identical price per unit of service, P_X, (iii) the volume of the services, X, being equal to the sum of services provided by each of the call centers of the TNC, where $X = X_{US} + X_{CA}$. Total revenue realized by the TNC is the product of P_X and the aggregated value of the services delivered by the call centers, meaning X. In other words, the total revenue may be obtained as $P_X * (X_{US} + X_{CA})$.

Figure 6.6: Profit Maximization by a Teleservices TNC



Source: Eden (2005)

As the upper figure depicts, from the above assumptions, the profit maximization condition Eden arrives at is $MR_{PAR} - MC_{PAR} = NMR_{PAR} = MC_{US} = MC_{CA} = p$ (1), where NMR is the net marginal revenue, MR is the marginal revenue, MC is the marginal cost and p is the efficient transfer price. The net marginal revenue of the

parental firm of the TNC, NMR_{PAR}, is the vertical distance between the two curves, MC_{PAR} and MR_{PAR}. $\sum MC$ sums the marginal costs of the two centers, MC_{US} and MC_{CA}. The point e where $\sum MC$ crosses NMR_{PAR} satisfies the statement (1) and therefore maximizes the global profit of the TNC. Notice that any tariff, corporate tax or any other market barriers are ignored in this. Notice also that p, the efficient transfer price, is the Lagrangian value, given the constraint that all the quantity produced is sold.[106]

Buus (2006) makes us aware that in the transfer pricing literature, the debate about how the transfer prices should be settled is still on.[107] The debate is whether the transfer prices to be charged need to be built in view of negotiation, arm' length or of a marginal cost basis. He demonstrates that optimal transfer price should be equal to the average cost of the supplying firm division/unit with a certain amount of economic profit of the business. This is independent of the market terms conditioning on intermediate or final product. The scholar further suggests that any other way of establishing transfer price is inefficient such that it will induce the corporate maneuver to be weakened to fight with its market competitors.

Baldenius and Reichelstein (2006) examine external and internal pricing in multidivisional businesses. Their diagnosis is that businesses that are multidivisional often consider external market prices so as to price (value) internal company transactions alongside the profit centers. The scholars investigate market-based transfer pricing if an upstream corporate division utilizes a monopoly power when to sell a proprietary partition to a downstream corporate division and to the external customers. They argue that when the internal corporate transfers are priced at the market price that prevails, the resulting transactions are disturbed through a double marginalization. Posing intra-company discounts will always enhance the global (overall) firm profits as long as the supplying corporate division has a limit of capacity.

The above scholars suggest that given the certain terms and conditions, it is quite likely to construe discount rules which may make the corresponding outputs and prices corporate wide efficient. Similarly, if the selling division has not any capacity constraint, the effect intra-company discounts (adjustments) might induce will not be clear. It will be therefore not probable to have a fully efficient outcome with a market-

[106] See Eden (2005) for this.
[107] For the earliest literature suggesting that optimal transfer prices should be equal to the marginal cost of production of the supplying business division, refer to Schmallenbach (1908/1909) and Hirshleifer (1956).

based transfer pricing, provided that the external market for the specific product does not prove to be large enough as to the internal market. The scholars come up with several propositions. For instance, they advocate that given the capacity constraint, a properly selected proportional discount rises the profit of the entire business.

The same conclusion may also be arrived even though there is no capacity constraint. This will be up to the assumption that internal and external demand are specified with linear functions satisfying certain conditions. The scholars show that depending on the assumption, it might be that there may not exist a transfer pricing rule reconciliating efficient sales quantities. They also contend that assuming that external market demand has a constant price elasticity, ε , and the unit variable cost for internal company transfer is $c_i(\theta) = c(\theta) - k$, the transfer price TP (p) will read as follows:

$$TP(p) = p.[1-(1/\varepsilon)] - k$$

In this way pricing procedure will accomplish the outcome efficiency. Notice that k, the incremental revenue figure, is the external marginal revenue netted of internal marginal revenue. From the cost model above, it is also apparent that, k is equal to the monetary amount that is the difference between selling the intermediate product internally and selling the intermediate product externally. In other words, intermediate good is internally sold at a cheaper price than an external selling.

Baldenius and Reichelstein (2006) draw upon the earlier transfer pricing papers that consider the intra-company discounts in their setups, meaning the adjustments. For instance, Kaplan and Atkinson (1998) argue that adjustments to the market prices might be considered to be procedures embedding cost savings and backing up internal corporate transfers. The PwC study (1984) shows that the adjusted market price reveals the prevailing market price that has been modified to incorporate market imperfections for the avoidance of internal sales. Merchant (2000) suggests that if the market competition is imperfect, a plenty of businesses employs market-based transfer prices. The technique in entitling such employment will count on the allowance for the deviations from the observed market prices. Likewise, Maher *et al.* (2005) conjecture that one of the common deviations in the market wide transfer prices is to build a policy enabling the purchasing corporate division with a discount opportunity for the internally generated items.

Considering arm's length arrangements respected in two countries, Korn and Lengsfeld (2007) study the corporate transfer pricing policy using such a transfer price

that is identical to the achievement of tax and managerial objectives of the firm. They suggest that three things determine the corporate transfer pricing policy: (i) interaction with competitors, (ii) minimization of tax levy and (iii) avoidance from punishments. They contend that as long as the transfer pricing rules are getting stricter, firms can lessen the harshness of competition and rise their profit volumes. Interestingly, the breach of the arm's length principle is incorporated in detecting the corporate equilibrium strategy.

As to empirical studies, as in theoretical investigations, the literature is silent. More clearly, there is no literature, to the best of my awareness, that study the relations on the establishment of transfer pricing from the standpoint of cost advantage as this dissertation does. The transfer pricing literature has rather evolved on different aspects, ranging from profit shifting/repatriation through transfer pricing manipulation, to tax competition, performance evaluation or to the usage of transfer pricing methods/approaches. Even though this dissertation will not follow, below will I present some of the scholarly investigations that are of some interesting implications.

For instance; Wu and Sharp (1979) empirically study transfer pricing practices. They report that criteria applying to transfer pricing (e.g. duly satisfaction of tax or tariff regulations, profit maximization) are subject to vary on industry basis for the American transnational businesses. Grubert and Mutti (1991), Hines and Rice (1994), Huizinga and Laeven (2005) show that there is an adverse relationship between the declared profit figures and the domestic tax schemes. Using firm level data on imports of oil in the U.S. petroleum industry for the years 1973 through 1984, Bernard and Weiner (1990) report that, businesses in exporting countries tend to manipulate transfer prices which deviate from arm's length prices. Bernard and Weiner (1992) investigate the relations between transfer prices and the excess cost of Canadian oil imports and document evidence on Bertrand vs. Rugman.

Rome (1992) suggests that transfer pricing influences decision making procedure internally (e.g. motivation and performance evaluation) and externally (e.g. tax optimization). Klassen *et al.* (1993) study the interaction between regional income shifting practices by multinationals and changes in the tax rates. Bernard and Laplante (1996) make a business analysis to conclude on transfer pricing in the context of the Canadian oil industry. Borkowski (1992) examine the organizational and international factors that influence transfer pricing of multinational businesses. Borkowski (1993)

show some document on managerial performance evaluation both locally and internationally. Borkowski (1997) investigates the organizational, environmental and financial factors (variables) that affect income shifting and transfer pricing between Canadian and U.S. transnational businesses. The scholar suggests that the larger U.S. transnationals tend to have higher rates of return while using non-market transfer pricing methods. On the other hand, smaller Canadian transnationals tend to use market transfer pricing approaches while having smaller rates of return.

Hallerberg and Bassinger (1998), Garrett (1998), Quinn (1997), Rodrik (1997), Swank and Steinmo (2002) and Slemrod (2004) investigate if corporate income tax revenues or rates are influenced through the measures such as capital controls or other independent variables. They tested if corporate income tax revenues or rates are adversely related to the inactivation of the control stipulation. Case *et al.* (1993), Besley and Case (1995), Heyndels and Vuchelen (1998), Brueckner (1998, 2001), Brett and Pinkse (2000) explored the estimation of tax reaction functions through local property tax rates or state income taxes.

Using the product level trade price data over 9000 U.S. imports from the U.K., Japan, Germany, France and Canada for the period in between 1981 and 1988, Swenson (2001) shows that transfer prices are exposed to only a small effect by taxes.[108] Using the data on intra-company trade flows between the U.S. and other 58 countries for years from 1982 through 1994 that have been obtained from the Bureau of Economic Analysis Unit at the U.S. Commerce Department, Clausing (2001) reports that transfer pricing significantly derives intra-company trade when confronting a change in the degree of tax rates. This implies that parental businesses in high-tax territories tend to overprice U.S. intra-company exports and underprice U.S. intra-company imports. For the businesses in low-tax jurisdictions, the opposite holds.

Using product level price data, Clausing (2003) documents that transfer pricing chargeable on intra-firm selling transactions is affected by different taxation schemes. The scholar contends that income or profit shifting is driven by tax motivation such that U.S. intra-company trade tends to have lower price for exports and higher prices for imports in the territories with low tax regimes. Grubert *et al.* (1993) study the motivations of foreign-controlled affiliates in the U.S. on reporting low taxable income,

[108] The reason is perhaps that the data the scholar uses reveal the trade among unrelated parties. See Devereux and Maffini (2006) for a literature investigation of empirical evidences that surveys the taxational effects along the location of capital, firms and profit.

earnings before taxes. The scholars report that there is almost a-50 %-difference in the level of the reported tax bases (i.e. taxable incomes) between domestic-owned businesses and foreign-owned businesses. Grubert (2003) evidences that intra-firm transactions that are itemized or registered in the total sales revenue of U.S. controlled foreign corporations materially react to the changes in taxes. Clausing (2001, 2006) found evidence that intra-firm trade transactions are influenced by taxation.

As different from the above scholars, Overesch (2006) studies to explore if pricing the intra-firm transactions in multinational businesses serves as a viable way for corporate tax planning. Using firm-level panel data from German multinationals, the scholar finds that local tax rates adversely and materially affect the size of the balance sheet items; i.e. intra-company selling transactions. This implies that transfer pricing in the intra-firm sales is considered as a major tool to optimize corporate taxes through profit shifting (repatriation).

On the other side, Devereux *et al.* (2008) have taken into account the strategic interactions among fiscal authorities as well as competition in taxes on national scale. The scholars investigate the transfer pricing from the standpoint of tax competition. Building a model where multinationals opt for a certain amount of capital stock as an immediate consequence of effective marginal tax rates, they explore if OECD member states compete with each other in terms of corporate income taxes and if this competition accounts for the fall in the level of the statutory tax rates in 1980s and 1990s. Employing data from 21 countries between the years of 1982 through 1999, the scholars document that member states compete on business taxes and that the resulting strategic interaction exists among open economies where there is no capital control. The next chapter presents the legal strand on transfer pricing that is followed not only by scholars but regulators and practitioners as well. The legal strand has particular tax implications and consequences, which will be quite useful in the application part of this dissertation.

CHAPTER 7– TRANSFER PRICING: LEGAL STRAND

7.1- Background

OECD is not only the relevant but the leading international institution that makes transfer pricing guidelines and other benchmarking regulations for the company transactions across the globe. Despite the fact that the guidelines, reports, regulations,

suggestions or any other arrangements conducted by OECD are not binding, they are yet taken into consideration as the foremost transfer pricing acknowledgements that almost all the regulators, scholars or practitioners closely and consistently follow.

OECD states that business transactions among different parts of a company or a multinational might not be exposed to the identical market forces shaping the relations between two independent firms. Transfer prices that are the streams of payments for goods or services transferred from a body (e.g. company, division etc.) of an enterprise to another one may diverge from the market (arm's length) prices. The underlying reasons may extend from corporate marketing or financial policies to tax optimization. In order to make sure that the tax base, the taxable income, of an enterprise or a business is aligned fairly, it is essential that transfers within a group approximate those that would be negotiated among independent firms, which refers to arm's length principle.[109]

In the OECD's 'Transfer Pricing Guidelines For Multinational Enterprises and Tax Administrations (2001)', the arm's length principle may be found to have been set out in the article 9 of the OECD Model Tax Convention. Guidelines that show how this principle should be put into practice or enforcement were primarily issued in the year of 1979, and were substantially revised and updated in 1995. Particularly, a plenty of new material was added on to the issue of comparability and to the transfer pricing methods, including profit approaches. Recall that comparability implies if a transfer among independent firms is similar to a transfer that happens within a corporate group.[110]

'2001 OECD Guidelines' expressly states that it *de jure* originates from the OECD Report on Transfer Pricing and Multinational Enterprises (1979). Guidelines were approved by the Committee on Fiscal Affairs on 27 June 1995 and by the OECD Council for the purposes of publication on 13 July 1995. The early 1979 report on Transfer Pricing and Multinational Enterprises is of substantiality since it establishes and clarifies the arm's length principle that is a tremendously major foundation in understanding the transfer pricing issue, as the following chapters will discuss. 1984 Report -Transfer Pricing and Multinational Enterprises: Three Taxation Issues-, and 1987 Report -Thin Capitalization- and the two other related OECD works, address the matter of transfer pricing in specific contexts as well. The mentioned 'Guidelines' further builds on the discussion undertaken by the OECD on the proposed transfer

[109] www.oecd.org
[110] ibid.

pricing regulations in the United States referring to the OECD Report on Tax Aspects of Transfer Pricing within Multinational Enterprises in the context of the United States Proposed Regulations in 1993. OECD notices that the content and the scope of the said Report were quite limited relative to the ad hoc Guidelines.

Starting from the next chapter, I will provide the core international legal strand that is all covered up within and throughout the OECD 2001 Guidelines. Saying the legal strand, I will particularly refer to the specific provisions 2001 OECD Guidelines stipulate, which are quite technical as transfer pricing is a complex issue to understand and apply to. Therefore, I will present the specifics of the relevant international legal body together with accompanying (numerical) examples that will clearly illustrate how to practice what the Guidelines tell us to do. This body is of a particular relevance on performing the analytical application in taxation aspect. Since the arm's length principle establishes the basis when it comes to transfer pricing, I will start with that.

7.2- The Arm's Length Principle

2001 OECD Guidelines (hereinafter referred to as OECD Guidelines or Guidelines) define the arm's length principle as an international standard that the OECD Member countries have agreed beforehand, to be followed in determining transfer prices for tax purposes. Being set forth in the OECD Model Tax Convention, article 9 suggests that, when conditions are made or imposed between the two enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, any profits which would, but for those conditions, have accrued to one of the enterprises, but, by reason of those conditions, have not accrued that way, could be incorporated into the profits of that enterprise and hence taxed. Guidelines recall that by seeking to adjust profits by reference to the conditions which would have obtained between independent enterprises in comparable transactions and comparable circumstances, the arm's length principle follows the approach of treating the members of an MNE group as operating as separate entities, rather than as inseparable parts of a single unified business. The reason is that since the separate entity approach treats the members of an MNE group as if they were independent entities or enterprises, attention is focused on or devoted rather to the nature of the dealings between those members.[111]

[111] Guidelines (1.6)

In the Guidelines, some reasons are provided to explain why OECD Member countries and other countries have acknowledged the arm's length principle. One of the major reasons is that the arm's length principle provides a broad parity of tax treatment for multinationals and independent enterprises. Since the arm's length principle puts independent and associated enterprises on a more equal footing for tax purposes, it avoids the creation of tax advantages or disadvantages that would otherwise distort the relative competitive positions of either type of the entities. In so wiping out these tax considerations from economic decisions, the arm's length principle backs up the growth of international trade and encourages investment.[112]

The Guidelines further suggest that the arm's length principle may work quite effectively in a great number of the cases. For instance, there is a plenty of cases that deal with the purchase or sale of commodities and the lending of money where an arm's length might already be found in a comparable transaction, undertaken by comparable independent enterprises, under comparable circumstances. Yet, there are also some remarkable cases where the arm's length principle is difficult or complicated to apply. For instance, in multinational groups involving the integrated production of highly specialized goods, involving the unique intangibles, and/or dealing the provision of specialised services, arm's length principle may get tougher to work with.[113] The Guidelines note that arm's length principle might be perceived as inherently flawed since the separate entity approach may not always explain the economies of scale and interrelation of diverse activities undertaken by integrated businesses. Despite this, there are no widely accepted objective criteria that enable the allocation of the economies of scale or benefits of integration between associated enterprises.[114]

In the Guidelines (1.10), we see that a practical hardship in practising the arm's length principle is that associated enterprises might engage in transactions that independent enterprises would not get involved. The reason might not be tax avoidance motivating such transactions, but rather be that, in transacting business with each other, members of a multinational group may confront different commercial circumstances than would independent enterprises. For instance, an independent enterprise may not be willing to sell an intangible, the claim to satisfy the products of future research, for a non-variant price if the profit potential of the intangible cannot be sufficiently predicted

[112] Guidelines (1.7)
[113] Guidelines (1.8)
[114] Guidelines (1.9)

or if there are other means of exploiting that intangible. In such a case, an independent enterprise may not want to take the risk of an outright sale since the price might not reveal the potential for the intangible to get abnormally profitable. Likewise, the owner of an intangible may not be quite decided on entering into licensing arrangements with independent enterprises. The reason may be because owner might be concerned about the depreciation likelihood of the value of the intangible. Conversely, the intangible owner could be willing to suggest the terms to associated enterprises that are less restrictive since the use of the intangible may be more closely monitored then. Recall that there is no risk to the overall group's (multinational's) profit from a transaction of this kind between the bodies of an MNE group. Recall also that an independent enterprise in such circumstances might exploit the intangible per se or license it to another independent enterprise for its pursuance at a specified period of time.[115] The same article states that it is because of this why an independent enterprise has to make a choice between selling the intangible and therefore mitigating the risk and hedging the profit, and exploiting the intangible and hence taking the risk that the profit will diverge from the profit that could be realized by selling off the intangible.[116]

There are other hardships in considering or following arm's length principle that has been cited in the Guidelines (1.11). For instance, the arm's length principle could lead to an administrative burden not only for the taxpayer but also for the tax administrations, particularly when to evaluate significant numbers and types of cross-border transactions. An associated enterprise may build the circumstances for a particular transaction once it is conducted, at some point though, the enterprise may be required to evidence that these are in concordance with the arm's length principle. On the other hand, the tax administration may also have to be a part of this verification process probably some years later after such transactions have been undertaken. In this case, the tax administration would then try to obtain information about similar transactions, the market conditions at the time when the transactions have taken place for countless and really different transactions. Such an operation normally gets much harder after those long lasting times.[117]

As suggested in the article 1.12 of the Guidelines, problems tax administrations and taxpayers could face may occur in gathering sufficient information to execute the arm's

[115] Guidelines (1.10)
[116] Guidelines (1.10)
[117] Guidelines (1.11)

length principle. Since the arm's length principle usually stipulates that taxpayers and tax administrations should assess the uncontrolled transactions and the business activities of independent enterprises, and compare these with the transactions and activities of associated enterprises, there might be a need of a substantial amount of data. Besides, the information that is accessible might be missing and hard to interpret; or, other information, in case it exists, may be hard to get due to its geographical location for instance. Further, it may not be possible to get information from independent enterprises owing to the matter of confidentiality. Even more, relevant information pursuant to an independent enterprise could not be available. In this case, formal assessments or evaluations by tax administration or taxpayer could probably be undertaken since transfer price may not deliver an accurate scholarship.[118]

2001 OECD Guidelines suggest some procedures to exercise arm's length principle. In order to follow a proper arm's length analysis, it is important that we make comparability analysis, recognize the actual transactions undertaken, evaluate seperate and combined transaction, use an arm's length range, use multiple year data if possible, consider losses, take into account the impacts of government policies, be aware intentional set-offs, assess customs valuations and follow the appropriate transfer pricing methods. The comparability analysis that rely on certain parameters is crucially important. Specifically; characteristics of property (e.g. goods, tangibles or intangibles) or services, functional analysis, contractual terms, economic conditions and business strategies are given to be functions that specify the effectiveness of the comparability analysis.[119]

7.3- Functional Analysis

Functional analysis is the core to the comparability and hence to the safe execution of the arm's length and transfer pricing analysis. The OECD Guidelines (1.20) stipulate that in dealings between two independent enterprises, compensation will normally reflect the functions that each enterprise fulfills, relative to the assets used and the risks assumed. Therefore, in determining whether controlled and uncontrolled transactions or entities are comparable, comparison of the functions undertaken by the parties is needed. This comparison should rely on a functional analysis that tries to identify and compare the economically significant activities and responsibilities undertaken or to be undertaken by the independent and associated enterprises. Thereby, a special attention

[118] Guidelines (1.12)
[119] Guidelines (2001)

should be devoted to the structure and organization of the group. In this, what juridical capacity the taxpayer performs its functions is of relevance as well.[120]

Guidelines (1.21) state that the functions that taxpayers and tax administrations may need to detect and compare may read design, manufacturing, assembling, research and development, servicing, purchasing, distribution, marketing, advertising, transportation, financing, management or such others. The principal functions undertaken by the party under examination should first be identified. Adjustments should then be made, if some material (significant) differences from the functions taken on by any independent enterprises with which that party is being compared are recognized. The same provision stresses that despite the fact that one party may provide a large number of functions relative to that of the other party to the transaction, it is the economic significance of those functions in view of their frequency, nature, and value to the respective parties to the transactions that is of salience here.[121]

The Guidelines (1.22) refer that, in the functional analysis, it may be quite relevant and useful in identifying and comparing the functions conducted to evaluate the assets that are employed or to be employed. This analysis should take into account the type of assets used like plant and equipment or the use of valuable intangibles etc., and the nature of the assets used like age, market value, location, outstanding property right protections and so on and so forth.[122] Guidelines (1.23) further note that, comparing the functions performed to consider the risks assumed by the respective parties may be useful and relevant. For instance, we know that, in the open markets, by definition, the assumption of increased risk needs to be covered by an increase in the expected return, which is the (required) risk premium. This suggests that, controlled and uncontrolled transactions and entities are not comparable if there are material differences in the risks assumed for which appropriate adjustments cannot be made. In other words, functional analysis remains incomplete unless the material risks assumed by each party have been considered. It may be because of the fact that the assumption or allocation of risks may affect the terms of transactions among the associated enterprises. In theory, as just stated, in the open market, the increased risk must be covered by a corresponding increase in the expected return. However, the actual return does not always have to

[120] Guidelines (1.20)
[121] Guidelines (1.21)
[122] Guidelines (1.22)

increase in proportion to or depending on the degree to which the risks are de facto realized.[123]

In the Guidelines (1.24), the types of risks to consider are given such as market risks like input cost and output price fluctuations, risks of loss associated with the investment in and use of PPE [i.e. property, plant, and equipment]; risks of the success or failure of investment in RD [i.e. research and development]; financial risks like the ones induced by currency exchange rate and interest rate variability, credit risks etc.[124] The Guidelines (1.25) suggest that, referring to the assets used and the risks assumed, the functions performed will determine, to some extent, the allocation/alignment of risks among the parties, and thus the conditions each party would expect at arm's length dealings. For instance, if a distributor undertakes the responsibility for marketing and advertising while risking its own resources in these activities, it may earn a commensurately higher anticipated return from the activity. The transaction terms would read different from the case where the distributor acts solely as an agent. In the latter case, the distributor will be compensated with its costs added up to the income appropriate to that activity she conducts.[125]

The Guidelines (1.27) recalls a particular attention to the controlling issue in functional analysis. It argues that, at arm's length dealings, it generally makes sense for the contractual parties to be allocated a greater share of those risks over which they have relatively more control. Suppose that Company A contracts to produce and ship goods to Company B, and the level of production and shipment of goods are to be at the discretion of Company B. In such a case, Company A may probably not agree to assume significant inventory risk, since it lacks of control over the inventory level while the other contractual party, Company B, does not.[126]

The same article suggests that functional analysis is required to determine to what degree each party bears such risks in practice such as currency exchange or interest rate risk. It also suggests that it is important to know if the taxpayer and/or the multinatinal group have a business strategy geared towards minimizing or managing such risks. In so doing, entities might draft or exploit hedging arrangements, futures, forward contracts, put/call options, spreads, exotic options or other derivative instruments. When

[123] Guidelines (1.23)
[124] Guidelines (1.24)
[125] Guidelines (1.25)
[126] Guidelines (1.27)

multinational group is only looking for mitigating some part of its overall group's risk exposure, it may suffer from huge losses.[127]

7.4- The Arm's Length Range

2001 OECD Guidelines define the arm's length range as a range of figures that is acceptable for establishing if the conditions of a controlled transaction (transaction under review) are at arm's length. The arm's length range is derived either from applying the same transfer pricing method to the multiple comparable data, or, from applying different transfer pricing methods. Guidelines (1.45) state that, in some cases, it will be likely to apply the arm's length principle to obtain a single figure, price or margin, that is the most reliable one to establish whether the conditions of a transaction are at arm's length. Yet, since transfer pricing is not an exact science, there will also be lots of occasions when the application of the most appropriate method or methods produces a range of figures all of which are relatively equally reliable. In these cases, differences in the figures that entail the range may be induced by the fact that in general the application of the arm's length principle only produces an approximation of conditions that would have been established between independent enterprises. The same provision notices that it is also possible that the different points in a range stand for the fact that independent enterprises engaged in comparable transactions under comparable circumstances may not establish exactly the same price for the transaction. However, in some cases, not all the comparable transactions treated will have a relatively equal degree of comparability. Therefore, the actual determination of the arm's length price necessarily requires exercising decent judgment. [128]

Guidelines (1.46) refer that, a range of figures may arise when more than one method is applied to evaluate a controlled transaction. For instance, two methods transcending similar degrees of comparability may be used to evaluate the arm's length character of a given controlled transaction. Each method may produce an outcome or a range of outcomes that differs from the other owing to the differences in the nature of the methods or the data, relevant to the application of a particular method, used. Yet, each separate range has a potential to be used to identify an acceptable range of arm's length figures. Data from these ranges could prove to be useful for the purposes of more accurately defining the arm's length range, in the instances where the ranges overlap, or reconsidering the accuracy of the methods used where the ranges do not. The same

[127] Guidelines (1.27)
[128] Guidelines (1.45)

article states that there is no general rule being stated on the use of ranges derived from the application of multiple methods. This may be because the conclusions to be inferred from their use will rely on the relative reliability of the methods employed to determine the ranges and the quality of the information used in applying the different methods.[129]

OECD Guidelines (1.47) say that where the application of one or more methods produces a range of figures, a substantial deviation among points in that range may indicate that the data used in establishing some of the points may not be as reliable as the data used to establish the other points in the range or that the deviation may result from features of the comparable data that require adjustments. In such cases, further analysis of those points may be necessary to assess their appropriateness for inclusion in any arm's length range. Guidelines (1.48) further suggest that if the relevant conditions of the controlled transactions, price or margin, fall into the arm's length range, no adjustment needs to be made. Similarly, if the relevant conditions of the controlled transaction, price or margin, fall outside the arm's length range stipulated by the tax administration, the taxpayer should in principle have the opportunity to present the arguments that the conditions of the transaction satisfy the arm's length principle, and that the arm's length range includes their findings. If the taxpayer is however unable to establish this fact, the tax administration must then decide how to adjust the conditions of the controlled transaction in view of the arm's length range consideration. The said provision notes that it could be argued that any point in the range yet fulfills the arm's length principle. Where is possible to distinguish among the various points found within the range, such adjustments need to be made to the point within the range that best reflects the facts and circumstances of the benchmarked controlled transaction.[130]

As one may realize from the upper statements, the arm's length range should in principle be built based on what the arm's length principle suggests for a particular transaction that the affiliates of a given business take on. It needs to be established such that it reveals the outcome that might be attained at best, given the factual terms and the conditions of the particular case in hand. After the establishment of the arm's length range, the early transfer price found will be adjusted to the new transfer pricing level that the tax administration stipulates to the controlled taxpayer. Following what the Guidelines propose and giving particular examples, the next sub-chapter discusses several transfer pricing methods that are enforced in the professional life.

[129] Guidelines (1.46)
[130] Guidelines (1.48)

7.5- Transfer Pricing Methods

In the OECD 2001 Guidelines, we see that the methods to evaluate transfer prices are (i) traditional transaction methods and (ii) other (transactional profit) methods. Traditional transaction methods refer to comparable uncontrolled price method, resale price method and cost plus method. Transactional profit methods rather refer to profit split method and transactional net margin method. OECD argues that the former category of transfer pricing methods, traditional transaction methods, should be preferred over the latter cascade of transfer pricing approaches, meaning transactional profit methods. The reason is that the former type is based on the results obtained under actual operational analysis that considers transactions of the contractual parties (entities) of the controlled businesses or multinationals. Namely, the results that the traditional transaction methods yield are the most reliable and hence the most robust results from statistical viewpoint. However, among traditional transaction methods, there is also a cascade as well. As to be seen from the below discussion, comparable uncontrolled price method should be sought to be used where available. In case where it is not possible or appropriate to use comparable uncontrolled price method or other traditional transaction approaches, other pricing techniques that are transactional profit methods may be enacted.

7.5.1 Traditional Transaction Methods

The OECD defines the transactional profit methods as the approaches examining the profits that arise from particular transactions among associated enterprises.[131] As covered in the upper discussions, there are three acknowledged transaction methods in the literature. I will start with the comparable uncontrolled price method as it always comes first to the attention of the transfer pricing readership.

7.5.1.1 The Comparable Uncontrolled Price (CUP) Method

The CUP is of particular relevance since it illustrates the best (simplest) case when to identify transfer prices and exercise the resulting (adjusted) tax bases. The OECD Guidelines (2.6) state that the CUP method compares the price charged for property or services transferred in a controlled transaction to the price charged for property or services transferred in a comparable uncontrolled transaction in comparable circumstances. If there is any difference between the two prices, this may indicate that the conditions of the commercial and financial relations of the associated enterprises are

[131] Guidelines (3.1)

not arm's length, and that the price in the uncontrolled transaction may need to be substituted for the price in the controlled transaction. Article (2.7) states that an uncontrolled transaction is comparable to a controlled transaction for the purposes of the CUP method if one of two conditions is met: (i) none of the differences (if any) between the transactions being compared or between the enterprises undertaking those transactions could materially affect the price in the open market; or (ii) reasonably accurate adjustments can be made to eliminate the material effects of such differences. Where it is possible to locate comparable uncontrolled transactions, the CUP Method is the most direct and reliable way to apply the arm's length principle. Consequently, in such cases the CUP Method is preferable over all other methods.

Article (2.8) of the Guidelines notes that it may be difficult to find a transaction between independent enterprises that is similar enough to a controlled transaction such that no differences have a material effect on price. For instance, a minor difference in the property transferred in the controlled and uncontrolled transactions could materially (significantly) affect the price even though the nature of the business activities undertaken may be sufficiently similar to generate the same overall profit margin. When this is the case, some adjustments should be made. Article (2.9) stipulate that, in considering if controlled and uncontrolled transactions are comparable, attention should be given to the effect on the price of broader business functions other than just product comparability. Where the differences exist between the controlled and uncontrolled transactions or between the enterprises undertaking those transactions, it may be difficult to determine reasonably accurate adjustments to wash out the effect on price. The difficulties arising in attempting to make reasonably accurate adjustments should not normally exclude the possible application of the CUP method. The same provision further suggests that practical considerations mandate a more flexible approach to enable the CUP Method to be used and to be supplemented as necessary by other appropriate methods, all of which need to be evaluated according to their relative accuracies. In this, every effort should be made to adjust the data, so that it may be used appropriately in a CUP method. As with any other transfer pricing method, the relative reliability of the CUP Method is affected by the degree of accuracy with which some adjustments can be made to satisfy comparability which is core to the functional analysis.[132]

[132] Guidelines (2.9)

In order to clearly comprehend the CUP method, below are some practical cases. I will provide three different cases exemplifying the CUP method. Each case should be considered in its own setting. Notice that the case resolutions may be directly inferred from the legal transfer pricing literature, particularly from the international transfer pricing arrangements drafted and published by OECD. All the cases to be presented in the other transfer pricing methods should be interpreted samewise.

EXAMPLE I

Table 7.1: CUP (Comparable Uncontrolled Price) Method

ABC sells television sets directly to its Italian subsidiary XYZ. ABC and other American firms also sell TV sets in Italy to unrelated (independent) parties through commission sales agents. By custom, the product is sold at FOB (free on board, meaning without any insurance or freight costs) from the purchaser's plant. An average Italian transaction price, based on sales by commission agents, is available from these agents. The transfer price per TV (in euro) set may be gathered as follows:

Average retail price in the Italy	800
Netted of:	
Adjustment for saving the agent's commission (10 % of the transaction price)	80
Freight adjustment (amount reflected in average daily transaction price less actual cost)	50
Total Deductions	130
Transfer Price using the CUP method	**€ 670**

Source: adapted from Eden (1998, p.38)

EXAMPLE II

The Fact & Transaction: ACo sells widgets to BCo, a related person. It also sells widgets to CCo, an unrelated person, for $ 100. Under CUP, ACo would charge BCo $ 100 (with possible adjustments for differences in shipping costs, etc.). Namely, referring to the actual sales of the same or similar products with unrelated persons will yield the transfer pricing result.[133]

[133] See McIntyre (2007) for the example, @ http://www.law.wayne.edu/McIntyre/text/intl_class/slides_transfer_pricing.pdf (18.04.2008).

EXAMPLE III

This example points to the case where the CUP method is not appropriate for calculating the transfer price.[134] Suppose that, Gluttony Unlimited (GUK), a UK company, manufactures a type of cheese which is calorie and cholesterol free when eaten while drinking fine French wine. The cheese is sold to related companies in Germany and the US and to an unrelated company, Guilt Free Parties (GFP) in France. A transfer price is needed for GUK's sales to its affiliates. The sale to GFP is the logical place to begin that investigation. GFP is a sponsor of cheese and wine parties in France. Individuals ask GFP to organize and conduct these parties and to provide the cheese, wine and other food and utensils needed to sponsor the event. GUK's subsidiaries in Germany and the US are distributors of the cheese to unrelated grocery stores and to wine and cheese party sponsors throughout their respective countries.

In this case, CUP is not a possible approach to obtain the correct transfer price. Namely, the price charged to GFP does not qualify as a CUP. The reason is that the level of the market is different, meaning that the US and German affiliates sell to a higher level of the distribution chain does GFP. Therefore, these differences can not be valued.

7.5.1.2 The Resale Price (RP) Method

The OECD Guidelines (2.14) state that the resale price method begins with the price at which a product that has been purchased from an associated enterprise is resold to an independent enterprise. This price, the resale price, is then reduced by an appropriate gross margin, the resale price margin, representing the amount out of which the reseller would seek to cover its selling and other operating expenses and, in the light of the functions performed [taking into account assets used and risks assumed], make an appropriate profit. What is left after subtracting the gross margin can be regarded, after adjustment for other costs associated with the purchase of the product such as customs duties, as an arm's length price for the original transfer of property between the associated enterprises. This method is probably most useful where it is applied to marketing operations. Article 2.15 of the Guidelines suggests that the resale price margin of the reseller in the controlled transaction may be determined by reference to the resale price margin that the same reseller earns on items purchased and sold in comparable uncontrolled transactions. Also, the resale price margin earned by an

[134] See PwC (2003) for the example.

independent enterprise in comparable uncontrolled transactions may serve as a guide. Where the reseller is carrying on a general brokerage business, the resale price margin may be related to a brokerage fee, which is usually calculated as a percentage of the sales price of the product sold. The determination of the resale price margin in such a case should take into account whether the broker is acting as an agent or a principal.

Article 2.16 states that an uncontrolled transaction is comparable to a controlled transaction (i.e. it is a comparable uncontrolled transaction) for purposes of the resale price method if one of two conditions is met. These are (i) none of the differences (if any) between the transactions being compared or between the enterprises undertaking those transactions could materially affect the resale price margin in the open market; or (ii) reasonably accurate adjustments can be made to eliminate the material effects of such differences. In making comparisons for purposes of the resale price method, fewer adjustments are normally needed to account for product differences than under the CUP Method, because minor product differences are less likely to have as material an effect on profit margins as they do on price.

The article 2.17 proposes that in a market economy, the compensation for performing similar functions would tend to be equalized across different activities. In contrast, prices for different products would tend to equalize only to the extent that those products were substitutes for one another. Because gross profit margins represent gross compensation, after the cost of sales for specific functions performed (taking into account assets used and risks assumed), product differences are less significant. For example, the facts may indicate that a distribution company performs the same functions (taking into account assets used and risks assumed) selling toasters as it would selling blenders, and hence in a market economy there should be a similar level of compensation for the two activities. However, consumers would not consider toasters and blenders to be particularly close substitutes, and hence there would be no reason to expect their prices to be the same.

Article 2.18 notices that although broader product differences can be allowed in the resale price method, the property transferred in the controlled transaction must still be compared to that being transferred in the uncontrolled transaction. Broader differences are more likely to be reflected in differences in functions performed between the parties to the controlled and uncontrolled transactions. While less product comparability may be required in using the resale price method, it remains the case that closer

comparability of products will produce a better result. For example, where there is a high-value or relatively unique intangible involved in the transaction, product similarity may assume greater importance and particular attention should be paid to it to ensure that the comparison is valid.

Article 2.19 suggest that it may be appropriate to give more weight to other attributes of comparability when the profit margin relates primarily to those other attributes and only secondarily to the particular product being transferred. This circumstance will usually exist where the profit margin is determined for an associated enterprise that has not used relatively unique assets (such as highly valuable intangibles) to add significant value to the product being transferred. Thus, where uncontrolled and controlled transactions are comparable in all characteristics other than the product itself, the resale price method might produce a more reliable measure of arm's length conditions than the CUP method, unless reasonably accurate adjustments could be made to account for differences in the products transferred. The same point is true for the cost plus method, discussed below.

The article 2.20 of the Guidelines states that when the resale price margin used is that of an independent enterprise in a comparable transaction, the reliability of the resale price method may be affected if there are material differences in the ways the associated enterprises and independent enterprises carry out their businesses. Such differences could include those that affect the level of costs taken into account (e.g. the differences could include the effect of management efficiency on levels and ranges of inventory maintenance), which may well have an impact on the profitability of an enterprise but which may not necessarily affect the price at which it buys or sells its goods or services in the open market. These types of characteristics should be analyzed in determining whether an uncontrolled transaction is comparable for purposes of applying the resale price method.

The OECD stresses some other occasions as well. For instance, in the article 2.21, it is said that the resale price method also depends on comparability of functions performed (taking into account assets used and risks assumed). It may become less reliable when there are differences between the controlled and uncontrolled transactions and the parties to the transactions, and those differences have a material effect on the attribute being used to measure arm's length conditions, in this case the resale price margin realized. Where there are material differences that affect the gross margins

earned in the controlled and uncontrolled transactions (e.g. in the nature of the functions performed by the parties to the transactions), adjustments should be made to account for such differences. The extent and reliability of those adjustments will affect the relative reliability of the analysis under the resale price method in any particular case.

Furthermore, the provision 2.22 of the Guidelines says that an appropriate resale price margin is easiest to determine where the reseller does not add substantially to the value of the product. In contrast, it may be more difficult to use the resale price method to arrive at an arm's length price where, before resale, the goods are further processed or incorporated into a more complicated product so that their identity is lost or transformed. This may be the case for instance where components are joined together in finished or semi-finished goods. Another example where the resale price margin requires particular care is where the reseller contributes substantially to the creation or maintenance of intangible property associated with the product, trademarks or tradenames, which are owned by an associated enterprise. In such cases, the contribution of the goods originally transferred to the value of the final product cannot be easily evaluated.

The article 2.23 says that a resale price margin is more accurate where it is realized within a short time of the reseller's purchase of the goods. The more time that elapses between the original purchase and resale, the more likely it is that other factors, such as changes in the market, in rates of exchange, in costs etc., will need to be taken into account in any comparison. According to the article 2.24, it should be expected that the amount of the resale price margin will be influenced by the level of activities performed by the reseller. This level of activities can range widely from the case where the reseller performs only minimal services as a forwarding agent to the case where the reseller takes on the full risk of ownership together with the full responsibility for and the risks involved in advertising, marketing, distributing and guaranteeing the goods, financing stocks, and other connected services. If the reseller in the controlled transaction does not carry on a substantial commercial activity but only transfers the goods to a third party, the resale price margin could, in light of the functions performed, be a small one. The resale price margin could be higher where it can be demonstrated that the reseller has some special expertise in the marketing of such goods, in effect bears special risks, or contributes substantially to the creation or maintenance of intangible property associated with the product. However, the level of activity performed by the reseller, whether

minimal or substantial, would need to be well supported by relevant evidence. This would include justification for marketing expenditures that might be considered unreasonably high; for example, when part or most of the promotional expenditure was clearly incurred as a service performed in favour of the legal owner of the trademark. In such a case the cost plus method may well supplement the resale price method.[135]

The article 2.25 recalls a particular attention to some cases. It states that where the reseller is clearly carrying on a substantial commercial activity in addition to the resale activity itself, then a reasonably substantial resale price margin might be expected. If the reseller in its activities employs reasonably valuable and possibly unique assets – for instance an intangible property of the reseller like its marketing organisation –, it may be inappropriate to evaluate the arm's length conditions in the controlled transaction using an unadjusted resale price margin derived from uncontrolled transactions in which the uncontrolled reseller does not employ similar assets. If the reseller possesses valuable marketing intangibles, the resale price margin in the uncontrolled transaction may underestimate the profit to which the reseller in the controlled transaction is entitled, unless the comparable uncontrolled transaction involves the same reseller or a reseller with similarly valuable marketing intangibles.

The article 2.26 says that in a case where there is a chain of distribution of goods through an intermediate company, it may be relevant for tax administrations to look not only at the resale price of goods that have been purchased from the intermediate company but also at the price that such company pays to its own supplier and the functions that the intermediate company undertakes. There could well be practical difficulties in obtaining this information and the true function of the intermediate company may be difficult to determine. If it cannot be demonstrated that the intermediate company either bears a real risk or performs an economic function in the chain that has increased the value of the goods, then any element in the price that is claimed to be attributable to the activities of the intermediate company would reasonably be attributed elsewhere in the multinational group, because independent enterprises would not normally have allowed such a company to share in the profits of the transaction.

The article 2.27 suggest that the resale price margin should also be expected to vary according to whether the reseller has the exclusive right to resell the goods.

[135] Guidelines (2.24)

Arrangements of this kind are found in transactions between independent enterprises and may influence the margin. Thus, this type of exclusive right should be taken into account in any comparison. The value to be attributed to such an exclusive right will depend to some extent upon its geographical scope and the existence and relative competitiveness of possible substitute goods. The arrangement may be valuable to both the supplier and the reseller in an arm's length transaction. For instance, it may stimulate the reseller to greater efforts to sell the supplier's particular line of goods. On the other hand, such an arrangement may provide the reseller with a kind of monopoly with the result that the reseller possibly can realize a substantial turn over without great effort. Accordingly, the effect of this factor upon the appropriate resale price margin must be examined with care in each case.

More importantly, the article 2.28 stipulates that where the accounting practices differ from the controlled transaction to the uncontrolled transaction, appropriate adjustments should be made to the data used in calculating the resale price margin in order to ensure that the same types of costs are used in each case to arrive at the gross margin. A case for this might be that research and development costs may be reflected in operating expenses or in costs of sales. The respective gross margins would not be comparable without appropriate adjustments. Below are some practical cases about the RP method to evaluate transfer prices.

EXAMPLE I

Table 7.2: RP (Resale Price) Method

ABC is the American distributor for its Italian parent's established line of autos. Comparable independent distributors in the US. earn profit margins of 12 %. ABC performs extra advertising and warranty services not normally provided by these distributors. The transfer price to ABC for a particular automobile (in dollars) is calculated as follows:

Final retail price in Canada	15.000
Netted of:	
Margin earned by comparable American distributors (10 % of the retail price)	1.500
Allowance for expenses borne by ABC not normally borne by comparable	400 for allowance for advertising 800 for allowance for warranty work

independent distributors	
Total Deductions	2.700
Transfer Price Using the RP method	**$ 12.300**

Source: adapted from Eden (1998, p.40)

EXAMPLE II

The Fact & Transaction: ACo sells widgets to BCo, a related person, and BCo sells them to unrelated retail customers for $ 200 each. Distributers in a similar line of business usually earn 20 percent of the sales price. Under the retail sales method, the price on the sale from ACo to BCo would be $ 160 [=($ 200 – (20 % of $ 200)]. The main reason is that the taxpayer is viewed as a distributer earning the customary percentage of the final sales price.[136]

EXAMPLE III

Shirts Unlimited (SU), an Italian company, manufactures and sells sports shirts. Manufacturing takes place at the parent company's factory in Italy. Subsidiaries in Germany, France and the UK serve as distributors in their respective markets. Through a search of comparable distributors of sports shirts, it is determined that independent distributors earn gross margins of 25 %. There is one major difference between the related party distributors and the independent distributors; the independent distributors also design the shirts, whereas the related party distributors do not. Upon further investigation, it is learned from independent distributors that they typically charge a 3 % (on sales) royalty for designing shirts.

Based on this information, the comparable resale price margin is adjusted for the design function. Hence, the gross margin to be earned by the related party distributors is reduced from 25 % to 22 % to explain the absence of a design function.[137]

7.5.1.3 The Cost Plus (C+) Method

Another important transaction-based method, the C+ method, has an important venue in the OECD Guidelines. The article 2.32 states that the cost plus method begins with the costs incurred by the supplier of property (or services) in a controlled transaction for property transferred or services provided to a related purchaser. An appropriate cost plus mark up is then added to this cost, to make an appropriate profit in light of the

[136] See McIntyre (2007) for the example, @ http://www.law.wayne.edu/McIntyre/text/intl_class/slides_transfer_pricing.pdf (18.04.2008).
[137] See PwC (2003) for the example.

functions performed and the market conditions. What is arrived at after adding the cost plus mark up to the above costs may be regarded as an arm's length price of the original controlled transaction. This method probably is most useful where semifinished goods are sold between related parties, where related parties have concluded joint facility agreements or long-term buy-and-supply arrangements, or where the controlled transaction is the provision of services.[138] The article 2.33 suggests that the cost plus mark up of the supplier in the controlled transaction should ideally be established by reference to the cost plus mark up that the same supplier earns in comparable uncontrolled transactions. In addition, the cost plus mark up that would have been earned in comparable transactions by an independent enterprise may serve as a guide.[139]

The article 2.34 of the Guidelines stipulate that an uncontrolled transaction is comparable to a controlled transaction, meaning that it is a comparable uncontrolled transaction, for purposes of the cost plus method if one of the two following conditions is met: (i) none of the differences (if any) between the transactions being compared or between the enterprises undertaking those transactions materially affect the cost plus mark up in the open market; or (ii) reasonably accurate adjustments can be made to eliminate the material effects of such differences. In determining whether a transaction is a comparable uncontrolled transaction for the purposes of the cost plus method, the same principles specified for the resale price method will apply. Thus, fewer adjustments may be necessary to account for product differences under the cost plus method than the CUP Method, and it may be appropriate to give more weight to other factors of comparability, some of which may have a more significant effect on the cost plus mark up than they do on price. The same provision notes that, as with the resale price method, where there are differences that materially affect the cost plus mark ups earned in the controlled and uncontrolled transactions, adjustments should be made to account for such differences. These differences might be found in the nature of the functions performed by the parties to the transactions. The extent and reliability of those adjustments will affect the relative reliability of the analysis under the C+ method in particular cases.[140]

The article 2.36 of the Guidelines underlies the fact that the C+ method presents some difficulties in proper exercise, particularly in the determination of costs. It states

[138] Guidelines (2.32)
[139] Guidelines (2.33)
[140] Guidelines (2.34)

that although it is true that an enterprise must cover its costs over a period of time to remain in business, those costs may not be the determinant of the appropriate profit in a specific case for any one year. While in many cases companies are driven by competition to scale down prices by reference to the cost of creating the relevant goods or providing the relevant service, there are other circumstances where there is no discernible link between the level of costs incurred and a market price. A case might be where a valuable discovery has been made and the owner has incurred only small research costs in making it.[141]

Furthermore, article 2.37 says that when applying the cost plus method one should pay attention to apply a comparable mark up to a comparable cost basis. It could be that if the supplier to which reference is made in applying the cost plus method in carrying out its activities employs leased business assets, the cost basis might not be comparable without adjustment if the supplier in the controlled transaction owns its business assets. As with the resale price method, the C+ method relies upon a comparison of the mark up on costs achieved by the controlled supplier of goods or services and the mark up achieved by one or more uncontrolled entities on their costs with respect to comparable transactions. Hence, the differences between the controlled and uncontrolled transactions that have an effect on the size of the mark up must be analyzed to determine what adjustments should be made to the uncontrolled transactions' respective mark up.[142]

The article 2.38 explains the immediate consequence of the previous article. It states that for this purpose, it is particularly important to consider differences in the level and types of expenses, such as operating expenses and non-operating expenses including financing expenditures, associated with functions performed and risks assumed by the parties or transactions being compared. Consideration of these differences may indicate the following: (i) if expenses reflect a functional difference (taking into account assets used and risks assumed) which has not been taken into account in applying the method, an adjustment to the cost plus mark up may be required; (ii) if the expenses reflect additional functions that are distinct from the activities tested by the method, separate compensation for those functions may need to be determined. Such functions may for example amount to the provision of services for which an appropriate reward may be determined. Similarly, expenses that are the result of capital structures reflecting non-

[141] Guidelines (2.36)
[142] Guidelines (2.37)

arm's length arrangements may require separate adjustment or (iii) if differences in the expenses of the parties being compared merely reflect efficiencies or inefficiencies of the enterprises, as would normally be the case for supervisory, general, and administrative expenses, then no adjustment to the gross margin may be appropriate.[143] The said article of the Guidelines further notes that in any of the above circumstances, it might be appropriate to supplement the cost plus and resale price methods by considering the results obtained from applying other methods.[144]

The article 2.39 of the OECD Guidelines devotes a special attention to the importance of accounting consistency which may be essential to the comparability issue. The said articles states that where the accounting practices differ in the controlled transaction and the uncontrolled transaction, appropriate adjustments should be made to the data used to ensure that the same type of costs are used in each case to ensure consistency. The gross profit mark ups must be measured consistently between the associated enterprise and the independent enterprise. In addition, there may be differences across enterprises in the treatment of costs that affect gross profit mark ups that would need to be accounted for in order to achieve reliable comparability. In some cases it may be necessary to take into account certain operating expenses in order to achieve consistency and comparability; in these circumstances the cost plus method starts to approach a net rather than gross margin. To the extent that the analysis takes into account operating expenses, the reliability of the analysis may be adversely affected as well.[145]

Similarly, the article 2.40 says that while precise accounting standards and terms may vary, in general the costs and expenses of an enterprise are understood to be divisible into three broad categories. First, there are the direct costs of producing a product or service, such as the cost of raw materials. Second, there are indirect costs of production, which although closely related to the production process may be common to several products or services. The costs of a repair department that services equipment used to produce different products may be given as example for this. Finally, there are the operating expenses of the enterprise as a whole, such as supervisory, general, and administrative expenses.[146]

[143] Guidelines (2.38)
[144] Guidelines (2.38)
[145] Guidelines (2.39)
[146] Guidelines (2.40)

The article 2.41 deals with the distinction between gross and net margin analyses. It suggests that in general, the C+ method will use margins computed after direct and indirect costs of production, while a net margin method will use margins computed after operating expenses of the enterprise as well. It must be recognised that because of the variations in practice among countries, it is difficult to draw any precise lines between the three categories described above. Hence, for instance, an application of the cost plus method may in a particular case include the consideration of some expenses that might be considered operating expenses. Yet, the problems in delineating with mathematical precision the boundaries of the three categories described above do not alter the basic practical distinction between the gross and net margin approaches.[147]

The article 2.42 discusses the issue of historical costs. It states that the C+ method may over-emphasize historical costs. Some costs, for example costs of materials, labour, and transport will vary over a period and in such a case it may be appropriate to average the costs over the period. Averaging also may be appropriate across product groups or over a particular line of production. Further, averaging may be appropriate with respect to the costs of fixed assets where the production or processing of different products is carried on simultaneously and the volume of activity fluctuates. Costs such as replacement costs and marginal costs also may need to be considered where these can be measured and they result in a more accurate estimate of the appropriate profit margin.[148]

The article 2.43 discusses the limitation of the application of the C+ method. It states that the costs that may be considered in applying the cost plus method are limited to those of the supplier of goods or services. This limitation may raise a problem of how to allocate some costs between suppliers and purchasers. There is a possibility that some costs will be borne by the purchaser in order to diminish the supplier's cost base on which the mark up will be calculated. In practice, this may be achieved by not allocating to the supplier an appropriate share of overheads and other costs borne by the purchaser, often the parent company, for the benefit of the supplier, often a subsidiary. The allocation should be undertaken based on an analysis of the functions performed by the respective parties, taking into account assets and risks assumed. The same provision also highlights the matter of the allocation of the overhead costs. It says that a related problem is how overhead costs should be apportioned, whether by reference to turnover,

[147] Guidelines (2.41)
[148] Guidelines (2.42)

number or cost of employees, or some other criterion. The Guidelines provide a chapter for cost contribution arrangements that covers this issue.[149]

The article 2.44 is a particular provision. It states that in some cases, there may be a basis for using only variable or incremental costs such as marginal costs, because the transactions represent a disposal of marginal production. Such a claim could be justified if the goods could not be sold at a higher price in the relevant foreign market. Factors that could be taken into account in evaluating such a claim include information on whether the taxpayer has any other sales of the same or similar products in that particular foreign market, the percentage of the taxpayers' production, in both volume and value terms, that the claimed " marginal production " represents, the term of the arrangement, and details of the marketing analysis that was undertaken by the taxpayer or multinational group which led to the conclusion that the goods could not be sold at a higher price in that foreign market.[150]

The article 2.45 notes that there is no general rule being set out that deals with all the possible cases. The various methods for determining costs should be consistent as between the controlled and uncontrolled transactions and consistent over time in relation to particular enterprises. For example, in determining the appropriate cost plus mark up, it may be necessary to take into account whether products can be supplied by various sources at widely differing costs. Related parties may choose to calculate their cost plus basis on a standardised basis. An unrelated party probably would not accept to pay a higher price resulting from the inefficiency of the other party. On the other hand, if the other party is more efficient than can be expected under normal circumstances, this other party should benefit from that advantage. The associated enterprise may agree in advance which costs would be acceptable as a basis for the C+ method.[151] Below are some examples to illustrate the method.

EXAMPLE I

Table 7.3: C+ (Cost Plus) Method
ABC, a wholly owned subsidiary of an Italian perfume multinational, produces an expensive perfume for sale in the US. using active ingredients purchased at arm's length. The active ingredient cost $3 per ounce of perfume; ABC's standard

[149] Guidelines (2.43)
[150] Guidelines (2.44)
[151] Guidelines (2.45)

manufacturing cost is $6. The firm also does custom formulations for other affiliates of its Italian parent. The industry average mark-up for bulk formulations performed by other perfume manufacturers in the US. is % 30 above standard cost. Custom formulations normally add an additional % 10 over standard cost. The transfer price per ounce of perfume for a particular shipment by ABC to one of the foreign affiliates (in dollars) is calculated as follows:	
ABC standard cost per ounce (excluding active ingredient costs)	6
PLUS	
Cost of active ingredients	3
Markup received by functionally comparable manufacturers in Canada (30 % of standard cost)	1.8
Additional cost of preparing custom formulation for the affiliates (10 % of standard cost)	0.6
Total add-ups	2.7
Transfer price obtained using C+ method	**$ 8.7**

Source: adapted from Eden (1998, p.43)

EXAMPLE II

The Fact & Transaction: ACo manufactures widgets at a cost of $ 50, sells them to BCo, a related person, and BCo sells them to unrelated retail customers for $ 200. Contract manufacturers in similar lines of business typically earn a gross profit of 30 percent. Under the C+ method, the price on the sale from ACo to BCo will read $ 65 which is equal to $ 50 + (30 % of $ 50).[152]

[152] See McIntyre (2007) for the example, @ http://www.law.wayne.edu/McIntyre/text/intl_class/slides_transfer_pricing.pdf, (18.04.2008).

EXAMPLE III

A UK company, Glass Shapes Ltd (GSL), is a specialist glass manufacturer. The company conducts all of its research and development and manufacturing activities in the UK. After the glass has been produced, it is shipped to the manufacturer's Irish affiliate where it is shaped, utilizing a special technical process developed by the UK company. The shaping process is not complex, nor does it require highly skilled labour. When the unfinished glass arrives at the plant, the Irish personnel examine the accompanying work order and immediately begin processing the glass. The Irish affiliate never takes title to the glass; rather, the unfinished glass is consigned to it.

In this case, the Irish affiliate is a contract manufacturer. It undertakes limited manufacturing activities and engages in no production scheduling, materials purchasing, or technical service. Furthermore, it bears no raw materials or market risk. When the shaping process is complete, the Irish affiliate ships the completed products to the UK parent for sale in the UK market. In addition to this service provided to the UK parent, the Irish affiliate also provides similar services to unrelated companies.

From the viewpoint of UK, the exercise of the CUP method is not possible here since the UK company uses no other contract manufacturer. Yet, as the Irish affiliate is also performing manufacturing services for unrelated companies, comparable information will exist from these transactions. In particular, the mark-up the Irish affiliate earns on services provided to unrelated companies can be used to apply the C+ method to the related party transaction.[153]

7.5.2. Transactional Profit Methods

As touched early on, the OECD has adopted two specific methods (other methods) to refer to transactional profit methods, namely; (i) profit split method and (ii) transactional net margin method.

7.5.2.1 The Profit Split (PS) Method

In the OECD Guidelines (3.5), it is stated that where transactions are very interrelated it might be that they cannot be evaluated on a separate basis. Under similar circumstances, independent enterprises might decide to set up a form of partnership and agree to a form of profit split. Accordingly, the profit split method seeks to eliminate the effect on profits of special conditions made or imposed in a controlled transaction by determining the division of profits that independent enterprises would have expected to

[153] See PwC (2003) for the example.

realise from engaging in the transaction or transactions. The profit split method first identifies the profit to be split for the associated enterprises from the controlled transactions in which the associated enterprises are engaged. It then splits those profits between the associated enterprises on an economically valid basis that approximates the division of profits that would have been anticipated and reflected in an agreement made at arm's length. The combined profit may be the total profit from the transactions or a residual profit intended to represent the profit that cannot readily be assigned to one of the parties, such as the profit arising from high-value, sometimes unique, intangibles. The contribution of each enterprise is based upon a functional analysis and valued to the extent possible by any available reliable external market data. The functional analysis is an analysis of the functions performed by each enterprise, taking into account assets used and risks assumed. The external market criteria may include, for example, profit split percentages or returns observed among independent enterprises with comparable functions.[154]

The following article (3.6) discusses one of the strengths of the given method. It states that one strength of the profit split method is that it generally does not rely directly on closely comparable transactions, and it can therefore be used in cases when no such transactions between independent enterprises can be identified. The allocation of profit is based on the division of functions between the associated enterprises themselves. External data from independent enterprises is relevant in the profit split analysis primarily to assess the value of the contributions that each associated enterprise makes to the transactions, and not to determine directly the division of profit. As a consequence, the profit split method offers flexibility by taking into account specific, possibly unique, facts and circumstances of the associated enterprises that are not present in independent enterprises, while still constituting an arm's length approach to the extent that it reflects what independent enterprises reasonably would have done if faced with the same circumstances.[155]

One of the other articles discussing the strenghts of the PS method is presented in the article 3.7 of the Guidelines. It says that another strength is that under the profit split method, it is less likely that either party to the controlled transaction will be left with an extreme and improbable profit result, since both parties to the transaction are evaluated.

[154] Guidelines (3.5)
[155] Guidelines (3.6)

This aspect can be particularly important when analysing the contributions by the parties in respect of the intangible property employed in the controlled transactions. This two-sided approach may also be used to achieve a division of the profits from economies of scale or other joint efficiencies that satisfies both the taxpayer and tax administrations.[156]

One of the flaws of the PS method is referred to in the article 3.8 of the Guidelines. It says that there are also a number of weaknesses to the profit split method. One such weakness is that the external market data considered in valuing the contribution each associated enterprise makes to the controlled transactions will be less closely connected to those transactions than is the case with the other available methods. The more tenuous the nature of the external market data used when applying the profit split method, the more subjective will be the resulting allocation of profits.[157] Another flaw of the PS method is given in the following provision.

The article 3.9 of the Guidelines highlights that a second weakness relates to difficulties in applying the profit split method. On first review, the profit split method may appear readily accessible to both taxpayers and tax administrations because it tends to rely less on information about independent enterprises. However, associated enterprises and tax administrations alike may have difficulty accessing information from foreign affiliates. Moreover, independent enterprises do not ordinarily use the profit split method to determine their transfer pricing, except for joint ventures for instance. In addition, it may be difficult to measure combined revenue and costs for all the associated enterprises participating in the controlled transactions, which would require stating books and records on a common basis and making adjustments in accounting practices and currencies. Further, when the profit split method is applied to operating profit, it may be difficult to identify the appropriate operating expenses associated with the transactions and to allocate costs between the transactions and the associated enterprises' other activities.[158]

The article 3.10 suggests that the foregoing considerations should be taken into account in determining whether any particular application of the profit split method is appropriate given the facts and circumstances. More importantly, because of the foregoing considerations, the application of the profit split method is subject to the

[156] Guidelines (3.7)
[157] Guidelines (3.8)
[158] Guidelines (3.9)

conclusions and limitations on transactional profit methods.[159] As in the previous sections, the Guidelines provide guidance on the exercise of the PS method as well. For instance, article (3.11) states that if the profit split method were to be used by associated enterprises to establish transfer pricing in controlled transactions, then each associated enterprise would seek to achieve the division of profits that independent enterprises would have expected to realize in a joint venture relationship. Generally, conditions established in this manner would have to be based upon projected profits rather than actual profits, because it is not possible for the taxpayers to know what the profits of the business activity would be at the time the conditions are established.[160]

Similarly, the article 3.12 notes that when a tax administration examines the application of the method to evaluate whether the method has reliably approximated arm's length transfer pricing, it is critical for the tax administration to acknowledge that the taxpayer could not have known what the actual profit experience of the business activity would be at the time that the conditions of the controlled transaction were established. Without such an acknowledgement, the application of the profit split method could penalize or reward a taxpayer by focusing on circumstances that the taxpayer could not reasonably have foreseen. Such an application would be contrary to the arm's length principle, because independent enterprises in similar circumstances could only have relied upon projections and could not have known the actual profit experience.

The article 3.13 suggests that in using the profit split method to establish the conditions of controlled transactions, the associated enterprises would seek to achieve the division of profit that independent enterprises would have realized. The evaluation of the conditions of the controlled transactions of associated enterprises using a profit split method will be easiest for a tax administration where the associated enterprises have originally determined such conditions on the same basis. The evaluation may then begin on the same basis to verify whether the division of actual profits is in accordance with the arm's length principle.[161] The perspective of the tax administration is given in the following provision.

Particularly, the article 3.14 states that where the associated enterprises have determined the conditions in their controlled transactions on a basis other than the profit

[159] Guidelines (3.10)
[160] Guidelines (3.11)
[161] Guidelines (3.13)

split method -as will almost always be the case-, the tax administration would evaluate such conditions on the basis of the actual profit experience of the enterprise. However, care would need to be exercised to ensure that the application of a profit split method is performed in a context that is similar to what the associated enterprises would have experienced, i.e. on the basis of information known or reasonably foreseeable by the associated enterprises at the time the transactions were entered into, in order to avoid the use of hindsight.[162]

The article 3.15 says that there are a number of approaches for estimating the division of profits, based on either projected or actual profits, as may be appropriate, that independent enterprises would have expected, two of which are discussed in the following paragraphs. These approaches, contribution analysis and residual analysis, are not necessarily exhaustive or mutually exclusive.[163] Concerning these analyses, prescription is provided in the following provision. Accordingly, the article 3.16 specifies that under a contribution analysis, the combined profits, which are the total profits from the controlled transactions under examination, would be divided between the associated enterprises based upon the relative value of the functions performed by each of the associated enterprises participating in the controlled transactions, supplemented as much as possible by external market data that indicate how independent enterprises would have divided profits in similar circumstances. In cases where the relative value of the contributions can be measured directly, it may not be necessary to estimate the actual market value of each participant's contributions.[164]

Operating profit, which is a viable figure for the performance and survival of the businesses is mentioned in the subsequent provision. Accordingly, the article 3.17 of the Guidelines suggests that generally, the profit to be combined and divided under the contribution analysis is operating profit. Applying the profit split in this manner ensures that both income and expenses of the MNE are attributed to the relevant associated enterprise on a consistent basis. However, occasionally, it may be appropriate to carry out a split of gross profits and then deduct the expenses incurred in or attributable to each relevant enterprise, and excluding expenses taken into account in computing gross profits. In such cases, where different analyses are being applied to divide the gross income and the deductions of the MNE among associated enterprises, care must be

[162] Guidelines (3.14)
[163] Guidelines (3.15)
[164] Guidelines (3.16)

taken to ensure that the expenses incurred in or attributable to each enterprise are consistent with the activities and risks undertaken there, and that the allocation of gross profits is likewise consistent with the placement of activities and risks. For example, in the case of an MNE that engages in highly integrated worldwide trading operations, involving various types of property, it may be possible to determine the enterprises in which expenses are incurred/attributed, but not to accurately determine the particular trading activities to which those expenses relate. In such a case, it may be appropriate to split the gross profits from each trading activity and then deduct from the resulting overall gross profits the expenses incurred in or attributable to each enterprise, bearing in mind the caution noted above.[165]

The article 3.18 notes that it could be difficult to determine the relative value of the contribution that each of the related participants makes to the controlled transactions, and the approach will often depend on the facts and circumstances of each case. The determination might be made by comparing the nature and degree of each party's contribution of differing types and assigning a percentage based upon the relative comparison and external market data. The provision of services, development expenses incurred, capital invested are set as examples in this case.[166]

The following articles discuss the specification and exercise of the residual analysis. For instance, the article 3.19 proposes that a residual analysis divides the combined profit from the controlled transactions under examination in two stages. In the first stage, each participant is allocated sufficient profit to provide it with a basic return appropriate for the type of transactions in which it is engaged. Ordinarily this basic return would be determined by reference to the market returns achieved for similar types of transactions by independent enterprises. Thus, the basic return would generally not account for the return that would be generated by any unique and valuable assets possessed by the participants. In the second stage, any residual profit/loss remaining after the first stage division would be allocated among the parties based on an analysis of the facts and circumstances that might indicate how this residual would have been divided between independent enterprises. Indicators of the parties' contributions of intangible property and relative bargaining positions could be particularly useful in this context.[167] The following article, 3.20, states that the residual could derive from the

[165] Guidelines (3.17)
[166] Guidelines (3.18)
[167] Guidelines (3.19)

application of other methods. For example, market data from traditional transaction methods could assist in the preliminary ascertainment of normal profits attributable to associated enterprises where one enterprise manufactures a unique product using proprietary processes and then transfers the product to another associated enterprise for further processing using other proprietary processes and for distribution.[168]

A particular investigation of the conduct of the residual analysis is given in the following provisions. Namely, the article 3.21 of the Guidelines suggests that one approach to a residual analysis would seek to replicate the outcome of bargaining between independent enterprises in the free market. In this context, the basic return provided to each participant would correspond to the lowest price an independent seller reasonably would accept in the circumstances and the highest price that the buyer would be reasonably willing to pay. Any discrepancy between these two figures could result in the residual profit over which independent enterprises would bargain. The residual analysis therefore could divide this pool of profit based on an analysis of any factors relevant to the associated enterprises that would indicate how independent enterprises might have split the difference between the seller's minimum price and the buyer's maximum price.[169]

The article 3.22 draws a special attention to cash flow predictions taken into consideration in the analysis. It says that in some cases an analysis could be performed, perhaps as part of a residual profit split or as a method of splitting profits in its own right, by taking into account the discounted cash flow to the parties to the controlled transactions over the anticipated life of the business. This may be an effective method in the following circumstances: where a start-up is involved, cash flow projections were carried out as part of assessing the viability of the project, and capital investment and sales could be estimated with a reasonable degree of certainty. However, the reliability of such an approach will depend on the use of an appropriate discount rate, which should be based on market benchmarks. In this regard, it should be noted that industry-wide risk premiums used to calculate the discount do not distinguish between particular companies let alone segments of businesses, and estimates of the relative timing of receipts can be problematic. Such an approach, therefore, would require considerable

[168] Guidelines (3.20)
[169] Guidelines (3.21)

caution and should be supplemented where possible by information derived from other methods.[170]

"The Guidelines" per se is careful about its scope and states in the article 3.23 that it does not seek to provide an exhaustive catalogue of ways in which the profit split method may be applied. Application of the method will depend on the circumstances of the case and the information available, but the overriding objective should be to approximate as closely as possible the split of profits that would have been realised had the parties been independent enterprises operating at arm's length.[171] Followingly, the article 3.24 says that one possible approach not discussed above is to split the combined profit so that each of the associated enterprises participating in the controlled transactions earns the same rate of return on the capital it employs in that transaction. This method assumes that each participant's capital investment in the transaction is subject to a similar level of risk, so that one might expect the participants to earn similar rates of return if they were operating in the open market. However, this assumption may not be realistic. For example, it would not account for conditions in capital markets and could ignore other relevant aspects that would be revealed by a functional analysis and that should be taken into account in a profit split. Therefore, this method should be used with great care and, in any event, other profit split methods should be considered before electing its use.[172]

The article 3.25 is noteworthy as well. It suggests that another possibility is to determine the profit split based on the division of profits that actually results from comparable transactions among independent enterprises. In most cases where traditional transaction methods would not be used, it will be difficult to find independent enterprises engaged in transactions that are sufficiently comparable to use this approach as the primary method. Even where such transactions exist, adequate information on the independent enterprises might not be available to taxpayers and tax administrations. However, co-operative arrangements are not confined to associated enterprises, but also sometimes occur between independent enterprises. Independent enterprises may set up joint-venture-like arrangements because they want to carry out, for example, a specific research project. In such a situation, independent enterprises might come to an arrangement in which prices are corrected afterwards, for instance because the

[170] Guidelines (3.22)
[171] Guidelines (3.23)
[172] Guidelines (3.24)

profitability is unpredictable and because they want to share the risks or the costs involved. Independent enterprises might choose to set up a real joint venture, and in such a case probably would agree to some form of profit split.[173] Below are some examples to illustrate the use of the method.

EXAMPLE I

Table 7.4: The PS (Profit Split) Method

Suppose that firms, ABC and XYZ are related. Each period, ABC makes and sells 100 lamps to XYZ at a transfer price of $ 1,50; B distributes and sells the lamps to consumers at 2 $. ABC's and XYZ's financial statements are reproduced as follows:

Financial Statement	**Firm ABC**	**Firm XYZ**	**Consolidated (Merged)**
Quantity of lamps	100	100	100
Selling price	$ 1.50	$ 2	$ 2
Total sales revenue (a)	$ 150	$ 200	$ 200
Cost of goods sold (b)	120	150	120
Gross profit (c) = (a-b)	$ 30	$ 50	$ 80
Operating expenses (d)	10	20	30
Operating profit (e) = (c) – (d)	$ 20	$ 30	$ 50
Net income expense (f)	$ 3	2	5
Net income (g) = (e) – (f)	$ 17	$ 28	$ 45
Operating assets (h)	$ 500	$ 1.500	$ 2.000
Rate of Return on assets (ROA in %) (=(e)/(h))	4 %	2 %	2.5 %

Profit split method suggests that transfer price is established such that each party gets a pro rate share; a share of operating profit in proportion to the respective party's share of multinational's operating assets. The ratio of ABC's operating profits to that of XYZ should read one-to-three. Namely, each affiliate firm is supposed to realize an average ROA along both the firms or 2.5 %.

Source: adapted from Eden (1998, p.46)

The upper case implies that since aggregate profits yield 50 $ and return on operating assets (ROA) both for ABC and XYZ is 2.5 %, the profit of ABC should register 12.50

[173] Guidelines (3.25)

$ and of XYZ should be 37.50 $. The same conclusion may be gathered following a backward induction approach in the financial statements. In order to make ABC's profit 12.50 $, the transfer price must be 1.425 $ that is the product of ((12.50 $ + 10 $ + 120 $) /100). Hence the operating profits of XYZ get 37.50 $ that is the product of ((200 $- 142.5 $- 20 $). Therefore the ratio of the operating profit of ABC to XYZ becomes 1/3 that is equal to 12.5$ / 37.5$ while the rate of return of both the affiliated parties reads 2.5% (Eden, loc.cit; 46).

EXAMPLE II

The Fact & Transaction: ACo and BCo are related persons engaged in the production and sale of pharmaceuticals. ACo engages in lots of R&D to produce its pills. BCo sells the pills after affixing its valuable trade name to the packaging. They earn profits of $8 million from the common enterprise.

Based on comparisons with unrelated persons, the tax department of Country A determines that ACo contributions to the common enterprise explains approximately 75 percent of the profits. Its taxable profits, ernings before taxes, will read $ 6 million which is 75 % of $ 8 million.[174]

EXAMPLE III

Wheels AG (WAG) is a German company which manufactures luggage carriers which are lighter than those sold by its competitors and which fold into a small package for use by airline passangers. Key parts are manufactured at the parent company and sold to a subsidiary located in the UK. The UK subsidiary assembles the finished luggage carriers, markets and distributes the products in their market. It has been in existence for 15 years. No comparables are available which would allow the application of the CUP, resale price or cost plus methods; so WAG has decided to utilize a profit split method to determine transfer prices.

Table 7.5: Wheels AG's sales in the UK market (1992)

	WAG	WUK	Consolidated
Sales	75	100	100
Cost of Sales (-)	(60)	(75)	(60)
Gross Profit	15	25	40

[174] See McIntyre (2007) for the example, @ http://www.law.wayne.edu/McIntyre/text/intl_class/slides_transfer_pricing.pdf, (18.04.2008).

Selling Expenses (-)	0	(20)	(20)
General & Administrative Expenses (-)	(1)	(8)	(9)
Operating Income	**14**	**(3)**	**11**

Source: PwC (2003, p.27)

In this example, it is not likely to use the PS method. The reason is as follows. The profit split at the gross profit level is 37.5 % (=15/40) for WAG and 62.5 % (=25/40) for WUK. On the other hand, the profit split at the operating income level is 127 % (=14/11) for WAG and 27 % (=(-3)/11) for WUK. Therefore, the transfer prices used here generate an inequitable profit split, which in turn implies that the UK tax authority will not admit them as the figures leading to a proper tax base.[175]

7.5.2.2. Transactional Net Margin Method (TNMM)

Another non-traditional transaction method which the OECD has acknowledged to be used in the identification of the transfer prices and hence appropriate tax base is the transactional net margin method (TNMM). The OECD Guidelines have well defined this method. The article 3.26 states that the transactional net margin method examines the net profit margin relative to an appropriate base such as costs, sales, assets that a taxpayer realizes from a controlled transaction. Thus, a transactional net margin method operates in a manner similar to the cost plus and resale price methods. This similarity means that in order to be applied reliably, the transactional net margin method must be applied in a manner consistent with the manner in which the resale price or cost plus method is applied. This means in particular that the net margin of the taxpayer from the controlled transaction should ideally be established by reference to the net margin that the same taxpayer earns in comparable uncontrolled transactions. Where this is not possible, the net margin that would have been earned in comparable transactions by an independent enterprise may serve as a guide. A functional analysis of the associated enterprise and, in the latter case, the independent enterprise is required to determine whether the transactions are comparable and what adjustments may be necessary to obtain reliable results. [176]

Discussing the strengths of the TNMM method, the article 3.27 says that one strength of the transactional net margin method is that net margins, such as return on assets, operating income to sales, and possibly other measures of net profit etc., are less

[175] See PwC (2003) for the example.
[176] Guidelines (3.26)

affected by transactional differences than is the case with price, as used in the CUP Method. The net margins also may be more tolerant to some functional differences between the controlled and uncontrolled transactions than gross profit margins. Differences in the functions performed between enterprises are often reflected in variations in operating expenses. Consequently, enterprises may have a wide range of gross profit margins but still earn broadly similar levels of net profits.[177] The following provision, the article 3.28, states that another practical strength is that it is not necessary to determine the functions performed and responsibilities assumed by more than one of the associated enterprises. Similarly, it is often not necessary to state the books and records of all participants in the business activity on a common basis or to allocate costs for all participants. This can be practically advantageous when one of the parties to the transaction is complex and has many interrelated activities or when it is difficult to obtain reliable information about one of the parties.[178]

Dealing with the flaws of the TNMM, the article 3.29 notes that there are also a number of weaknesses to the transactional net margin method. Perhaps the greatest weakness is that the net margin of a taxpayer can be influenced by some factors that either do not have an effect, or have a less substantial or direct effect, on price or gross margins. These aspects make accurate and reliable determinations of arm's length net margins difficult. Thus, it is important to provide some detailed guidance on establishing comparability for the transactional net margin method.[179] Besides, the article 3.30 stipulates that application of any arm's length method requires information on uncontrolled transactions that may not be available at the time of the controlled transactions. This may make it particularly difficult for taxpayers that attempt to apply the transactional net margin method at the time of the controlled transactions.[180]

The same provision states also that taxpayers may not have access to enough specific information on the profits attributable to uncontrolled transactions to make a valid application of the method. It also may be difficult to ascertain revenue and operating expenses related to the controlled transactions to establish the financial return used as the profit measure for the transactions. Tax administrators may have more information available to them from examinations of other taxpayers. However, as with any other

[177] Guidelines (3.27)
[178] Guidelines (3.28)
[179] Guidelines (3.29)
[180] Guidelines (3.30)

method, it would be unfair to apply the transactional net margin method on the basis of such data unless the data can be disclosed (within the limits of the confidentiality requirements of tax laws) to the taxpayer so that there is an adequate opportunity for the taxpayer to defend its own position and to safeguard effective judicial control by the courts.[181]

Similarly, the article 3.31 states that one other issue that arises for the transactional net margin method is that the method is typically applied to only one of the associated enterprises. This one-sided aspect does not distinguish the method from most other methods, given that the resale price and cost plus methods also have this feature. However, the fact that many factors unrelated to transfer prices can affect net margins and can render the transactional net margin method less reliable heightens the concerns over a one-sided analysis. A one-sided analysis may not take into account the overall profitability of the MNE group from the controlled transactions for purposes of comparability. A one-sided analysis potentially can attribute to one member of an MNE group a level of profit that implicitly leaves other members of the group with implausibly low or high profit levels. While the impact on the profits of the other parties to a transaction is not always a conclusive factor in determining the pricing of a transaction, it may act as a counter-check of the conclusions reached.[182]

On the subject of hardships, the article 3.32 suggests that there may also be serious difficulties in determining an appropriate corresponding adjustment when applying the transactional net margin method, particularly where it is not possible to work back to a transfer price. This could be the case, for example, where the taxpayer deals with associated enterprises on both the buying and the selling sides of the controlled transaction. In such a case, if the transactional net margin method indicates that the taxpayer's profit should be adjusted upwards, there may be some uncertainty about which of the associated enterprises' profits should be reduced.[183] In addition, the article 3.33 proposes that the foregoing considerations should be taken into account in determining whether any particular application of the transactional net magrin method is appropriate given the facts and circumstances of a case. More importantly, because of

[181] Guidelines (3.30)
[182] Guidelines (3.31)
[183] Guidelines (3.32)

the foregoing considerations, the application of the transactional net margin method is subject to the conclusions and limitations on transactional profit methods.[184]

On the guidance for the exercise of the method, the provision 3.34 of the Guidelines notes that prices are likely to be affected by differences in products, and gross margins are likely to be affected by differences in functions, but operating profits are less adversely affected by such differences. As with the resale price and cost plus methods that the transactional net margin method resembles, this, however, does not mean that a mere similarity of functions between two enterprises will necessarily lead to reliable comparisons. Assuming similar functions can be isolated from among the wide range of functions that enterprises may exercise, in order to apply the method, the profit margins related to such functions may still not be automatically comparable where, for instance, the enterprises concerned carry on those functions in different economic sectors or markets with different levels of profitability. When the comparable uncontrolled transactions being used are those of an independent enterprise, a high degree of similarity is required in a number of aspects of the associated enterprise and the independent enterprise involved in the transactions in order for the controlled transactions to be comparable; there are various factors other than products and functions that can significantly influence net margins.[185]

Particularly, the article 3.35 says that use of net margins can potentially introduce a greater element of volatility into the determination of transfer prices for two reasons. First, net margins can be influenced by some factors that do not have an effect (or have a less substantial or direct effect) on gross margins and prices, because of the potential for variation of operating expenses across enterprises. Second, net margins can be influenced by some of the same factors, such as competitive position, that can influence price and gross margins, but the effect of these factors may not be as readily eliminated. In the traditional transaction methods, the effect of these factors may be eliminated as a natural consequence of insisting upon greater product and function similarity.[186] Concerning net margins, the article 3.36 suggests that net margins may be directly affected by such forces operating in the industry as follows: threat of new entrants, competitive position, management efficiency and individual strategies, threat of substitute products, varying cost structures (as reflected, for example, in the age of plant

[184] Guidelines (3.33)
[185] Guidelines (3.34)
[186] Guidelines (3.35)

and equipment), differences in the cost of capital (e.g. self financing versus borrowing), and the degree of business experience (e.g. whether the business is in a start-up phase or is mature). Each of these factors in turn can be influenced by numerous other elements. For example, the level of the threat of new entrants will be determined by such elements as product differentiation, capital requirements, and government subsidies and regulations. Some of these elements also may impact the application of the traditional transaction methods.[187]

A particular provision in the Guidelines conveying the information about the usage capacity of the TNMM, the article 3.39 suggests that the transactional net margin method may afford a practical solution to otherwise insoluble transfer pricing problems if it is used sensibly and with appropriate adjustments to account for differences of the type referred to above. The transactional net margin method should not be used unless the net margins are determined from uncontrolled transactions of the same taxpayer in comparable circumstances or, where the comparable uncontrolled transactions are those of an independent enterprise, the differences between the associated enterprises and the independent enterprises that have a material effect on the net margin being used are adequately taken into account. Many countries are concerned that the safeguards established for the traditional transaction methods may be overlooked in applying the transactional net margin method. Thus where differences in the characteristics of the enterprises being compared have a material effect on the net margins being used, it would not be appropriate to apply the transactional net margin method without making adjustments for such differences. The extent and reliability of those adjustments will affect the relative reliability of the analysis under the transactional net margin method. Likewise, the article 3.40 stipulates that another important aspect of comparability is measurement consistency. The net margins must be measured consistently between the associated enterprise and the independent enterprise. In addition, there may be differences in the treatment across enterprises of operating expenses and non-operating expenses affecting the net margins such as depreciation and reserves or provisions that would need to be accounted for in order to achieve reliable comparability.[188]

Other technical guidance in the use of TNMM is found in the subsequent articles. For instance, the article 3.41 proposes that in applying the transactional net margin method, various considerations should influence the choice of margin used. For

[187] Guidelines (3.36)
[188] Guidelines (3.40)

example, these considerations would include how well the value of assets employed in the calculations is measured (e.g. to what extent there is intangible property the value of which is not captured on the books of the enterprise), and the factors affecting whether specific costs should be passed through, marked up, or excluded entirely from the calculation.[189] Furthermore, 3.42 of the Guidelines says that an analysis under the transactional net margin method should consider only the profits of the associated enterprise that are attributable to particular controlled transactions. Therefore, it would be inappropriate to apply the transactional net margin method on a company-wide basis if the company engages in a variety of different controlled transactions that cannot be appropriately compared on an aggregate basis with those of an independent enterprise. Similarly, when analysing the transactions between the independent enterprises to the extent they are needed, profits attributable to transactions that are not similar to the controlled transactions under examination should be excluded from the comparison. Finally, when profit margins of an independent enterprise are used, the profits attributable to the transactions of the independent enterprise must not be distorted by controlled transactions of that enterprise.[190]

More specific details can be found, referring to the functional analysis. For instance, the article 3.43 establishes that the associated enterprise to which the transactional net margin method is applied should be the enterprise for which reliable data on the most closely comparable transactions can be identified. This will often entail selecting the associated enterprise that is the least complex of the enterprises involved in the controlled transaction and that does not own valuable intangible property or unique assets. However, the choice may be restricted by limited data availability regarding the transactions undertaken by enterprises located in a foreign tax jurisdiction.[191]

Moreover, the article 3.44 stipulates that multiple year data should be considered in the transactional net margin method for both the enterprise under examination and independent enterprises to the extent their net margins are being compared, to take into account the effects on profits of product life cycles and short term economic conditions. For example, multiple year data could show whether the independent enterprises that engaged in comparable uncontrolled transactions had suffered from the effects of market conditions in the same way and over a similar period as the associated enterprise

[189] Guidelines (3.41)
[190] Guidelines (3.42)
[191] Guidelines (3.43)

under examination. Such data could also show whether similar business patterns over a similar length of time affected the profits of comparable independent enterprises in the same way as the enterprise under examination.[192]

Concerning the range of outcomes arising from the use of TNMM, the article 3.45 suggests that it also is important to take into account a range of results when using the transactional net margin method. The use of the range in this context could help reduce the effects of differences in the business characteristics of associated enterprises and any independent enterprises engaged in comparable uncontrolled transactions, because the range would permit results that would occur under a variety of commercial and financial conditions.[193]

EXAMPLE

The Fact & Transaction: XCo is an independent distributor of electronic gear, which it purchases from unrelated manufacturers. The ratio of its profits to its gross revenues is 1:10. ACo manufacturers electronic gear, which it sells to BCo, a related person. BCo has gross receipts from the sale of the electronic gear of $30 million. Under TNMM, its profits would be $3 million ($30 million × 1/10). If the overall profits of ACo and BCo are $8 million, then ACo would have profits of $5 million ($8 million – $3 million).

7.5.3. The Comparable Profits Methods (CPM): An Alternative Method to TNMM

The OECD does not welcome the use of CPM as a detection of transfer pricing figures on the business transactions in a regular basis. As said before, it first prefers the traditional transaction methods. If it is not possible to use those, a second set of approaches, "other methods (in the words of OECD)" might be used. Among the other methods, we do not see the CPM. It is permissible as long as it is consistent with the overall Guidelines. More specifically, the Guidelines (3.1.) state that the only profit methods that satisfy the arm's length principle are those that are consistent with the profit split method or the transactional net margin method as described in these Guidelines. In particular, so-called "comparable profits methods" or "modified cost plus/resale price methods" are acceptable only to the extent that they are consistent with these Guidelines. From this phrase, one also should realize that the OECD allows the exercise of modified (adjusted/quasi) C+/RP methods as long as they fit the intuition underlying the Guidelines.[194]

[192] Guidelines (3.44)
[193] Guidelines (3.45)
[194] Guidelines (3.1)

EXAMPLE I

Table 7.6: The CP (Comparable Profits) Method		
Suppose that ABC makes lamps and sells them to XYZ at a transfer price of 1.50 $. ABC's financial statement is the same with the previous (PS) method. The right-hand side shows ABC's income after the CP method has been applied to re-predict ABC's operating income, in terms of the return on assets earned by comparable uncontrolled manufacturing firms. The data are as follows:		
ABC's statement before CPM		**ABC's statement after CPM**
Quantity of lamps Selling price	100 $ 1.50	100 $ 1.625
Total sales revenue (a) Cost of goods sold (b)	$ 150 120	$ 162.5 120
Gross profit (c) = (a-b) Operating expenses (d)	$ 30 10	$ 42.5 10
Operating profit (e) = (c) – (d) Net income expense (f)	$ 20 $ 3	$ 32.5 $ 3
Net income (g) = (e) – (f)	$ 17	$ 29.5
Operating assets (h)	$ 500	$ 500
Rate of Return on assets (ROA in %) (=(e)/(h))	4 %	6.5 %

Source: adapted from Eden (1998, p.49)

In order to use comparable profits method, we need to have a benchmarking profit level indicator. Suppose that we adopt the ROA as the key denominator. Recall that ROA has previously been defined as the ratio of operating income to operating assets. Suppose also that the minimum ROA that has been observed on the comparable uncontrolled firms is 5 %, the maximum ROA is 8 %. The ordinary mean then becomes 6,5 % as it is the half of the lower and upper bounds. Now that we know what we need, we can establish the arm's length range as follows. The maximum income is 40 $ that is the product of (500 $)*(8 %) and the minimum income is 25 $ that equals (500 $)*(5

%). Therefore the arm's length ranges from 25 $ to 40 $. Hence the midpoint of the arm's length reveals 32,5 $. The same amount can be equivalently calculated by (500 $)*(6.5 %) as well (Eden, 1998).

From the case above, we see that ABC's operating profit which is 20 $ is not at arm's length. Arm's length principle suggests that 12.5 $ that is the difference between 32.5 $ and 20 $ should be added to the ad hoc operating profit figure of ABC. Therefore the transfer price should read 1.625 $ that is the result of (32.5 $ + 10 $ + 120 $)/(100) (Eden, 1998).

7.5.4. Global Formulary Apportionment: A Non-Arm's-Length Approach

The arm's length approach is based on the adoption and the understanding of a separate accounting or entity approach. Under this assumption, for instance, both the overall (parent/group-wise) and single (firm/individual-wise) profits or repatriation of profits are treated separately since multinationals and their members run their activities on different territories.[195] The arm's length principle suggests that the transfer prices should be determined as if the transactions have taken place among the unaffiliated or unrelated companies, which implies dealing-at arm's-length.[196] Namely, for the separate entity approach to be applicable to the operations or transactions within a group, the individual member firms of that group must be subject to a tax levy based on the consideration that those activities happen at arm's length in dealing of the member firms with each other.[197]

A comprehensive explanation about the global formulary apportionment method is given in the OECD Guidelines. The article 3.58 recalls that global formulary apportionment has sometimes been suggested as an alternative to the arm's length principle as a means of determining the proper level of profits across national taxing jurisdictions. The method has not been applied as between countries although it has been attempted by some local taxing jurisdictions.[198] The provision 3.59 suggests that a global formulary apportionment method would allocate the global profits of a multinational group on a consolidated basis among the associated enterprises in different countries on the basis of a predetermined and mechanistic formula. There would be three essential components to applying a global formulary apportionment

[195] Haufler (loc.cit.)
[196] Ibid.
[197] See the Guidelines.
[198] Guidelines (3.58)

method: (i) determining the unit to be taxed, i.e. which of the subsidiaries and branches of an MNE group should comprise the global taxable entity; (ii) accurately determining the global profits; and (iii) establishing the formula to be used to allocate the global profits of the unit. The formula would most likely be based on some combination of costs, assets, payroll, and sales.[199]

The article 3.60 notes that global formulary apportionment methods should not be confused with the transactional profit methods. The former methods would use a formula that is predetermined for all taxpayers to allocate profits whereas transactional profit methods compare, on a case-by-case basis, the profits of one or more associated enterprises with the profit experience that comparable independent enterprises would have sought to achieve in comparable circumstances. Global formulary apportionment methods also should not be confused with the selected application of a formula developed by both tax administrations in cooperation with a specific taxpayer or multinational group after careful analysis of the particular facts and circumstances, such as might be used in a mutual agreement procedure, advance transfer pricing agreement, or other bilateral or multilateral determination. Such a formula is derived from the particular facts and circumstances of the taxpayer and thus avoids the globally pre-determined and mechanistic nature of global formulary apportionment methods.[200]

The following provisions of the Guidelines discuss the comparison issue of the global formulary apportionment with the arm's length principle. For instance, the article 3.61 says that global formulary apportionment has been promoted as an alternative to the arm's length principle by advocates who claim that it would provide greater administrative convenience and certainty for taxpayers. These advocates also take the position that global formulary apportionment methods are more in keeping with economic reality. They argue that a multinational group must be considered on a group-wide or consolidated basis to reflect the business realities of the relationships among the associated enterprises in the group. They assert that the separate accounting method is inappropriate for highly integrated groups because it is difficult to determine what contribution each associated enterprise makes to the overall profit of the multinational group.[201] The article 3.62 adds that apart from these arguments, advocates contend that a global formulary apportionment approach reduces compliance costs for taxpayers

[199] Guidelines (3.59)
[200] Guidelines (3.60)
[201] Guidelines (3.61)

since in principle only one set of accounts would be prepared for the group for domestic tax purposes.[202]

That the OECD does not welcome the approach of global formulary apportionment as a sound basis may be found in the Guidelines in detail. Referring to this, the article 3.63 states that the OECD Member countries do not accept these propositions and do not consider global formulary apportionment a realistic alternative to the arm's length principle. The reasons are given in the subsequent provisions.[203] For instance, the article 3.64 says that the most significant concern with global formulary apportionment is the difficulty of implementing the system in a manner that both protects against double taxation and ensures single taxation. To achieve this would require substantial international coordination and consensus on the predetermined formulae to be used and on the composition of the group in question. For example, to avoid double taxation there would have to be common agreement to adopt the method in the first instance, followed by agreement on the measurement of the global tax base of a multinational group, on the use of a common accounting system, on the factors that should be used to apportion the tax base among different jurisdictions (including non-Member countries), and on how to measure and weight those factors. Reaching such agreement would be time consuming and extremely difficult. It is far from clear that countries would be willing to agree to a universal formula.[204]

The article 3.65 suggests that even if some countries were willing to accept global formulary apportionment there would be disagreements because each country may want to emphasize or include different factors in the formula based on the activities or factors that predominate in its jurisdiction. Each country would have a strong incentive to devise formulae or formula weights that would maximise that country's own revenue. In addition, tax administrations would have to consider jointly how to address the potential for artificially shifting the production factors used in the Formula, such as sales or capital, to low tax countries. There could be tax avoidance to the extent that the components of the relevant formula can be manipulated, e.g. by entering into unnecessary financial transactions, by the deliberate location of mobile assets, by requiring that particular companies within a multinational group maintain inventory

[202] Guidelines (3.62)
[203] Guidelines (3.63)
[204] Guidelines (3.64)

levels in excess of what normally would be encountered in an uncontrolled company of that type, and so on.[205]

The article 3.66 discusses the immediate consequences of the previous considerations such as double taxation. It proposes that the transition to a global formulary apportionment system therefore would present enormous political and administrative complexity and require a level of international cooperation that is unrealistic to expect in the field of international taxation. Such multilateral coordination would require the inclusion of all major countries where multinationals operate. If all the major countries failed to agree to move to global formulary apportionment, multinationals would be faced with the burden of complying with two totally different systems. In other words, for the same set of transactions they would be forced to calculate the profits accruing to their members under two completely different standards. Such a result would create the potential for double taxation in every case.[206]

The following articles debate on other matters the global formulary apportionment approach may cause. For instance, the article 3.67 suggests that predetermined formulae are arbitrary and disregard market conditions, the particular circumstances of the individual enterprises, and management's own allocation of resources, thus producing an allocation of profits that may bear no sound relationship to the specific facts surrounding the transaction. More specifically, a formula based on a combination of cost, assets, payroll, and sales implicitly imputes a fixed rate of profit per currency unit (e.g. dollar, franc, mark) of each component to every member of the group and in every tax jurisdiction, regardless of differences in functions, assets, risks, and efficiencies and among members of the multinational group. Such methods could potentially assign profits to an entity that would incur losses if it were an independent enterprise.[207]

The article 3.68 suggests that another issue for the global formulary apportionment approach is dealing with exchange rate movements. Although exchange rate movements can complicate application of the arm's length principle they do not have the same impact as for the global formulary apportionment approach; the arm's length principle is better equipped to deal with the economic consequences of Exchange rate movements

[205] Guidelines (3.65)
[206] Guidelines (3.66)
[207] Guidelines (3.67)

because it requires the analysis of the specific facts and circumstances of the taxpayer.[208]

The same articles further states that if the formula relies on costs, the result of applying a global formulary apportionment approach would be that as a particular currency strengthens in one country consistently against another currency in which an associated enterprise keeps its accounts, a greater share of the profit would be attributed to the enterprise in the first country to reflect the costs of its payroll nominally increased by the currency fluctuation. Thus, under a global formulary apportionment approach, the exchange rate movement in this example would lead to increasing the profits of the associated enterprise operating with the stronger currency whereas in the long run a strengthening currency makes exports less competitive and leads to a downward pressure on profits.[209]

In addition, the article 3.69 stipulates that contrary to the assertions of its advocates, global formulary apportionment methods may in fact present intolerable compliance costs and data requirements because information would have to be gathered about the entire multinational group and presented in each jurisdiction on the basis of the currency and the book and tax accounting rules of that particular jurisdiction. Thus, the documentation and compliance requirements for an application of a global formulary apportionment approach would generally be more burdensome than under the separate entity approach of the arm's length principle. The costs of a global formulary apportionment approach would be further magnified if not all countries could agree on the components of the formula or on the way the components are measured.[210]

The article 3.70 discusses the valuation issue. It states that difficulties also would arise in determining the sales of each member and in the valuation of assets (e.g. historic cost versus market value), especially in the valuation of intangible property. These difficulties would be compounded by the existence across taxing jurisdictions of different accounting standards and of multiple currencies. Accounting standards among all countries would have to be conformed in order to arrive at a meaningful measure of profit for the entire multinational group. Of course, some of these difficulties, for example the valuation of assets and intangibles, also exist under the arm's length

[208] Guidelines (3.68)
[209] Guidelines (3.68)
[210] Guidelines (3.69)

principle, although significant progress in respect of the latter has been made, whereas no credible solutions have been put forward under global formulary apportionment.[211]

The article 3.71 notes the global formulary apportionment approach's non-acknowledgement of the separate entity (hence accounting) principle. Precisely, it says that a global formulary apportionment method would have the effect of taxing a multinational group on a consolidated basis and therefore abandons the separate entity approach. As a consequence, a global formulary apportionment method cannot, as a practical matter, recognize important geographical differences, separate company efficiencies, and other factors specific to one company or subgrouping within the multinational group that may legitimately play a role in determining the division of profits between enterprises in different tax jurisdictions. The arm's length principle, in contrast, recognizes that an associated enterprise may be a separate profit or loss centre with individual characteristics and economically may be earning a profit even when the rest of the multinational group is incurring a loss. A global formulary apportionment approach does not have the flexibility to account properly for this possibility.[212]

Furthermore, the provision 3.72 notes that by disregarding intra-group transactions for the purpose of computing consolidated profits, a global formulary apportionment method would raise questions about the relevance of imposing withholding taxes on cross-border payments between group members and would involve a rejection of a number of rules incorporated in bilateral tax treaties.[213] Additionally, the article 3.73 states that unless the global formulary apportionment approach includes every member of a multinational group, it must retain a separate entity rule for the interface between that part of the group subject to global formulary apportionment and the rest of the multinational group. [214]

The said article further states that global formulary apportionment could not be used to value the transactions between the global formulary apportionment group and the rest of the multinational group. Thus, a clear disadvantage with global formulary apportionment is that it does not provide a complete solution to the allocation of profits of a multinational group unless global formulary apportionment is applied on the basis of the whole enterprise. This exercise would be a serious undertaking for a single tax

[211] Guidelines (3.70)
[212] Guidelines (3.71)
[213] Guidelines (3.72)
[214] Guidelines (3.73)

administration given the size and scale of operations of major multinational groups and the information that would be required. The multinational group would also be required, in any event, to maintain separate accounting for businesses that are not members of the multinational group for global formulary apportionment tax purposes but that are still associated enterprises of one or more members of the multinational group. In fact, many domestic commercial and accountancy rules would still require the use of arm's length prices such as customs rules, so that irrespective of the tax provisions a taxpayer would have to book properly every transaction at arm's length prices.[215]

From the above discussions, it could be realized that the OECD does not admit the consideration and therefore the exercise of not only global formulary apportionment method but other non-arm's length approaches as well. The article 3.74 clearly stipulates that OECD Member countries reiterate their support for the consensus on the use of the arm's length principle that has emerged over the years among Member and non-Member countries and agree that the theoretical alternative to the arm's length principle represented by global formulary apportionment should be rejected.[216]

7.5.5. The Best Method Rule

The Best Method Rule basically stipulates that there is not any (must) rule for the identification of an arm's length range and establishment of the resulting transfer pricing figure for the taxpayers. As to be implied from the previous discussion hitherto, the OECD is on the side of the hierarchy of the transfer pricing rules. It gives a special preference and therefore an emphasis to the traditional transaction methods. The reason, as said before, is that these methods do rely on the factual conditions (the nature) of the transactions businesses undertake in a given period. In other words, the OECD believes that transaction-based approaches are expected to generate more reliable and robust transfer pricing behavior and hence to reveal more proper level of tax base.

On the other hand, unlike in the OECD Member States, in some countries like the US, the best method rule prevails. It refers that the transfer pricing method selected, under the facts and circumstances of the reviewed transactions, is expected to present the most reliable measure of an arm's length result, in terms of the credibility of the other applicable methods in place. It suggests that the transfer pricing approach generating the most robust outcome should be decided to be applicable to a specific transaction under review. Namely, the use of the CUP or other transactional methods,

[215] Guidelines (3.73)
[216] Guidelines (3.74)

unlike the OECD, is not a must to decide on an arm's length character of the ongoing transactions of the businesses. Therefore, taxpayers are free to choose any pricing methods that do make sense to be used in their taxational operations or decision makings.[217]

The relative reliability of the different transactional transfer pricing approaches mainly draws on: (i) the exercise of comparable uncontrolled transactions and the degree of comparability between those transactions and the taxpayer's transactions under scrutiny (review) and (ii) the accuracy and completeness of the underlying data as well as the reliability of the assumptions made and the adjustments needed to improve the capacity of comparability.[218] The next chapter explores corporate governance and shows that it may create some cost advantages for businesses.

CHAPTER 8– CORPORATE GOVERNANCE: AN IMPORTANT SOURCE TO GENERATE COST ADVANTAGE

As highlighted several times, although this research seeks to discover corporate profit results or the implications of having a cost advantage at the transfer price axis, it is however not interested in exploring the reasons underlying cost advantage. In this respect, it is also not interested in studying corporate governance nor its direct effects on corporate transfer pricing or operating profits. That will fall into the table of a different study. This dissertation instead takes it granted or given that corporate governance might be a strong reason arising cost advantages for businesses. Therefore, it employs governance as an assumed factor to generate cost advantage or induce cost disadvantage. The assumption posits that businesses with good governance structures realize or have (operating) cost advantages relative to the others that have insufficient or inadequate governance qualities. Two main reasons in incorporating governance notion into our analysis have been given, (i) its broad scope and (ii) its compatability with the literature on corporate funding costs.

As the following chapters will examine, corporate governance is by definition a complex and multidimensional issue. OECD, the leading institution setting benchmarks for the governance structures across the globe, has set certain standards or criteria to satisfy if a given corporate governance structure is duly appropriate, proper, effective and therefore advisable (decent). As to be seen, corporate governance draws on different

[217] See PwC (2003).
[218] Ibid.

legs. Considering these legs, the governance literature has been shaped. The scholarly investigations have concentrated on different aspects of corporate governance according to their originating research strands. For instance, there are governance studies from the viewpoints of economics, finance, accounting, auditing, law, strategy, business, management, organization etc. There are also specific research areas or studies trying to grasp the governance idea or seize its effects, such as law and finance studies, studies for banks/financial institutions etc.

Investigating the literature, this chapter comprehensively cyrstalizes the corporate governance. Chapter 8.1, the next section, describes the governance and identifes its scope. Chapter 8.2 visits the theoretical yardsticks that are the foundations underlying the governance. Chapter 8.3 shows that governance or its attributes (e.g. transparency, disclosure, strong stakeholder rights, decent legal systems, decent legal enforcement, independent boards, diffused ownerships, economic development, economic growth, scale economies, competitive markets, sizeable shareholders, quality information, viable monitoring, existence or absence of any agency problem, transaction costs etc.) may itself create a cost advantage for the firms.

8.1- Definition & Scope

Covering corporate control (hereinafter referred to as, *corporate governance*) in its scope, corporate governance refers to a wide spectrum of terminology since it is broad.[219] A definition of corporate governance may be given as " system or chain of relations between the shareholders, board of directors and management of a company, as defined by the corporate charter, by-laws, formal policy and rule of law ".[220] Among many other definitions, OECD refers to corporate governance as being a notion involving a set of relationships between a company's management, its board, its shareholders and all the remaining stakeholders.[221] This implies that corporate

[219] Corporate governance is often used interchangeably with corporate control. Turnbull (1997) gives concrete explanations in terms of usage of corporate governance by a plenty of scholars. For instance, Hawley & Williams (1996) identifies four models of corporate control to proxy for corporate governance such as (i) simple finance model, (ii) stewardship model, (iii) stakeholder model and (iv) political model. Therefore, this dissertation will use corporate governance wording as a more accurate terminology rather than corporate control. Further, corporate governance will also entail scope for (i) market for corporate control in order to reflect the impact of market forces and circumstances on the governance behavior of a given organization, or (ii) for the impacts of financial institutions' corporate control as well (e.g. Santos and Wilson, 2006).

[220] See " Corporate Governance in Russia ", @http://www.corp-gov.org/glossary.php3?glossary_id=34, (14.06.2006).

[221] See " Corporate Governance Principles 2004 [1999]-OECD: OECD Principles of Corporate Governance –Introduction-",

governance provides us with a certain structure or cluster, through which, objectives of the companies are set, and the means of attaining those objectives and monitoring performances are predetermined.[222] Corporate governance is also seen as one of the key determinant factors in improving economic efficiency and growth, which in turn would suggest for instance increase in economic development.

Corporate governance practitioners have taken into account certain frames, principles and guidelines as a main stream in the table. As a regulatory body concerning several cross border economic issues (e.g. international transfer pricing regimes, anti-money laundering policies, anti-tax avoidance/evasion schemes etc.), OECD is the major benchmarking institution to set comprehensive principles corporate governance leans on. OECD has framed rules of corporate governance significantly in the year of 1999 with a wide acknowledgement around the globe. In view of 1999 Principles, some rigor basis for an effective corporate governance framework has been established. Such a formation has been stated to deliver transparent and efficient markets with consistency in terms of law or legal issues and to lead certain segmentations of the responsibilities among supervisory, regulatory and enforcement authorities.[223]

1999 OECD governing rules also suggest that fundamental principles are expected to hold mainly for publicly-held companies, however the enforcement of these reference proposals to the other types of entities (e.g. non-publicly held/closed, financial or non-financial etc.) has also been suggested to be applicable.[224] OECD principles include four main sections therein such as (i) shareholders, (ii) (other) stakeholders, (iii) disclosure and transparency, and (iv) board governing the company. In other words, principles postulate to direct focus on the claims of shareholders, an equitable treatment of shareholders, a proper treatment of stakeholders, a sufficient level of disclosure, transparency and on the duties of board members.

As another influential international lobby, Worldbank (WB) has declared its mission to help its clients (sovereigns) in the evaluation of their institutional corporate governance frameworks and practices by issuing country-based corporate governance assessments using the principles of the OECD as a guide. The assessments WB has made about some of the countries like Brasilia, Turkey, Poland have been carried out

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@http://www.valuebasedmanagement.net/articles_oecd_corporate_governance_principles _ 2004. htm (14.06.2006).

[222] Ibid.

[223] Ibid.

[224] Ibid.

under the auspices of the joint bank-fund initiatives on the Financial Sector Assessment Program (FSAP) and the Reports on the Observance of Standards and Codes (ROSC).[225] According to WB, corporate governance entails an extensive range of issues of allocation of control rights within a firm.[226] Recent events starting with Enron scandal and following series of companies misrepresenting their financial statements and making other frauds highlighted the importance of corporate governance even in countries that are used to be considered to have " close to perfect " capital markets.[227] In developing countries, corporate governance issue is indeed more important because of (i) the weak legal system which cannot effectively enforce contracts and resolve disputes, (ii) poor quality of information which prevents effective monitoring and (iii) widespread corruption and mistrust involved.[228] Recently emerged law and finance literature, as the following chapters will mention, has highlighted the importance of investor protection for development of financial markets and firms' access to finance.[229] According to another definition released by WB, corporate governance stands for the main frameworks and processes for the direction and control of companies such that it regards the relationships among the management, the board of directors, the controlling shareholders, minority shareholders and other stakeholders.[230]

According to IMF, good corporate governance mechanism may be in place when (i) the extent of disclosure [from sufficient level to the full length] is increased, (ii) power of large insider shareholders is curbed [through strengthening minority shareholder rights for instance], (iii) sizeable outside shareholders are present, and (iv) financial system is private and competitive [e.g. broader capital markets with sound and efficient financial systems].[231] In other words, for a decent corporate governance structure to be accomplished on an arm's-length basis, in addition to transparent relations among

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[225] See " Private Sector Development: About Corporate Governance ", @http://www.worldbank.org (15.06.2006).

[226] Governance here implies how the authority is exercised and the way the quasi-rents generated by firm are allocated/aligned along different classes of stakeholders. For that, see Klapper and Love, @http://www.econ.worldbank.org/programs/finance/topic/governance (02.11.2004).

[227] Ibid.

[228] Ibid.

[229] Ibid. For this see the discussions in empirical documentations of this chapter.

[230] See Lubrano (2003). This implies that controlling is not a unilateral matter as acclaimed by pure shareholder theorists but of a multi-lateral-perspective instead. This is probably because the potential misconduct of the claims of minority shareholders by the larger shareholders is disfavoured by WB. Namely, the WB has adopted a structure of diffused ownership than block ownership. Therefore it could be argued that OECD lends more credit to stakeholder framework than shareholder view and hence than agency approach, given that other required terms and conditions are satisfied.

[231] See for instance Iskender *et al.* (1999).

businesses, governments and banks, fundamental cultural and institutional changes are required as well.[232] This suggests that corporate governance has one-to-one association with economic development. IMF further refers that as long as well-functioning laws, regulations, and business traditions and practices lead the relationships between companies and their investors, productivity and growth are expected to increase.[233] This is because countries with poor corporate governance skills are more vulnerable to financial crises than those with better governance skills.[234] The next chapter reviews the major corporate governance theories.

8.2- Theory

8.2.1 The Agency Problem

Following Eisenhardt (1989), an agency issue may be defined as a problem to occur when co-acting parties have different goals and division of labor. In particular, agency problem arises when the desires or goals of the principal and agent conflict and when it is hard or significantly costly to monitor how the agent is performing. Further, problem may also arise since risk preferences of principal and agents are different and indeed opposite, which is often referred to as risk-sharing incongruence in the literature. The analysis unit is given as a contract between principal and agent while information is assumed as a purchasable commodity.[235]

Agency theory dates back to Coase (1937) or to Williamson (e.g. 1964, 1967, 1979, 1981, 1985, 1987). The literature has a very rich body in terms of studying agency problem and its impacts. The main themes in these papers have basically been on the nature of the firm, separation of ownership and control, costs of production, information and transaction costs. Known as Coase theorem (1960), Coase argued that, regardless of

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[232] Ibid.

[233] This is an argument similar to those of the WB and the OECD.

[234] Some empirical studies document that better corporate governance increases the likelihood that organizations will satisfy the legitimate claims of all stakeholders and carry on fulfilling its environmental and social responsibilities smoothly. This then secures a long-term and sustainable growth for companies which is immensely important to economic growth. See Klapper and Love (2002) for instance.

[235] Following Fama and Jensen (1983), agency theory could be argued to boil down to two parts: a-) Positivist Agency Theory, b-) Principal-Agent. In the former, research mainly focused on the special case of the principal-agent relationship between owners and managers of large public corporations, adopting less mathematical approaches to the establishment and advancement of agency theory. In this context, agency theory conjectures that agent is more likely to behave in the interests of the principal when *(a)* his contract is outcome based and *(b)* the principal has information to verify the agent's behaviour. On the other hand, in the latter, research has been concerned about an overall theory that may better explain principal-agent relationships (e.g. employer-employee, lawyer-client, buyer-supplier and so on and so forth). This approach is however about abstract expositions and works with mathematical justifications unlike the previous approach. Therefore it involves a careful specification of assumptions to be followed by logical deductions and proofs. Nonetheless, both the approaches are neither conflicting with nor alternative to each other but rather complementary as both explain (pre/post-) contractual asymmetries.

what law says about who is liable to, the economic outcome entailing the state of the distribution of wealth would be stationary if transaction costs are given to be zero. He argued that firms should be realized as entities which are endogenous to any economic system and whose immediate existence could be given to be true in the presence of transactions costs to production. This in turn makes property rights not affect the efficiency of the allocation of resources, given its initially aligned position.

Later on, Demsetz (e.g. 1967, 1968, 1969, 1972, 1973 and 1979) and Alchian (e.g. 1958, 1959, 1962, 1964, 1965, 1969, 1972 and 1978) were the two who tried to elaborate on what Coase conjectured. An affiliated name with Coase, Williamson (1985) argued that not only production but transaction costs should be considered since firms are profit maximizers. He meant that minimizing total costs will also mean to minimize transaction costs, the latter of which is borne owing to opportunism and bounded rationality. Fundamental variables therefore are given to be frequency, uncertainty and asset specificity.

In particular, Alchian and Demsetz (1972) argued that long-term contracts between employer and employee are not fundamental to the organizations and firms came out as efficient economic organizations to advance and control the production of the team that introduced metering, monitoring and problem of organization. In the paper, market competition among potential team members is said to guide membership of team and rewards on individual basis. The specialist getting the residual rewards will be the monitor of the team members. Within this framework, the residual claimant should be given the power to revise the terms of the contract in order to discipline team members and hence reduce potential shirking. Moreover, it is argued that the lower the costs of managing, the greater will be the comparative advantage of organizing resources within the firm. And transaction costs can be shrunk should the property rights efficiently characterized.[236]

Jensen and Meckling (1976) developed a sound theory of ownership structure based on property rights, agency (principal-agent) relationships and finance. They examine agency costs, relate it to separation and control, debt and outside equity. In particular, the analysis of the factors affecting issuance of debt and equity claims is given to be a

[236] As to profit-sharing firms, paper states that an equal division of profits and losses between owners of the inputs will leave each with stronger incentives to reduce shirking if the optimal team size includes only two owners of inputs (as opposed to the case where optimal team size is larger than that). So, incentives to shirk are positively related to the optimal size of the team under an equal profit-sharing scheme.

special case of the supply side of the completeness of markets problem. Jensen and Meckling implies that an entrepreneur or manager in a firm with a hybrid form of financial composition (i.e. both debt and equity) tends to select a set of activities for the firm so that the total value of the firm would be less than it would be if that entrepreneur or manager were the sole owner. [237]

Fama and Jensen (1983) analyzed the survival of organizations in which important decision agents do not bear a major share of the wealth effects of their decisions. Their analysis shows that survival of the organizations is characterized by the separation of ownership (risk-bearing) from control (decision) mechanism.[238] Further, following Jensen and Meckling (loc.cit.), organization is given to be the nexus of contracts, both written and unwritten, between the owners of factors of production and customers. Fama and Jensen call these contracts as internal rules of the game. Accordingly, those who bear residual risks will be the residual risk bearers and therefore residual claimants.

As another seminal paper, Alchian and Woodward (1988) considered the notion of transactions as exchanges which are transfer of property rights to resources with no promises or latent future responsibility. They view the contracts as promises to the future performance versus exchange. Thus, transaction costs might be decomposed into costs of ensuring an efficient or productive teamwork and costs of the quality of the contractual agreement which is expected to serve for minimizing opportunism, if any. Alchian and Woodward argue that hold-up and moral hazard problems should cautiously be separated from each other.

Coupling moral hazard with plasticity, the above scholars conjecture that the higher the level of the plasticity, the higher the susceptibility to moral hazard. Concerning financing choice of the firm, Alchian and Woodward argue that firms with more plastic assets will have lower debt/equity ratios than firms with less plastic or relatively more

[237] The notion of 'residual loss' which is given as a divergence between agent's decisions and decisions expected to be maximizing the welfare of the principal is embodied in the seminal paper by Jensen and Meckling. Accordingly, agency costs are given as the aggregate value of monitoring costs incurred by the principal, the bonding expenditures and the residual loss. For one thing, the firm is articulated as not an individual in Jensen and Meckling; instead, as a legal fiction serving as a *nexus* of a set of contracting relationships among individuals. Within this viewpoint, firm behavior is expected to explain the market behavior. For another thing, civil law and common law as well as human ingenuity (ability to create or generate) have important effects on the determination of the augmentation of the agency costs. Jensen and Meckling also argued that benefits generated from specialization would outweigh the costs of agency incurred. Therefore, in terms of corporate governance, it could be argued that the lower the agency costs and/or the higher the benefits from specialization, the more decent the corporate governance system in an organization will be, ceteris paribus.

[238] In addition to large corporations, separation is also meant to be applicable to financial mutuals, large professional partnerships, even to non-profit organizations as well.

implastic assets. Therefore, in contrast to Jensen and Meckling (loc.cit.) and Fama and Jensen (loc.cit.), Alchian and Woodward do not adopt the view that firms should be regarded as a nexus of (long-term) contracts. This is because such a description may weaken or even prevent an efficient use of firms as basic units in the analyses.[239]

8.2.2. The Stakeholder Problem

A common opinion pertaining to the stakeholder understanding recognizes stakeholders as any groups or individuals to affect or to be affected by the achievement of the organization's objectives (Jawahar and Mclaughlin, 2001). In other words, one should not just take into account an active approach (individuals or legal entities affecting any organization) but also a passive approach (natural or legal persons affected by the organization). Stakeholder theory has many other definitions.[240] Among such are (i) the organization has interactions with different stakeholders (constituents) to affect or to be affected by the actions of that organization (Freeman, 1984), (ii) the interests of all the legitimate stakeholders have intrinsic value and no set of interests is assumed to dominate the others (Clarkson, 1995; Donaldson and Preston, 1995), (iii) It [stakeholder theory] puts a special emphasis to the managerial decision makings (Jones and Wicks, 1999).

Stakeholder approach (stakeholder theory in view of modern property rights) by Donaldson and Preston (1995) refers to the normative base as a corner stone of all but for a robust stakeholder theory. Accordingly, the model by Donaldson and Preston proposes that (i) the stakeholder theory be unarguably descriptive, instrumental but fundamentally normative as well, (ii) stakeholders be persons or groups with legitimate interests, (iii) stakeholders be identified by their interests in the business, (iv) the interests of all the stakeholders be of intrinsic values and (v) stakeholder management

[239] Bounded rationality and opportunism are given as sources of transaction costs –across markets and within firms. By bounded rationality, Williamson points to the people with limited information and limited ability to process it. This implies (i) incomplete information regarding market opportunities and (ii) limited ability to predict the future. By opportunism, he means that when a conflict arises between what people want and what they have agreed to do for others, they will act in their own interest insofar as it is costly for others to know their behaviour. He argues that opportunism derives from bounded rationality plus self-interest. Within this view, opportunism might be seen as a concept covering honest disagreements (rather than dishonest agreements). For this, see Williamson (1985).

[240] Unlike shareholder theory, there is not one single stakeholder theory. There are different stakeholder approaches, depending on the definitions and the natures of a stakeholder. However, unless otherwise stated, stakeholder theory or approaches should be understood to refer to identical things as they almost highlight identical things in their essence. Similarities or differences of those approaches are given in detail throughout this chapter.

require a simultaneous attention to the legitimate interests of all appropriate stakeholders.

On the other hand, stakeholder approach (known as relationship attributes-based stakeholder theory) adopted by Mitchell *et al*. (1997) posits that (i) stakeholder attributes are variable, not steady state, (ii) stakeholder attributes are socially constructed, but not objective reality themselves[241] and (iii) consciousness and wilful exercise may or may not be present. Among the other things, relationship attributes-based stakeholder theory implies that stakeholder salience will be (a) positively related to the cumulative number of stakeholder attributes [i.e. power, legitimacy, and urgency] which are perceived by managers to be present, (b) low where only one of the stakeholder attributes is perceived by managers to be present, (c) moderate where two of the three aforementioned attributes are perceived by the managers to be present and (d) high where all the three said stakeholder attributes are perceived by the managers to be present. Hence, managers as practitioners are expected to enrich the management techniques in dealing with multiple stakeholders or stakeholder groups simultaneously.

Jones and Wicks (1999) mainly hypothesized that (a) the more integrated the normative basis with the instrumental grounds at the same time, the more complete the stakeholder theory and (b) the richer the mix (match) and composition of the constituents of the social sciences and ethics, the better/stronger the stakeholder theory one may have in hand.[242] Stakeholder approach by Jones and Wicks, known as convergent stakeholder theory, implies that (a) the relationships shaped by mutual trust and cooperation are morally desirable, (b) the organizations whose managers establish and keep relationships with their stakeholders on mutual and cooperative basis will realize cost advantage over the ones whose managers do simply not, (c) mutual trust and cooperation are socially beneficial in addition to adding economic value to the organizations, (d) the behavioural contingency is automatically to be adopted and (e) human behaviour is malleable.

In particular, Jawahar and Mclaughlin (2001), in the light of organizational life cycle treatment, stated that: at any given organizational life cycle stage, certain stakeholders, because of their potentiality to satisfy critical organizational needs, will be more important than the others (meaning that the more critical the stakeholders to the

[241] Existence of each attribute is a matter of multiple perceptions.
[242] This is because shared values as well as shared understandings driving stakeholder research may deliver better or more accurate consequences.

organizations, the higher the prima facie priority of one set of interests and benefits over another [stakeholder]). Further, they suggested that the strategy an organization would use to cope or deal with each stakeholder depends on the importance of that stakeholder to the organization relative to the other stakeholders. Using this model, it seems possible to describe the corporate social performance of the strategic business units as they evolve from one stage to another, focus on threats which are intrinsic to the life cycle stages in particular and establish such strategies as proaction, accommodation, defense and reaction to the interactions with the stakeholders.

8.2.3 Corporate Governance Approaches Compared

Unlike the stakeholder theories, there are not many different shareholder theories in the literature. In shareholder theory, usually what matters [varies] is how to measure the shareholder value and what kinds of indicators can be used. This is because shareholder theory relies on the assumption that shareholders are the bosses [principles] and they are the ones to control the managers [agents].[243] In this approach, shareholders are the only stakeholders or at least the biggest claimants with the sole priorities over the other claimants.[244]

Table 8.1: Shareholder, Stakeholder and Agency Theories Compared

Key Attribute	Stakeholder Theory	Shareholder Theory	Agency Theory
Definition of the Firm	Social Institution/Entity	Owners' Instruments	Nexus of Contracts
Implication for Corporate Governance	The more the wealth created, the more decent the corporate governance within an entity will be	The higher the shareholder value, the more decent the corporate governance within an entity will be	The higher the profit, the more decent the corporate governance within an entity will be
Goal of the Firm	Creating Wealth	Maximizing Shareholder Wealth	Maximizing Profit

[243] For a comparison summarizing the key attributes and differences of agency problem, stakeholder and shareholder approaches, refer to the table 8.1.

[244] It should be noticed that weights attributed to the stakeholders under both shareholder theory and stakeholder approaches vary depending on the assumptions.

Governance Structures	Team Production Model	Principal-Agent Model	Principal-Agent Model
Role of Managers	-	Agent	Agent
Indicators	Customer Social Responsibility etc.	Shareholder Value and Corporate Value	Corporate Value
Residual Risk Holders /Claimants	All the stakeholders	Shareholders	Principals

Source: Kochan and Rubinstein (2000)[245]

In shareholder theory, a basic principle is that, by maximizing shareholder value it is possible to maximize firm or enterprise value [i.e. corporate valuation] both over the short and long runs. In other words, maximizing shareholder value will also mean to enhance the quality of corporate governance in an organization since corporate governance might prove better under an optimized corporate value that some agency theorists suggested a couple of decades ago. Table 8.1 above suggests that there is a close association between agency framework and shareholder theory. Shareholder theory considers the shareholders as the biggest residual claimants from an agency view, and equivalently as the major stakeholders from any stakeholder approach. On the other side, a stakeholder theory in its substance will not consist of the shareholders alone but all the other stakeholders as well because of the 'stakeholder' parlance.

In the upper passages, stakeholder approaches have been argued to differ in terms of the criteria chosen to name the stakeholders involved. Therefore, depending on the model, it has been seen that there may be different types of stakeholders, given the different organizations. One can then argue that stakeholder theory is more extensive than shareholder in its scope, which might be true. Further, stakeholder theory suggests that all the stakeholders be treated in the same way without making any discrepancies among them. This is because of the fundamental assumption that there is no *prima facie* priority of one set of interests and benefits over another, i.e. not any sets of interests of

[245] See also " Shareholder Value versus Stakeholders, Value Based Management.net ", @ http://www.valuebasedmanagement.net/faq_shareholder_stakeholder_perspective.html (13.06.2006).

the stakeholders may dominate another one or rank higher. This is not true for shareholder theory, where shareholders have an absolute prima facie priority.

Not any model is without its limitations. Some carve-outs of stakeholder approaches might be found in their natures. For one thing, should managers pay a simultaneous attention to the interests of various stakeholders, then, it is not clear how those stakeholders are to be identified. For another thing, it is arguable that addressing to the interests of all the stakeholders will lead to an increased corporate performance. Or, even if all the stakeholders' claims were legitimate so that managers could approach to all of them, it seems that it is not easy to do so in the real complex life. Therefore, there are at least three main problems: (i) *accuracy* problem (e.g. descriptive bonds), (ii) *falsifiability* problem (e.g. instrumental bonds) and (iii) *impracticality* problem (e.g. normative or ethic-concentrated bonds).

Sustainable progression or enhancement of the enterprise/shareholder value, optimal resource allocation, hedging of risks [risk dispersion], decentralized management of organization, prevention of hostile takeovers, harmonization of the interests of managers and shareholders, identification of value-generations are sometimes pronounced among the merits of shareholder-value-management.[246] However, there are some problems associated with shareholder theory as well. These problems mainly stem from the assumptions of the model.

First, shareholder theory assumes that financial markets do always good job of estimating the true/intrinsic values of the assets, especially those of shares. This is not always true because in real stock markets, informational asymmetries, speculative attacks or herd behaviour may be possible to observe and therefore a perfectly efficient market hypothesis can not be expected to hold all the time. Second, managers are assumed to have a sole metric to measure their performance and to make them responsible for what is happening inside their firms. This may mean that managers will exclusively focus on stock prices and not really care about any other event in the organization. This further makes them lazy and may induce them to go for manipulations or fraud attempts. Third, it is assumed that should managers be granted high-powered incentives [i.e. compensation packages tied to the performance of the price of the stock], then they will do a better job to increase the shareholder value. This is arguable since managers with stock option compensation packages will sort of win if

[246] On the other hand, a balanced structure of different legitimate stakeholder groups may be said to be the premier merit of the stakeholder management. For a concrete summary, see Brink (2004) for instance.

the stock price increases but not will lose if it falls down. This is because managers may manipulate over the price behaviours of the stocks [i.e. earnings management and outright fraud].[247]

8.2.4. The Relevancy of Corporate Governance With Transaction Cost Economics

Dating back to Coase (1937) and enjoying particularly the venues of new institutional economics and organizational economics, transaction cost economics (TCE) has been a notable destination to address the gaps not covered by the complete contracting view (Williamson, 1998). When one has no perfect information, cognition, rationality or foresight, differentiating exchange in firms from exchange in markets becomes ambiguous or spurious from time to time. This is because defining firms and markets in a completely isolated manner becomes a hard job.[248] Coase (1937) argued that, costs of organizing within a firm would read equal to the costs of organizing in another firm, or, to the costs organized by the viability of the price mechanism at the margin.

It is a known fact that incomplete contracting may give a rise to some costs of transaction. This is usually given on the grounds of motivation or coordination problems. Specifically, when the contracts are incomplete, one may argue that, there might be unforeseen contingencies to motivate renegotiation of contract, or, that contractual terms might not be properly respected or enforced. There is no room for renegotiation under complete contractual agreements, at which contracts are designed in such a state where everything is ex ante or a priori specified. Any surplus is also allocated ex ante among the parties in there. When that is the case; meaning that when there is not any question of motivation or coordination, or when there is not any problem with efficient bargaining, exchange is automatically facilitated, trade takes place and every single person bounded with the terms of those contracts gets their share, at least in a pro rata basis.

However, the assumptions underlying complete contracting do not often hold in reality and therefore are not consistent with the stylized facts in some sense. In the real life, there may occur problems of hidden information (e.g. information asymmetries), hidden action (e.g. moral hazard or hold-up), shirking or incomplete credibility/commitment. The real world we are living in is complex and involves uncertainties such that, it is not possible to control for every single thing at least a priori. Bargaining then turns out to be an efficient mechanism most of the time, and even more

[247] Blair *et al.* (2003)
[248] See James (2004), Hendrikse (2003) for this.

importantly, there occurs a problem with the allocation or value dissipation, as do some TCE scholars highlight (e.g. Foss (2003 a/b), Foss and Foss (2002, 2005) etc.). In other words, what we know from the reality is that, there is always a certain amount (non-ignorably high) of transaction costs and markets undergo a failure.

As the upper passages imply, corporate governance has a close tie with transaction cost economics. On the whole, the related literature on transaction cost economics advocates that there is an adverse relationship between corporate governance and transaction costs. I will treat this connection, itemizing the main sub-research strands individually as the following.

8.2.4.1 The Governance Structure Issue

TCE tells us about the choice of governance structure in that, by minimizing not production costs but rather transaction costs involved, a sound type of governance structure might be established. As a matter of fact, Williamson (1985) prefers to use 'governance structure' to stand for organization type. Among them are vertical integration, short-term and long-term contract.[249] Williamson specified the merits of transaction with the considerations of degree of asset specificity, degree of uncertainty involved and frequency or occurrence a transaction happens with. These said merits constitute the explanatory variables to account for the form of a given governance structure. For instance, if asset specificity and uncertainty involved are both low, a market type governance structure [sort of short-term contract] is advised to be built. This implies that exchange is guided by the market.

Remember that TCE does not favor the investments with high asset-specific or dependant type. Remember also that a correct transfer pricing system corresponds to what TCE speaks of. In the cases of high asset specificity or high level of uncertainty, vertical integration type of governance structure is sometimes proposed. Thus, it might be possible that, an upstream party in a transaction carries out an activity and therefore contract is put forth into practice. A downstream party is also expected to honor the contract and therefore obey (respect) what the contract obligates. When this is the case, the fear of hold-up may get lost since the conflict of interests would disappear. Even the problems like haggling could also be removed from the very beginning or much before a

[249] Alchian and Woodward (1988) imply that, the term 'ownership integration', a mechanism using common ownership of the dependent resources as one bundle to abstain from opportunism, should be preferred over the concepts like vertical or horizontal integrations, since the latter ones would be unnecessarily restrictive.

transaction is getting started. However, this is not always the case, trust or reputation undertakes an important role in the markets, irrespective of financial or real ones. Namely, if uncertainty is not that much; meaning that, markets are stable somehow or people can make credible projections, a long-term contract might be proposed as well. As one may realize, there is not an absolute best form of organizational structure, because it really depends.

TCE does not just rely on what has been said so far. It is more than that and surrounded for instance with some behavioral concepts as well. Opportunism which is a strategic behavior, and limited (bounded) rationality are frequently given attributes in this. Williamson (1993) argues that, TCE departs from the assumption that, economic agents are opportunistic and that, economizing on bounded rationality is a reasonable way of investigating solutions regarding the concerns of different economic organizations. Considering opportunism together with bounded rationality, Williamson explicitly suggests that, most economic agents are behaving opportunistically not all the time maybe but most of the time. He argues that, not only the failures to self-disclose true attributes ex ante (e.g. adverse selection) and true performance (e.g. moral hazard), but also the failures to tell the whole truth are implicated by opportunism itself.

As one may realize from this, opportunism perceived by Williamson is broader than a reciprocal or preemptive opportunism. TCE then implies (i) to contract in a rigorous way and (ii) to mitigate opportunism in a cost-effective way. Williamson follows an interesting enthusiasm here, because he believes that, transactions that are exposed to ex-post opportunism will benefit, if cost-effective precautions might be a priori developed. This is because (transaction) cost savings might be accomplished in this way. Williamson believes that, organizations exist because of their abilities to attenuate or alleviate opportunism through performing hierarchical controls that are not accessible to markets (Ghoshal and Moran, 1996).

TCE may also be dimensionalized on measurement costs approach, according to which, governance structure yielding the lowest measurement costs should be chosen (Barzel, 1982). That is, a cost-effective way of economizing or treating transaction costs is taken. In there, factors such as degree of measurement problems or risk aversion may matter in the delivery of proper incentive mechanism as well as about the feasible form of governance structure. For instance, if ownership is to include not a huge amount of

uncertainty and if measurement becomes a problem, vertical integration might be suggested.

Hendrikse (2003) suggests that, TCE might also be dimensionalized on the bargaining or negotiation costs. These costs are for instance: (i) costs of monitoring or performing the requirements of a given contractual agreement, (ii) costs of renegotiation, (iii) costs of lacking coordination, (iv) costs of information search and gathering or (v) eventually costs of information asymmetries eventually. This approach, ceteris paribus implies that, as long as bargaining costs are minimized, transaction costs are economized and therefore an efficient exchange system is given a chance to be established as much as possible. In parallel to that, ways to an optimal governance structure are also facilitated. Namely, maybe not necessarily the first-best, but the second-best or third-best solutions could be possibly sustained in this manner, depending on the circumstances.

At the limit where the bargaining costs are zero, market exchange is proven to be efficient even without thinking about the degree of uncertainty, the degree of asset specificity, or about the occurrence of transactions. Asset specificity should be taken as a transaction specificity. This a little bit reminds us of what Coase (1960) argued actually for his theorem to hold.[250] Needless to say, they are not the same things though. More than that, there is a problem with investment specificity. The point here is that, the more specific any given investment, the higher the likelihood that any bargaining costs may accrue.

As to be realized what has been discussed up to now, TCE signifies costs due to market failures. When this is taken into consideration, it should not be so fancy to predicate that, markets should be given the highest priority in the course of considering a proper governance structure fitting to a given situation at best. If markets do not seem to be the right one, then hybrids (for example as suggested in Williamson, 1991) may work out. If they also do not suit, firms -hierarchy- might be opted for organizing.[251]

Williamson uses the merits of contract law and theory of organization, in order to identify and synthesize some core patterns that tell about three generic forms of economic organization. They are markets, hybrids (e.g. long-term contracts, franchises etc.) and hierarchies. He finds that, differing mechanisms of control and coordination, as

[250] Coase suggests that, an efficient bargaining framework suffices to label an optimal/Pareto-efficient allocation of resources if property rights are also defined, allocated and enforced herewith.
[251] For an opposing view, refer to the concept known as ‘ influence costs ’ in its effects.

well as various abilities to get immediately synchronized to any noise, are mainly the ones to characterize these given economic organization formats –different sorts of governance structures. He also suggests that, these different types of economic organizations should be reinforced through different types of contract law.

8.2.4.2 The Property Rights & Incomplete Contracting Issue

In the literature, we see that TCE, an incomplete contracting problem, closely relates property rights approach. Hendrikse (2003) suggests that, Coase theorem mainly relies on five pillars or considerations, i.e. (a) ownership structure, (b) number of producers and consumers, (c) decentralization, (d) institutions and (e) negotiation/bargaining. Ownership structure implies that, if rights of ownership are sufficiently well characterized and if the person who decides also bears the costs and obtains the revenues associated with the use of the given asset, one may conjecture that, production means are utilized in the most efficient manner. Thus, ownership structure will determine who will have ownership rights.

Ownership claims might be decomposed into (i) decision rights [i.e. any right entailing the usage of the asset on hand] and (ii) income rights [i.e. rights enabling the right holder to bear the costs and therefore to possess the proceeds from the use of that asset]. Hence (efficient) ownership rights are meant to be encompassing these two said rights simultaneously. Second pillar [i.e. number of consumers and producers] implies that, for efficiency to take place, there is no need to have an enormously large number of traders or exchangers (consumers and producers).[252] This is mainly given on the grounds that, bargaining would ipso iure accomplish efficiency, by eroding any inefficiency drawback. As revealed already above, Coase suggests that, externalities may be addressed via creating additional markets, wherein ownership rights are traded.

Third pillar [i.e. decentralization] arises as a self-outcome of the mentioned theorem. It suggests that, in the case of efficient bargaining, one may expect that, there is no problem of motivation or coordination. However, this is not always the case. Centralization, as a different way of overcoming market imperfection problem if any, may give a birth to a better solution than decentralization, in terms of removing or at

[252] This is an interesting conjecture in terms of what many economists almost talk about. To the proponents of the competitive market notion, the higher the number of the market actors -sellers/buyers-, the more competitive the market those actors will be in. Hence, ceteris paribus, the prices would be considered as given and be settled up to p=MC at the limit. This for instance may yield the highest amount of efficiency in the case of perfect competition, while the vice versa will register in monopolies -especially the natural ones-.

least mitigating motivation or coordination problems. Fourth pillar (institutions) says that, one may need different types or structures of institutions in order to ensure a sound market system. In the light of Coasian view, contracts' design, allocation of ownership rights and opting for institutional framework may be endogenously materialized in the course of conducting economic analysis. Thus, in opposition to what neoclassical economists do, Coase seems to have brought a new pace which rules in costs associated with institutions. More precisely, costs to be arising due to management of organizations, design and execution of contracts are acknowledged. That is, a path addressing the needs of an organization theory is constructed in this way.[253] Remember that neoclassical economists highly consider production costs in their appraisals.

Fifth pillar (negotiation/bargaining) seems maybe one of the vital legs for the brevity of Coasian approach. Bargaining implies that, should the bargaining process efficiently take place, even though market exchange is somehow inefficient -because of positive costs of settling and performing an efficient design-, it would be yet possible to retrieve an efficient allocation, irrespective of whatever the type of markets (perfectly or imperfectly competitive) or alignment of ownership rights are, or, regardless of whether one may have externalities or not. This result is also argued to hold without considering the apportionment of the strength [power] of bargaining. Needless to say, this is a challenge to the core of economic wisdom dominating up until the moment Coase appeared. All these also suggest that, organizations evolve and persist in the cases of inefficient bargaining and/or existences of income effects. In return for that, motivation or coordination problems are expected to be destroyed or at least significantly lessened. Financial instruments make up also an important part of this market failure problematic, hence; contractual agreements are basically designed (drafted).[254]

Property rights are indeed related to the promise of the Coase theorem. As said early on, Coase (1960) suggested that, contracts or contractual agreements might erase any inefficiency problem off. For these contractual agreements to prove to be successful, it is needed that, (i) ownership rights be specified in first place, ii) institutions[255] as well as judicial bodies and the like be structured and (iii) contracts be honored and enforced somehow. By property rights approach, Alchian and Demsetz (1972) tried to generalize

[253] In so doing; it is clear that, Coasian theorem is intended to entail not only costs of production but institutional costs as well. Namely, it should be taken as a broad concept.
[254] See Hendrikse (2003) for these discussions.
[255] In so doing, the likelihood that ownership rights are efficiently exchanged and traded in an appropriate manner is supposed to enhance.

a standard theory of production and exchange to obtain an expanded scope of its validity. The scholars conjectured that, (i) objective of wealth maximization is substituted by that of utility maximization, where firm is not the unit of analysis any more, instead, individual adjustment to the economic environment should be credited more, (ii) transaction costs are positive and do change as regards to the changes in the assignments of property rights over the resources. They further argued that, one particular set of (private) property rights governing the exploitation of all the resources is not the sole relevant configuration involved (Furubotn and Pejovich, 1972; Pejovich, 1973).

When institutions do not function well or when ownership structures prove not to be efficient enough, property rights become real issue on the agenda. Institutions may not go well for instance if ownership rights are not allocated. Property rights may still be a question to resolve, smooth allocation of ownership rights notwithstanding. If ownership rights are not implemented, or, not duly enforced, we face a problem. Failure in enforceability or enforcement is a serious issue because it may stem from contract incompleteness.[256] Contract incompleteness does not only raise concerns about observability, of the law and spirit of the contractual agreement, but also about verifiability. Failing in achieving the verifiability is indeed a more serious matter than observability. For example, even though one may explicitly see or (implicitly) monitor what is going on among the parties of the agreement, if there is not an independent party or outsider to identify the actions of those contractual parties involved, contracts are yet argued to be incomplete or missing arrangements.

Ownership rights are also meant to be so-called convertible in the market, i.e., tradable. If ownership rights are not subject to trade or not transferrable, even though they are allocated, implemented and enforced, we may still have property rights problem. Another problem with property rights points to misallocation of income and decision rights –misdecomposition of ownership rights. These combine to imply some inefficiencies. Separation of ownership from control is usually given as an example to illustrate this case (e.g. Berle and Means, 1932 and so on). In here, we face an inefficient risk-sharing problem. In particular, the persons who pay the costs are different from the ones who are authorized to decide or to obtain the proceeds. The latter ones are the right holders.

[256] Scott (1983) argues that, ensuring enforceability implies a social contract or imposition by official authorities.

As already implied, property rights approach is useful since it tries to cover the caveats that arise due to incomplete contracts.[257] Williamson (1991) associates property rights with the right to (i) use the asset, (ii) appropriate returns from the asset and (iii) change the form of the given asset and/or its substance.[258] In the real life, it might often be too costly to specify every single term in a contractual agreement. People are limitedly rational and therefore may not foresee every possible situation beforehand or not ever in much advance. Or, some people are of restricted cognition. In this case, it is not possible to get agreed on everything ex-ante. Therefore, ex-post bargaining may become a deal to satisfy, when the contracts are incomplete. In other words, one may perceive a need for governance structure or ownership.

Hendrikse (2003) defines governance structure as an organization comprising rules, through which exchange is served. This is usually given on the grounds that, conduct or enforcement of contracts would rely on the organizational setup -in the case of incomplete contracting-. These organizational setups or versatile governance structures dictate possible ex-post bargaining cases, which are ex ante or a priori expected to be impounded into specific investments of the contracting parties. Making it necessary to impose existences of governance structures, property rights approach aims at establishing the path to the highest surplus available. This is particularly important for negotiations that disprove to be efficient enough.

Zingales (1998) suggests that, the upper thing may happen, depending on either the level of (ex-ante) investment effects, inefficient bargaining or eventually risk-aversion.[259] Hendrikse (2003) suggests that, walking through one of these veins, governance structures may be consulted to add value, when (a) (contractual) relationship engenders a quasi-surplus and (b) this quasi-surplus is a priori not allocated in an entire basis. This purports to say that, it could be the case, that not all the decisions are given a priori and not the entire quasi-surplus is allocated ex-ante[260]. The reason is, apparently, the costliness of contract incompleteness. However, enabling ex-post bargaining system, suggested governance structure will be striving for doing its best, in the view of ensuring

[257] Asymmetric or superior information aggravates the drawback of the given contract. On the other hand, when the contracts are complete, parties of those contracts might be immune to any relevant problem, should what Coasian theorem suggests be fulfilled.
[258] For a much broader definition, see Furubotn and Pejovich (1972).
[259] Zingales argues that, the notion corporate governance should be alone tackled in the vein of contract incompleteness. Therefore, corporate governance may be suggested to rely fundamentally on the definition of the firm in its essence.
[260] The vice versa is always the case under complete contracting, where the design of the contractual agreement sets everything from the very beginning.

the best optimally efficient distribution/sharing of quasi-surplus in an ex-post fashion.[261] One should bear in mind that, among the ultimate goal of governance structures is to maximize the incentives to create value-enhancing investments and efficiency. The way is to minimize risk and hence transfer the residual risk to the least risk-averse or most risk-lover party.

Specifically, ownership or governance structures regard the allocation of residual (decision) rights while specific rights particularly concern contracts. This is mainly because there occurs a certain variation between specific rights and residual decision rights when contracts are incomplete (Grossman and Hart, 1986). As touched before, the problem is that, not every observable action or happening is necessarily verifiable. In complete contracting case, we expect that, every single right is specified in the contracts. By this definition, specific rights are the ones to portray the claims and obligations for the circumstances that are also verifiable. So, the problem with incomplete contracting is basically the lack of or flaws on the required specific rights. In the case of contract incompleteness, some specific rights are ex ante missing.

Covering this gap and hence completing the contracts, the concept of residual rights has been developed. Residual rights tell us who is entitled to exploit the use of production means for the circumstances that the contracts do not expressly stipulate or provision. Hendrikse (2003) argues that, one way to distinguish between residual and specific rights is that, all-non specified rights in a regular contractual relationship are assumed to be residual ones. In particular, (allocation of) residual rights shape the division of surplus which is dependant of the allocation of bargaining power. In so doing, residual rights coact with some governance or institutional structures. Thus, some investment opportunities (in specific assets) are encouraged with nicely envisaged incentive (-compatible) mechanism.

As explicitly stressed several times in this part of the dissertation, there is a close link between TCE and property rights approach. One of the main pillars TCE and property rights approach lean on is that, both the approaches significantly highlight the problems stemming from bargaining inefficiencies, i.e. contractual incompleteness. It is the law of contracts issue. This is probably because both conjecture that, depending on the distribution of bargaining position and/or strength, one may testify different types of governance structures. Both the approaches suggest that, a governance structure as well

[261] It does not have to be always necessarily so, though.

as practices or institutions might be needed, should the bargaining process occur inefficiently (Hendrikse, 2003).

De Alessi (1983) argues that, both transaction costs and structure of property rights affect extent and form of shirking which is also the main point in Alchian and Demsetz (1972). De Alessi believes that, shirking is an indispensable consideration in explaining why firms exist and why we have different types of organizational forms (governance structures). Some people even argue that TCE, at least in the world of Williamson, is a version of property rights theory in that firms have gotten a much broader perspective than before.[262]

The close connection between TCE and property rights approach is also given from allocative viewpoints, as already mentioned. Alchian and Demsetz (1973) argue that, when transaction costs are significant [i.e. not negligible], a change in the identity of right owners might have allocative effects, due to the fact that, negotiations geared towards a unique utilization of resources may be inhibited by positive transaction costs. Foss and Foss (2005) define transaction costs as the costs of exchanging, protecting and capturing property rights. Thus, transaction costs turn out to be functionalized on the utilization of property rights themselves. In other words, economizing transaction costs pass through economizing on property rights in some sense. Namely, cost optimization regards the definition and/or content of both the given approaches to the incomplete contracting problem.

Considering resources as bundles of property rights to attributes, Foss and Foss argue, that transaction costs might also be the costs of protecting or safeguarding against entry and imitation. These costs might level property rights down to the streams of income from controlling over some certain market shares and resources. The scholars also suggest that, thinking of the issue this way necessitates that, resources which are bundles or sets of property rights are the outcomes of transaction cost economizing processes. Moreover, they say that when costs of exchanging property rights are zero, all property rights to all the attributes may be exchanged and are optimally set up into the resources surrounding those rights. This also implies that, when transaction costs are given to be zero, the property rights to resource attributes, in their entireties, would be perfectly specified, protected or traded. It suggests that, if transaction costs correspond a

[262] See Zald (1987).

positive number rather than zero, not all but at least some property rights may remain not specified or not sufficiently protected, and so on and so forth.

We also know that, when there are some not-negligibly high transaction costs involved, property rights may be decisive on value creation. This means that one may have a directional relationship in this case, recognizing who possesses which assets over the others becomes an important point; namely, it does not read a redundant information any more. Inhibiting the existence of such an information (asset ownership) would make us know about the bargaining strength or power of the contractual parties as well. Together with also knowing about degree of asset specificity (bargaining position) when all else is fulfilled, some probable ownership patterns are also possibly identified. Thus, the ownership pattern where value creation is maximized is eventually operationalized out there.

Remember that at a very extreme case, property rights approach in the Coasian world (1960) stipulates that, if costs of protecting and exchanging property rights are zero: (a) all the resources would be in their highest value use, (b) production would be at its maximum or (c) no need to establish any firm around. At another extreme, property rights approach is sometimes suggested as a full indicator even for microeconomic theory (Furubotn and Pejovich, 1972).

Analytically speaking, property rights theory of the firm may be argued to trace back to Grossman and Hart (1986), where a buyer and a seller plan to trade an undefined good that will be produced with a physical asset. Property rights theory has been thereafter exposed to some advancement by Hart and Moore (1999) [hereinafter, GHM model] (Williamson, 2000).[263] In particular, Williamson suggests that, GHM is similar to TCE as follows.

First, GHM deals with make-or-buy decision with the help of a framework, where contracts are not complete [due to bounded or limited rationality]. Second, promises alone may not be used to overcome non-contractibility [due to opportunism]. Third, parties within a given contract are bilaterally dependent [due to asset specificity].

Maskin and Tirole (1999) argue that, property rights models are not different from a bilateral monopoly model in terms of their structures. This is given on the grounds that, those models predicate that, the hypothetical trades with outsiders are non-contractible.

[263] For a detailed investigation, see Maskin and Tirole (1999).

In other words, an asset owner's utility out of trading with an outsider is equal to private benefit she derives by depleting up that asset.[264]

On the other hand, Williamson (2000) notifies us of some particular salient differences between TCE and GHM as follows. Inter alia, TCE suggests that, maladaptation in the interval of the execution of a given contract is the main cause of inefficiency, while GHM ex post rules out (precludes) maladaptation, by the nature of its presuppositions about common knowledge and cost-free ex post bargaining.[265] The ultimate outcome of this given transition in the differentials of the assumptions implies that, the entire inefficiency found in GHM is incorporated into the (ex ante) investments in human assets that are conditioned on the ownership of physical assets. When this is the case, TCE facilitates empirical investigations a lot much more than property rights approach with GHM backbone.[266]

Another thing is that, since common ownership under GHM does not suggest unified management, for instance, the way how a vertical integration is established matters, which recalls a directional social network approach under GHM. Williamson (2000) suggests that, not any single physical asset utilization or transfer pricing distortion [due to the impossibility of selective intervention] happens under GHM. This is because of some assumptions as follows. First, incentive intensity, administrative controls and informal organization are not subject to any change to be posed by ownership. Second, courts are irrelevant since renegotiation is cost-free. On the other hand, TCE suggests that, different modes of governance structures alternate in incentive intensity, administrative controls such as auditing, accounting, and transfer pricing or in access to courts and informal organization.

To summarize, a decent corporate governance by definition implies good governance structures, effective monitoring, effective control, strong legal rights, strong legal

[264] See also Hart and Moore (1999), where buyer and seller are assumed to be risk-neutral. At this point, refer to Maskin and Tirole (1999b), wherein the scholars conjecture that: if parties were risk averse, a first-best solution might be obtained even without allocating property rights. These combine to suggest that, the degree of risk aversion may significantly matter in this.

[265] When maladaptation exists, it could be argued that, incentives might be lower-powered, or incremental bureacratic costs might go up at the same time.

[266] However, in the recent years, one may also witness some empirical investigations regarding property rights concept as well. Using some proxies such as extralegal payments, unofficial payments for specific services or payments to fire, sanitary etc. (to stand) for property rights security, Johnson *et al*. (2002) show that, the security of property rights in the course of determination of financial choice matters. They conjecture that, the more secure/stronger the property rights prevailing in a country, the more demand for external finance would be created and the more the reinvestment rate (i.e. reinvestment/profit) will be. Their evidence documents that, secure property rights, more incentive to make investment, have been both necessary and sufficient safeguards for investment if any.

enforcement, lower transaction costs, lower agency costs and a viable financial mechanism that grows up on a healthy venue. Therefore, it could be argued that, a sound governance system helps to mitigate transaction costs around both firm-wide and country-wide. This implies that corporate governance can contribute to write off a significant partition of transaction costs through its role in completing the contracts and enforcing them. The next section examines the related literature that contends that good corporate governance may reduce firms' costs and thereby may generate significant cost advantages for them.

8.3- Corporate Governance As A Cost Advantage

As the preceeding discussions of this chapter have prescribed and suggested, corporate governance builds on different legs that are its attributes (e.g. transparency, disclosure, good accounting principles/standards/practices, strong stakeholder rights, decent legal systems, decent legal enforcement, independent boards, diffused ownerships, economic development, economic growth, competitive markets, sizeable shareholders, quality information, viable monitoring, scale economies, existence or absence of agency problem, transaction costs etc.). The scholarly investigations have concentrated on these legs to proxy for corporate governance. This dissertation does particularly pertain to the accounting field as its subject (i.e. transfer pricing) belongs thereto, including any taxation or auditing implications where available. In this chapter, we are particularly interested in showing that good corporate governance creates a cost advantage for the firms because it reduces their funding costs (cost of capital), stimulating further reductions in other costs of the firms such as their operating costs/expenses. Once the operating costs are shrunk, operating profits of the firms will rise. Therefore, I will investigate the studies examing the effects of corporate governance or its attributes on firms' costs of capital from different perspectives.

A good corporate governance by definition implies less uncertainty for the investors, stronger creditor rights, more quality shareholder protection, higher returns, which suggest a lower cost of capital. For instance, Gordon (2002) argues that cost of capital for firms with good corporate governance would be lower when a given corporate governance structure is more favourable. The reason is that investors in those jurisdictions will be better able to price the risks involved in their investments. Claessens (2003) reports that (i) the stronger (weaker) the creditor rights, the greater (smaller) the depth of the financial system, (ii) the better (worse) the quality of shareholder

protection, the larger (smaller) the country's stock markets, (iii) the weaker (stronger) the corporate governance, the higher (lower) the costs of capital associated with the respective entities and (iv) the better (worse) the corporate governance, the higher (lower) the returns on assets will be. A table showing that strong corporate governance results in lower cost of capital is given below.

Figure 8.1: Corporate Governance & Cost of Capital

Source: Claessens (2003)

Good corporate governance implies less earnings management. There are some studies, known as law and finance studies, that suggest that the legal frameworks of the countries might affect the quality of financial information and therefore cost of capital. For instance, Leuz *et al.* (2003) suggest that, the degree of outside investor protection endogenously determines the quality of financial information reported to the outsiders. It is documented that, weak legal protection translates into a poor-quality financial reporting that probably patterns the advancement of arm's length financial markets.

Put differently, the above scholars contend that, when legal investor protection proves to be less effective, which in turn implies that earnings management practices may get more probable/common to observe, fundamental corporate choices such as firm's financing or dividend policies beside to ownership structures will be badly affected as well. Remember that earnings management is wrongful representation/misconduct of financial statements by insiders. Making use of superior information (e.g. information asymmetry), financial statements are presented in an untrue and unfair manner through an earnings management practice. Hence, there is a negative association between earnings management and the quality of legal enforcement. In other words, when the quality of legal enforcement increases, since the quality of financial information will rise, cost of capital will decrease.

Sampling 49 countries, Porta *et al.* (1997) document that countries that have poorer investor protections in comparison to the richer ones tend to have smaller and narrower capital markets. Scholars derive this important result based on the variables (e.g. legal origin, external cap/GNP, domestic firms/Pop, IPOs/Pop, Debt/GNP, GDP growth) quantified as to the peculiarity of dominating legal rules and to the quality of the enforcement of law. Regarding the debt markets, in opposition to some possible expectations, when the investor protection is getting more decent, then the level of debt financing increases. The reason is because those countries have adopted a common law system versus a civil law framework. Therefore, it is suggested that legal systems play effective role on financial choices of the companies.

Similar to 1997 paper and sampling 49 countries again, the same scholars as above (1998) investigate the legal frameworks which are enforced for the protection of corporate stockholders as well as those frameworks' origins and qualities. The findings report very similar results to those in 1997 paper and document, that common-law regulated countries on the whole tend to have the strongest investor protections whereas French-civil-law countries have the opposite situation. In 1998 paper, it is also documented that there is a negative association between *investor protection* and *concentration of share ownership* in the largest public companies. This is because small, diversified shareholders probably may not be recognized not that important in the countries with relatively bad legal protection systems. Put it differently, investors in different legal jurisdictions are entitled to exploit different sets of rights. Findings also suggest that when national income increases, the quality of law enforcement increases as well. Further, when there is poor investor protection, then, ownership structure is found to get more concentrated rather than dispersed. Ownership concentration is also suggested to shrink if accounting standards and practices as well as shareholder protection are relatively decent.[267]

Beck *et al.* (2003) document that legal origin plays an important role in financial development because legal practices bring about mechanisms to efficiently adjust to the uprising economic circumstances. In the paper, two approaches are adopted, namely political channel [i.e. tenure of supreme court judges and supreme court power] and (ii)

[267] In another paper**,** Porta *et al.* (2002) provide a model, through which it would be possible to see how legal protection of minority shareholders and cash-flow ownership affect the value of a firm. In so doing, the said scholars use Tobin's q to measure the valuation with the data from 27 wealthy economies on a firm-basis. They find that the better the protection of minority shareholders and the higher the cash-flow by the controlling ownership shareholder, the higher the corporate value will be.

adaptability channel [i.e. case law or legal justification]. The former is said to work when civil law systems support the development of the institutions furthering the power of the State. This is because of the rationale that says that legal traditions would be different depending upon the priority they attribute to private property rights –compared to the rights of the State. The latter is said to be the case highlighting that legal traditions would be different or matter as regards to their responsiveness to the changing socio-economic circumstances.

By controlling for firm-fixed effects and time-varying firm characteristics, Bertrand and Schoar (2003) document that manager fixed effects impact on a number of corporate decisions from heterogeneity in investment to financial or organizational practices of firms. In doing so, there establishes a close link between manager fixed effects and management style. Scholars argue that the better the corporate governance in a given firm, the higher the compensation committed to managers with higher performance fixed effects would be. More recently, Cremers and Nair (2004) study the inter-relationship between external governance [market for corporate control] and internal governance mechanisms [shareholder activism] in terms of equity returns. It is argued that there is a complementarity effect for the firms with lower industry-adjusted leverage and this effect is even getting stronger for smaller firms.[268] Running two-step weighted least squares regression, scholars document that external governance is more effective for small firms –the larger the firm size, the less the quality of the external governance will be.

Klock *et al.* (2005) study the relation between the cost of debt capital and corporate governance. Using firm-level data for the period from 1990 through 2000, they show that provisions stipulating antitakeover governance and management rights help to reduce cost of debt capital. Building a model of a firm that belongs to shareholders and is executed by managers, Garmaise and Liu (2005) investigate the relations among firm governance, corruption (dishonesty) and cost of capital. They classify the managers as either dishonest or honest ones. Garmaise and Liu suggest that when managers possess superior information (an information asymmetry advantage) but shareholders are the ones who exercise control, managers who are dishonest may prepare false reports so as to disturb the investment and cash flows of the firms they administer.

[268] This is because internal governance mechanism is seen as a must for the external mechanism to work out when for example large shareholders may activate takeovers since they have strong incentives to monitor the management.

The above scholars notice that, that the dishonest managers have both information access and control rights aggravates the degrading in the level of firm value and profits registered. They conclude that once the corporate governance coupled with management dishonesty is not effective, firms may have more systematic risk exposures. Further, similar to La Porta *et al*. (1997, 1998, 1999, 2000) and Beck *et al.* (2003), they believe that the legal foundations are influential in driving financial outcomes, particularly firm betas. However, unlike La Porta *et al*. and Beck *et al*., Garmaise and Liu argue that it may not be the legal origin of the commercial codes but rather the current stipulations of the antidirector rights that have such rigor effect.

A recent study by Shen and Chih (2007) investigates the relations between corporate governance and earnings management in Asia's emerging markets. Using firm-level governance data of nine Asian countries and using country-level governance data deployed in past studies, they contend that firms that have good governance skills are inclined to have less earnings management. Following the earnings management measures used by Leuz *et al*. (2003), Shen and Chih suggest that good governance might help to reduce the earnings smoothing (management) practices of large size firms. Good governance may also help to reduce the earnings smoothing and aggressiveness tendencies of firms that have higher growth or lower earnings yields.

One of the themes that has appealed great attraction in the academia is disclosure issue which is one of the most important attributes of corporate governance, as uncovered already. As we have seen, disclosure is a prerequisite for a good governance structure to be in place. In other words, disclosure is an inseparable part, an attribute, of good governance. Disclosure as a term suggests that any (quality) information about the firm be appropriately and timely known to the public. It can be decomposed into two parts: (i) mandatory disclosure and (ii) voluntary disclosure.

A mandatory disclosure refers to the disclosure that stipulates that firms are mandated to disclose their financial information in the way the respective Statute governs. (Local) Generally Accepted Accounting Principles (GAAP), International Accounting Standards (IAS), International Financial Reporting Standards (IFRS) are some well-known benchmarks/regulations setting some criteria for the accomplishment of proper disclosure practices. In addition, depending on the judicial territory, firms may be obliged to disclose their financial information in lieu of commercial codes, capital markets codes, tax codes etc. All these fall into the category of mandatory disclosure.

Wang *et al.* (2008) define voluntary disclosure as the information in excess of mandatory disclosure. Voluntary disclosure refers to discretionary disclosure practices that firms are not supposed to do. In this, even though firms are not required, they may disclose some information about them on a voluntary basis. Firms may do that, to signal their stakeholders (e.g. investors, shareholders, suppliers, creditors etc.) how credible they are or how good they are financially doing.

Before going any further, our venue for the departure will be identifying the relevant international accounting and financial reporting standards that regulate the disclosures as the following. The international accounting and financial reporting standards (e.g. IAS I) stipulate that entities should regularly present their balance sheets, income statements, statement of changes in owner's equities, cash flow statements, notes that include an excerption of significant accounting policies and other explanatory notes. The reason has been given such that, duly presentation of financial statements will give an opportunity for standard setters, other regulators and practitioners to clearly see the previous financial states of the entities relative to the current state, in addition to make comparison with the other entities in the market. IAS I states that financial statements that must be presented at least once a year must fairly snapshot entities' financial performance, financial stance and cash flows. It further states that unless entities fully comply with international financial reporting standards, they will not be said to appropriately follow IFRS.[269]

IAS 10 requires that entities should adjust their financial statements when some (material) events after the balance sheet date develop. This suggests that disclosure is not only important for the presentation (declaration) of the things that the entity is related to, but for the events that may occasion after the issuance of the financial statements. The respective Standard defines the " events after the balance sheet date " as the favourable/unfavorable happenings that may happen between the balance sheet date and the date on which the financial statements are officially allowed to be issued. According to this Standard, disclosure is such important that may make an exception to the going concern principle. For instance, if the events after the balance sheet date

[269] See " Technical Summary, IAS 1: Presentation of Financial Statements ", @ http://www.iasb.org/NR/rdonlyres/80B373BF-BB16-45AB-B3F7-8385CD4979EA/0/IAS1.pdf.

suggest that going concern principle is not proper to be applicable, it will not be possible to arrange financial statements therewith.[270]

IAS 24 mandates the duly related party disclosures. Accordingly, a party will be considered as related to an entity, for instance, if it controls or is controlled by that. A related party transaction is a transaction between the party and the entity in the form of transfers of services, resources or even obligations. There is no need for a price to be charged for such a transfer. Among the items that need to be disclosed relative to key management personnel compensation are short-term employee benefits, post-employment benefits, other long-term benefits, share-based payments and termination benefits. In addition to this, a disclosure must include the nature of the related party relationship, information about, and outstanding transactions out of the transaction that could happen between the related parties.[271]

IFRS 7 is geared towards arranging disclosures for financial instruments. It suggests that entities make appropriate disclosures on their financial statements so that users of financial information may be able to watch the weight of financial instruments in those entities' financial performances (e.g. income statement) and financial positions (e.g. balance sheets). The users of the disseminated financial information, from the provided entity disclosure, might be capable of understanding the nature/extent of the risk exposures and how the entity is dealing with mitigating/hedging them. The qualitative and quantitative disclosures should complement each other for this purpose. Financial instruments should be conceived to be the frequently used accounts for the entities such as accounts receivable/payable for a small manufacturer. IFRS 7 needs to be considered together with IAS 32 (Financial Instruments: Presentation) and IAS 39 (Financial Instruments: Recognition and Measurement).[272]

IAS 32 recommends principles for presenting, and applies to categorizing the financial instruments. Financial instruments may be categorized as financial assets, financial liabilities and equities. Financial instruments are defined as contractual arrangements that engender a financial asset of one entity and financial liability/equity for another entity in return. Cash, contractual claims, contracts (derivatives/non-

[270] See " Technical Summary, IAS 10: Events After The Balance Sheet Date ", @ http://www.iasb.org/NR/rdonlyres/6B8638F3-A408-4FD0-B8DC-4D394BD5D1D6/0/IAS10.pdf.
[271] See " Technical Summary, IAS 24: Related Party Disclosures ", @ http://www.iasb.org/NR/rdonlyres/5D53347E-1221-4D83-947D-2B72DD1D9615/0/IAS24.pdf.
[272] See " Technical Summary, IFRS 7: Financial Instruments: Disclosures ", @ http://www.iasb.org/NR/rdonlyres/8177F9A2-EB2F-45A3-BBF3-3DE7DCB13E1A/0/IFRS7.pdf.

derivatives with the receipt promises etc.) or equity instruments of other entities might constitute examples for financial assets. Contracts (derivatives/non-derivatives with the delivery promises etc.) or contractual obligations should be considered as financial liabilities. Equity instruments should be perceived as contractual arrangements documenting the residual claims in the entity's assets, netted of all its liabilities. IAS 32 should be considered together with IFRS 7 (Financial Instruments: Disclosures) and IAS 39 (Financial Instruments: Recognition and Measurement).[273]

IAS 34 concerns non-year end (annual) or rather interim financial reporting procedures of entities. Interim period refers to the period shorter than one fiscal year, while interim financial reports stand for either the reports that are in the forms of complete sets of financial statements, or the reports that are sets of condensed financial statements. In particular, the Standard tries to set the minima for the presentation of corporate financial disclosures. The Standard stipulates that the information provided (disclosed) in the interimly issued documents not replicate the ones already presented in the annual financial statements.

The interim financial statements should rather reveal new and material information to the related information recipients (e.g. investors, creditors, shareholders, other stakeholders.). Otherwise, it would not make any sense to issue them. In so doing, it is suggested that, as long as interim financial statements/reporting are drafted in timely and reliable fashion, investors, creditors and other stakeholders of the publishing entities may better be able to see those entities' capacities of generating cash flows/earnings and to see their financial states besides their liquidity positions. Accordingly, an interim financial report should comprise, at minimum, the following financial elements: condensed balance sheet, condensed income statement, condensed cash flow statements, explanatory notes at discretion, condensed statements documenting either all the changes in the equities or only the changes in equities that rather pertain to the transactions remaining outside the ones with owners.[274]

Coming back to scholarly investigations, in the accounting literature concerning disclosure issue, we see that there are studies linking disclosure (particularly voluntary disclosure) with cost of capital generally, or with cost of debt capital and cost of equity

[273] See " Technical Summary, IAS 32: Financial Instruments: Presentation ", @ http://www.iasb.org/NR/rdonlyres/0242B440-1174-4BED-B399-B5BA248D0D06/0/IAS32.pdf.
[274] See " Technical Summary, IAS 34: Interim Financial Reporting ", @ http://www.iasb.org/NR/rdonlyres/039DD3F5-2355-4E4E-8071-48BCEED606C8/0/IAS34.pdf.

capital individually. Crediting both, I will review several studies that mainly contend that disclosure reduces firms' costs of capital, starting from the earliest ones to the most recent ones.[275]

Amihud and Mendelson (1986) argue that as long as bid-ask spreads of the securities offered are lower, since investors will ask lower returns to counterbalance their risk premia, the cost of equity will be lower. They suggest that the mechanism to provide that interaction is disclosure of information which mitigates adverse selection covenant that is incorporated into the bid-ask band. Diamond and Verrechia (1991) investigate the relations among disclosure, liquidity and the cost of capital. They document that disseminating public information to mitigate information asymmetry may help decrease cost of capital of businesses. It is because following public information disclosure, liquidity for the firms' securities will increase and therefore large investors will show high appetites (demand) for them. The scholars argue that large firms will tend to disclose more information for they are the ones to benefit most. Further, by means of market makers, disclosure helps reduce the capacity of risk taking. When initial information asymmetry is much, mitigating it off will enhance the security prices.[276]

McNichols and Wilson (1995) suggest that firms with frequent disclosure (e.g. management earnings forecasts) can access to capital markets at cheaper cost. Botosan (1997) explores the relationship between degree of firm disclosure and the cost of equity capital. In particular for the firms with low analyst following, Botosan reports a negative link between cost of equity and firm disclosure and size levels; and a positive link between market beta and disclosure. However, for the businesses with high analyst following, the scholar evidences not any documentation.[277] Healy *et al.* (1999) imply

[275] In the literature, there are some works that show the incentives underlying the link between voluntary disclosures and the corporate governance perspective. For instance; in a study, Eng and Mak (2003) investigate the effects of governance structures on voluntary disclosures. The reason they thought that governance structures may be related to disclosures is as follows. Specifically, ownership structure determines the degree of monitoring which implies that the degree of disclosure will be affected as well. Likewise, since board of directors is supposed to monitor the decisions of the management, a higher proportion of outside (independent) directors in the composition of the board may lead to, an increased level of (a more effective) monitoring and hence disturb managerial opportunism. This implies that voluntary disclosure will go up. In other words, the scholars argue that it is the monitoring that establishes such link between corporate governance and voluntary disclosure.

[276] For the related discussions, see Diamond and Verrechia (1982), Holmström (1982), Diamond (1985), Diamond and Verrechia (1981) etc.

[277] See Edwards and Bell (1961), Ohlson (1995) and Feltham and Ohlson (1995) for the accounting based valuation formula used in estimating the cost of equity capital in the study by Botosan (loc.cit.). For the related papers, see for instance Copeland and Galai (1983), Glosten and Milgrom (1985), Amihud and Mendelson (loc.cit.), Diamond and Verrechia (loc.cit.), Klein and Bawa (1976), Barry and Brown (1985), Coles and Loewenstein (1988), Handa and Linn (1993), Coles *et al.* (1995), Clarkson *et al.* (1996) etc.

that disclosure might reduce cost of equity capital since it rises institutional ownership, analyst following, stock liquidity and performance.

Sengupta (1998) explores how corporate disclosure qualities may affect cost of debt capitals (hence cost of capital) of those businesses. The scholar reports that, companies that have relatively high or more decent disclosure quality ratings are exposed to a lower level of effective interest costs of debt issuance. The main reason is that companies' systematic (timely and comprehensive) disclosure policies may induce changes in the default risk perceptions of lenders and underwriters for those disclosing companies. In other words, if any given firm regularly discloses its financial information, the lenders or underwriters will price the default risk at a lower layer, which is the risk of firms' not being able to service their debts.

This for instance implies that, lenders will ask less interests on loans; meaning that, credit spreads lenders will request from the borrowers will be getting reduced, provided that disclosure quality is more decent (sufficient). Remember that credit spreads are the returns, the net interest rate proceedings, of the lenders. The lenders (banks) will realize their (main) operating profits when to sell a loan to a borrower at a higher interest volume than the one they have to offer for collecting the deposits; particularly the time deposits. The scholar further conjectures that, when the uncertainties tend to get higher in the markets, the disclosure qualities of the companies will be of more importance, relative to the ones where uncertainties are less. In the paper, the yield to maturity on new debt issues and the total interest cost of those new debt issues are proxied for firms' costs of debt capitals. Uncertainties are measured by volatilities or fluctuations on daily stock returns.[278]

Like Botosan (1997), Botosan and Plumlee (2002) document that disclosure level negatively relates to cost of equity capital. The scholars argue that, the differential magnitude in the level of cost of equity capital between the businesses providing the most annual report disclosure and the ones providing the least amounts ca. 0.5-1 % points, after controlling for firm size and market beta (β).

Brown and Hillegeist (2005) hypothesize that information asymmetry could be lessened, by providing higher disclosure quality. The scholars study the way how disclosure quality may influence the degree of asymmetric information. They argue that it is not about changing the incentives that induce information trading, but about

[278] For the related papers studying the determinants of cost of debt on reducing cost of debt, see for instance Fisher (1959), Jaffee (1975), Kidwell *et al.* (1984), Fung and Rudd (1986) etc.

changing the probability of information trading, which establishes such a direction. The proxy they use to indicate for information asymmetry is the probability of informed trade. In particular, it is conjectured that, as long as the disclosure quality is relatively high, it may record shrunk asymmetric information since the probability the investors learn and hence trade on private (superior) information will decrease. The scholars suggest that, disclosure quality is adversely related to information asymmetry, referring to annual reports and firms' relationships with investors. The scholars further report that, the negative relationship between information asymmetry and disclosure quality appears to be stronger in the years of industry with a high market-to-book ratio. Besides, the given relationship may read quite differently across the firms in a systematic basis.

Chen *et al.* (2004) study the effects of firm wide disclosure and the quality of corporate governance on the level of cost of equity capital in the setting of emerging markets. They document that corporate governance significantly explain the cost of equity capital such that as long as it is significantly getting more decent, cost of equity capital significantly declines.

Ashbaugh *et al.* (2004) identify corporate governance attributes as financial information quality, ownership structure, shareholder rights and board structure. They make several conjectures. Firstly, firms with larger (smaller) abnormal accruals and less (more) transparent earnings bear higher (lower) cost of equity. Secondly, firms that have more independent audit committees or whose majority of stocks are held by activist institutions have lower equity costs. Thirdly, besides the independence, as long as the portion of the board holding shares of the company is larger, the cost of equity declines. The governance attributes that the scholars have set account for 14 % of the variation in the beta of the firms and for 8 % of the cross-sectional variation in the level of firms' costs of capital. These findings confirm the general hypothesis proposing that firms with decent or better governance skills pose less agency risk to their shareholders which therefore leads to reducing cost of equity capital. [279]

[279] See Bushman and Smith (2001) and Shleifer and Vishny (1997) for the papers studying governance attributes and agency cost relationships. In the finance literature, for the studies that show that 'if the financial information is quality, since the market liquidity increases, transaction costs decrease and therefore the demand for the firms' securities increases, cost of equity capital is getting lower', see for instance Copeland and Galai (1983), Glosten and Milgrom (1985), Amihud and Mendelson (1986), Diamond and Verrechia (1991). For the studies that show that 'if the financial information is quality, since the information risk of the investors will be reduced, the equity cost of capital will be reduced', see

Francis *et al.* (2004) investigate the relationship between the cost of equity capital and several earnings attributes such as accrual quality, persistence, predictability, smoothness, value relevance, timeliness and conservatism. Drawing on Barth and Landsman (2003), Cohen (2003) and Barone (2003), they identify the accrual quality, persistence, predictability or smoothness as more accounting bases than the others that are rather market based. The criterion in so doing is that the ones with accounting bases use accounting data while the resting ones use financial information such as share returns. The scholars show that firms with least favorable values of each earnings attribute have larger costs of equity than those with the most favorable ones. To be more clear, they contend that the accounting-based earnings attributes explain more of the cross-sectional variation in the estimates of the degree of the cost of equity than what the market-based earnings attributes reveal. And conservatism has been found not to affect the cost of equity capital.[280]

Chen *et al.* (2004) argue that more disclosure may do a better job for outsiders (outside investors) as long as those outsiders are making their decisions in a rational basis.[281] The scholars investigate the relationships between disclosure, corporate governance, and the cost of equity capital. The scholars find that there is a significantly negative association between the cost of equity capital and the corporate governance. Further, the association is systematic (recurrant). That is, they conjecture that, the more decent the corporate governance, the less the cost of equity capital will be. In particular, they report that corporate governance, firm wise, will be more influential in lowering the cost of equity in the territories with strong protection of investor rights or claims. This suggests that firm wide corporate governance and country wide legal protection substitute each other. The scholars further argue that, the (mandatory) disclosure should be fortified through decent legal systems where investor protections are robust, which in turn may suggest a reasonable amount of decrease in the cost of capital. Using the cost of capital model developed by Easton (2004), Kim and Shi (2005) study the relation between voluntary disclosure and the cost of capital through management earnings

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for instance Easley *et al.* (2002), Francis *et al.* (2004), Leuz and Verrechia (2004), Coles *et al.* (1995), O'Hara (2003), Barry and Brown (1985), Klein and Bawa (1976) etc.

[280] Unlike Francis *et al.* (2004), after controlling for known risk factors and innate determinants of conservatism, Lara *et al.* (2006) document that conservatism negatively affects the cost of equity capital. They use a portfolio approach to measure the level of conservatism.

[281] For the papers that argue that disclosure helps reduce information asymmetry, see for instance Diamond and Verrechia (1991), Easley and O'Hara (2003) etc. Apparently, these papers imply that disclosure might lessen the cost of source or capital of the firms.

forecasts. They document that the degree of cost of capital declines following the disclosure of management earnings (good news) forecasts.

Lambert *et al.* (2007) examine the relations among accounting information, disclosure and cost of capital. In particular, they want to know if and how accounting information concerning a firm accounts for its cost of capital, the attributes of diversification notwithstanding. Establishing a model in line with the CAPM (capital assets pricing model), the quality of accounting information has both direct and indirect effects on cost of capital. Direct effect refers that higher quality disclosures shrink the firm's assessed covariances with the cash flows of the other firms. This is non-diversifiable. The indirect effect refers that higher quality disclosures influence the real decisions a firm may make, changing the ratio of expected future cash flows to the covariance of these flows combined with the aggregate cash flows observed in the market.

Exploring the link between corporate governance disclosure and the degree of default risk, James and Cotter (2007) argue that one of the reasons for voluntary disclosure of company wise financial information, from the viewpoint of corporate governance, is that, disclosures of this type lessen companies' external financing costs since the investment risk will shrink. The scholars further argue that governance qualities could affect businesses' financial strengths and abilities to service or satisfy their debt obligations.

Francis *et al.* (2008) examine the links among voluntary disclosure, earnings quality and cost of capital. The firms that have good earnings quality also have larger voluntary disclosures relative to the firms that have bad/low earnings quality. Consistent with the disclosure literature, the scholars document that cost of capital is negatively associated with the level of voluntary disclosure. In the literature we also see that there are some studies investigating the relations between intrinsic disclosure costs and cost of capital such as the risk-sharing issue in Diamond and Verrechia (1991), agency costs issue in Baiman and Verrechia (1996), proprietary costs in Hayes and Lundholm (1996), information asymmetry issue as in the empirical disclosure review by Healy and Palepu (2001) etc.

Audits may also be considered as a part of disclosures. An interesting work in this by Kim *et al.* (2007) investigates the effect of the informational value of voluntary external audits of financial statements on cost of debt capital. Using a sample of not publicly but

privately held Korean businesses with no obligation of any external audit, the scholars document that private companies with voluntary external audits have less cost of debt capital than the private companies without considering to have such audit for their financials. They also document that changing the company status from 'no audit' to 'getting audited' results in material savings of borrowing costs.

A recent study by Chen *et al.* (2008) examines the effect of audit quality on earnings management and the cost of capital in Chinese firms. To better cyrstalize the investigation, the scholars differentiate the firms as state-owned enterprises and family-owned businesses. They show that as long as the audit quality is high, the reduction or the fall in the level of the cost of equity capital and earnings management will be high. The results are more significant for the family-owned businesses than the state-owned enterprises, as both different types of firms have different ownership structures, agency relationships and risks associated with bankruptcy, leading to differences in demand for the quality of the audit.[282] Furthermore, investigating the determinants and consequences of voluntary disclosure in Chinese listed firms, Wang *et al.* (2008) document that the level of voluntary disclosure is positively associated with the proportion of state and foreign ownerships and firm performances.

One may question if mandatory disclosure benefits the firms in terms of their capital costs. For instance, Bushee and Leuz (2005) and Ferrell (2004) suggest that mandatory disclosure might result in increases in the level of liquidity; Sunder (2002) suggests that mandatory disclosure may lessen bid-ask spreads. Using a sample of municipal-level yield data, Gore (2004) documents that mandatory disclosure reduces a basis of 15 points, which implies that cost of capital gets lower even in mandated disclosure regimes (e.g. some states that are municipal bond issuers). Gore also notices that regulating disclosure may yield benefits but might also impose some costs.

[282] See for instance Fan and Wong (2005), Khurana and Raman (2004), Watkins *et al.* (2004) for similar studies on audit/auditor quality and cost of capital. Another research stream for instance is value-relevance of financial information on which there is a number of studies. The scholars therein usually contend that value relevance should be regarded as one of the covenants to assure the quality of accounting. For this, refer to Francis *et al.* (2004), Francis and Schipper (1999), Collins *et al.* (1997), Brown *et al.* (1999), Lev and Zarowin (1999), Harris *et al.* (1994), Hung (2001), Ali and Hwang (2000), Jindrichovska and McLeay (2005) etc.

CHAPTER 9– DISCUSSION

It has been seen that the OECD Guidelines reveal a plenty of general and particular features of the arm's length considerations and transfer pricing methods. Among all, the CUP method is mainly preferred by the tax authorities at least for two reasons: it (i) allows more information about any specific transaction than does any other method, meaning that; the arm's length methodology relies on a full transaction basis there; and (ii) does not concentrate on only one of the parties as in the cases of RP or C+ but indeed considers the situations of all the contractual parties involved.[283] However, if a product comparable does not exist, then the CUP method becomes very hard to be enacted, as pointed out earlier.[284] In addition; if some differences exist between the controlled and uncontrolled transactions or among the enterprises in those transactions, a reasonable accurate adjustment to eliminate or at least lessen what has been readily on price might not be expected to be recognized, should CUP be used.[285]

The RP approach is expected to give a best result when the distributor adds relatively little value to the product, so that the value of its functions could be easier to estimate.[286] Under the RP Method, all the excessive profit on the transaction goes or is apportioned to the seller-side, and for that reason, the RP method has a tendency to overestimate or overpredict the transfer price for it distributes all unallocated profits on the transaction to the upstream or onward manufacturer dubbed a *contract distributor case*.[287] That the RP method is sensitive can also be tempted by the fact that the less comparable the functions performed together with the assets used and risks assumed, the less reliable the said method will be.[288]

For the C+ Method to be used in a most effective manner, the MNE or the tax authority must have an exact idea about the accounting approach adopted by the unrelated parties.[289] C+ method, as in the RP Method, devotes more importance solely to one of the parties involved, but unlike the RP method, to the manufacturer's side. In contrast to RP method, this method tends to underestimate the transfer price as it

[283] Eden (loc.cit.)
[284] Ibid.
[285] The Guidelines
[286] Eden (loc.cit.)
[287] Ibid.
[288] The Guidelines
[289] Eden (loc.cit.)

distributes all the unallocated profits on the transaction to the buyer coined as a *contract manufacturer case*.[290]

As stated several times early on, the approaches or the methods building on transaction-based concentrations are better acknowledged and therefore have more chances to be applicable than those with non or less transaction-based concentrations. This is because when to use transaction-based methods, it would be more possible to obtain a proper arm's length range and hence an accurate transfer price figure. However, when comparables do not exist and/or material (significant) differences are likely to occur, the goods and services, namely tangibles and intangibles, should be valued using some other types of [profit-based] methods such as TNMM, PS or CPM. Among these, CPM is not proposed in the Guidelines since it does not show the traits of a transactions-based method. Particularly, it does not take into consideration the contractual obligations or musts of the drafting parties involved in the transaction process nor not reflect true corporate economic or financial circumstances in first place.[291]

The so-called CPM has been proposed by its advocates in the U.S. in the year 1992, but been hugely attacked by the taxation world as it tried to get a priority over the other methods.[292] Since then, it has been quite modified and shaped in a more acceptable way to the suggestion that it should come after if any of the other pricing methods is futile or fail to apply.[293] Besides, it should be used when any other approaches do not make any sense to apply, and needs to be tested or checked against the best method rule each time.[294] This implies that, from hierarchical viewpoint, it is the last one or the least preferred one among all the transfer pricing approaches.[295] For these reasons, (net) profit method based on transactions (TNMM) has been proposed. With this approach, it is not required that the functions performed and risks assumed by more than one of the associated enterprises be systematically recognized.[296]

However, the TNMM has some disadvantages. For instance, the net margin of a taxpayer may be influenced by some of the factors that do either not have any effect, or have a less substantial/direct effect on price/gross margins making the arm's length net

[290] Ibid.
[291] Ibid.
[292] Ibid.
[293] Ibid.
[294] Ibid.
[295] Ibid.
[296] The Guidelines

margins less accurate and reliable.[297] Moreover, this method necessitates more information relative to the transactions of the uncontrolled party which may not be available at the time of the transactions of the controlled party.[298] The TNMM is usually applicable to only one of the associated enterprises, which is another problem.[299]

Under the guidance of the PS Method, it is less possible or likely that, one of the parties engaged in the process of the transfers of the properties or transactions, be left with an extreme/abnormal profit outcome as all the parties involved are attributed equal weights to.[300] However, the issues such as (i) which profit measures (i.e. various ratios and/or margins) should be enforced, (ii) how the profit will be apportioned/split among the transactions of the affiliated firms and (iii) on what kind of activities it would be marked yet remain as question marks and therefore need to be resolved.[301] Depending on the answers to be addressed to these questions, the referred transfer and/or arm's length prices would be expected to change for sure.[302] A last point might be that the external data considered in valuing the contribution each of the associated or affiliated enterprises make to the controlled (tested) transactions will be less closely interrelated to those transactions than is the case with the other existing methods.[303]

The next part being part III performs a transfer pricing analysis that theorizes the research question and provides inputs to be further processed by the application part which is part IV. Part III is of particular relevance as part IV will follow its findings and implications.

PART III: TRANSFER PRICING ANALYSIS

Transfer Pricing Analysis being Part III is one of the major contributive parts of this dissertation. Theorizing (generalizing) the research question, it particularly examines transfer pricing in imperfect competition venues. It consists of four main chapters. Chapter 10 discusses transfer pricing analysis when the market is perfectly competitive. Chapter 11 and Chapter 12 make a transfer pricing examination when the markets are imperfectly competitive. Chapter 11 is particularly interested in monopoly market while

[297] Ibid.
[298] Ibid.
[299] Ibid.
[300] Ibid.
[301] Eden (loc.cit.)
[302] Ibid.
[303] The Guidelines

Chapter 12 pertains to oligopoly competition in particular. In monopoly market, two affiliated (intra-group) firms are transacting. In oligopoly competition, two affiliated (intra-group) banking firms that are in competition with each other are transacting. Chapter 13 presents the equilibria for both the transfer pricing examinations performed in Chapter 11 and 12 and discusses their implications as they are the backbones this research leans on.

Part III is spectacularly important to Part IV as Part IV will build on the findings obtained and the implications drawn in here. It shows how cost advantages contribute to corporate transfer pricing establishments among the others. The next chapter examines transfer pricing when the market competition is perfect, which is a desirable state for many scholars and regulators.

CHAPTER 10– TRANSFER PRICING ANALYSIS UNDER PERFECT COMPETITION

This chapter theoretically studies the transfer pricing in the perfect competition setting. It is believed to be useful for a clear understanding on the in-depth transfer pricing analyses made for the businesses running their operations under imperfect competition as to be given in the following chapters. Before making the analysis, let us first define some important characteristics underlying the perfect competition market types. One may propose the following features that are typical to perfect competition.

A perfectly competitive market is composed of a large number of small buyers and sellers, none of whom are able to influence the market price. In this, every firm produces or supplies insignificantly small number of the aggregate output in the market, therefore their market share is too small. Similarly, buyers consume quite small portion of the aggregate market demand. There is no recordable differentiations on the goods produced or services delivered, it is even such that the products are homogeneous. In other words, it is hardly possible to differentiate the product of a firm from the product of another firm both of whom exist in perfect competition markets (Mathis and Koscianski (2002)).

In perfect competition, firms' entry to or exit from the market is easy since there are no obligations like state licences, patents, economies of scale or hefty upfront costs. All the information is complete and available to the entire set of sellers or buyers. Therefore, the market players have a full knowledge of technology, qualities of the

offered products, prices or such other parameters that may influence the willingness of the market exchange (Mathis and Koscianski (2002)).

Unlike imperfect competition types, the upper mentioned prospects of the perfect competition dictate that the market price, being equal to marginal revenue, is also equal to the marginal costs of the supplying (competing) firms. Firms are price takers. Both over the short and long runs, the firm profit maximization happens at the point where marginal revenue (price) cuts off marginal cost. Thus, in perfect competition, there is neither space nor scope for extra or abnormal profits or returns. In other words, market firms keep surviving, without earning significant profit figures. Besides, there is no material difference among the firms in terms of those profit figure levels.

It may be that there is a market for a certain internally transferred product which is perfectly competitive. This is one of the most desired states we might have when it is about transfer pricing. The product that is transferred among the affiliated parties can be of an intermediate or a final nature. In this case, once a product is produced or service is delivered by a firm division or an intra-group firm, it can be offered to the external parties (outsiders) as well as to the other affiliated parties (insiders). This is because there would be many buyers and sellers of this product in the market.[304]

In the preceeding discussions, we have already seen the solution to pricing for such upper transactions. We know that when the external markets are available, whatever is priced in the market for a certain product may be benchmarked (taken as a reference) to set the price for the transfer transaction that happens among the affiliated parties. In other words, intra-firm divisions or intra-group firms will price the transferred product, looking at the market price for that. Therefore, transfer price may read the same with the market price. We also know that the analysis may be samewise applicable to the intermediate and final products as there can be markets for both product types.

For the perfectly competitive markets, Hirshleifer's approach (1956) stipulates that, the marginal cost (MC) for the transferred product or service is assumed to be equal to the transfer price, at such an output level, which is globally optimum for the central office per se (e.g. March and Simon (1958), Solomons (1965), Thomas (1980) etc.). Central office can be a firm or a group firm consisting of several firms, depending on who makes the transfer exchange. Notice that, in terms of the language of the strategic business units that are no one else than intra-firm divisions or intra-group firms that can

[304] See the literature reviews for the intermediate or final market discussions.

make the transfer exchange, this approach particularly implies that: transfer price, for the profit/revenue center (unit), will be equal to its marginal revenue, while being equal to marginal cost for the cost center (unit). Assuming that there is no goal incongruence problem, the level of the market output as well as the market price to be considered for each single firm division or group firm will characterize the optima for the entire business according to the terms perfectly competitive market conditions postulate.

Consider now that there are two affiliated firms, the intra-group firms, production and sales businesses, each belongs to the group firm X running in a special procurement business. Production business manufactures and transfers a product to the sales business. As there is a market for the product which is perfectly competitive, the intra-group firms are transacting at the terms of perfect competition. The average unit operating revenue (price) function for the firms, P(R) is given as follows.

$$P(R) = \alpha + \psi Q$$

conditional on P, α, and $Q > 0$. Q, represents the output quantity. The production business, P, has a cost structure of $C_p = \beta + \gamma Q$ and the sales business, S, has $C_s = \theta + \delta Q$, conditional on C_p , C_s , β , γ, θ, $\delta > 0$. C_p stands for the average unit operating (production) cost of the production business, C_s for the average unit operating (selling) cost of the sales business. Costs are everywhere differentiable such that $C_p' > 0$, $C_s' > 0$, $\beta \neq \theta$.

More specifically, among the main assumptions underlying the model above are that:

- no taxes
- intra-group firms transact under the terms of perfect competition
- no capacity constraint
- there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the intra-group firmss
- intra-group firms earn one source of operating revenue or income which is the sales revenue and bear one source of operating expense which is the cost of sales

As the following chapters will discuss at-length, operating revenue (income) is the revenue that the intra-group firms earn on performing their ordinary (main) course of businesses. Similarly, operating cost (expense) is the cost that the intra-group firms incur while performing their ordinary course of businesses. Accordingly, the operating revenue which is the only piece of income source for the production and sales businesses is the sales revenue. Unlike the operating revenue which is unique and

common for both the contractual parties (transacting intra-group firms), the operating cost which is the only piece of expense venue is production cost for the production business and selling cost for the sales business.

Having said that, following Hirshleifer's approach (1956), as the production business is to maximize its profits, it should be that marginal revenue, MR, be set equal to the marginal cost, MC. Therefore,

$$MR = MC \qquad (1)$$

Or equivalently,

$$\partial TR/\partial Q = \partial TC/\partial Q \qquad (2)$$

From (2), it comes that:

$$\partial (\alpha - \psi Q)*Q/\partial Q = \partial (\beta + \gamma Q + \theta + \delta Q) *Q /\partial Q \qquad (3)$$

Hence the optimal quantity, Q*, is to be obtained as,

$$Q^* = \frac{\alpha - \theta - \beta}{2(\gamma + \delta + \psi)} \qquad (4)$$

As to be immediately noticed from the above outcome, optimal transfer quantity or output will rely on all the parameters specifying the (revenue and cost) functions. The optimal transfer price, TP, will then be set equal to the marginal cost of the production business of the firm X. Since the total cost of the production business is $(\beta + \gamma Q) * Q$, its marginal cost will equal $\beta + 2\gamma Q$. Embedding the optimized quantity volume, Q*, into the marginal cost function of the production business, we will have an optimal dollar value of transfer price as the following:

$$TP = \beta + 2\gamma[\frac{\alpha - \theta - \beta}{2(\gamma + \delta + \psi)}] \qquad (5)$$

A Numerical Example: Case of Pharmaceutical Business

Supposing that all the assumptions itemized in this chapter hold, a pharmaceutical group firm ABC has an average unit operating revenue (R) = 100 – 0,5Q with two firms, production business (P), and sales business (S). Manufacturing a special type of medicine for heart diseases, the production business sells it out to the sales business. As there is a market for the product which is perfectly competitive, the intra-group firms are transacting at the terms of perfect competition.

The production business has a cost structure of $C_p = 20 + 0,1Q$, the sales business has $C_s = 6 + 0,6Q$. Q represents the output quantity, C_p stands for the average unit

operating cost of P and C_s is for the average unit operating cost of S. Costs are everywhere differentiable such that $C_p' > 0$, $C_s' > 0$, Cost and revenue figures are in dollars. Calculate the optimal values of transfer quantity and transfer price.[305]

Solution. Since the production business, P, will aim to maximize its profits, it must be that:

TR (total revenue) should be equal to	TC (total cost) should be equal to
$= (100) * (Q) - ((0,5Q) * (Q))$	$= ((20 + 0,1Q) + (6 + 0,6Q))*Q$
$= 100Q - 0,5Q^2$ *(1)*	$= 26Q + 0,7Q^2$ *(2)*

From the profit maximization condition to be satisfied, MR (marginal revenue) and MC (marginal cost) values should be equalized at such a point where the MC value is to be increasing. In other words,

$$MR = \partial TR/\partial Q \text{ and } MC = \partial TC/\partial Q \quad (3)$$

$$\partial TR/\partial Q = \partial TC/\partial Q \quad (4)$$

$$100 - Q = 26 + 1,4Q \quad (5)$$

$$Q^* \approx 31 \text{ units} \quad (6)$$

This suggests that, the production business will maximize its profits at a level of 31 units which is the optimal transfer quantity volume. In order to calculate the transfer price, we need to find out the marginal cost figure of the production business which is MC_p. Since $C_p = 20 + 0,1Q$ is the average unit (operating) cost volume, total cost volume reads $(20 + 0,1Q)*Q$. Accordingly,

$$MC_p = \partial TC_p/\partial Q_p \quad (7)$$

$$MC_p = 20 + 0,2Q \quad (8)$$

Since $Q^* = 31$ units, $MC_p \approx \$ 26$ which is the optimal transfer price. Hence the result.■

From an accounting viewpoint, notice that the aggregate profit of the group firm ABC, amounts ca. $ 1.141.[306] At this price and quantity level, the intra-group firm P will have a (book) profit of ca. $ 90.[307] As a result, the (book) profit of S will be the difference between the overall profit, $ 1.141, and the profit of P, $ 90, which hence registers ca. $ 1.051. As these numbers will be used for recording purposes, they will be the ones to appear in the books of the intra-group firms and ABC as the group firm and

[305] See Thomas (1980) for a naïve case where intra-firm divisions make a transaction.
[306] Conclusion may be addressed with [(100-0,5Q) – ((20+0,1Q)+(6+0,6Q))] * [Q], where 31 is plugged into Q.
[307] In the equation [P (transfer price)] * [Q] – [(20+0,1Q)*(Q)], where 26 and 31 are plugged into, as P and Q respectively.

therefore in their (periodic or year-end) corporate financial statements. As the transacting affiliated businesses are not the intra-firm divisions but the group firms, they will reflect their solo profits on their own books or financial statements. For ABC being the group firm, due to consolidation purposes, there will appear such a profit figure in its books or financial statements which is 1.141 $ as shown above. The next chapter makes a theoretical transfer pricing investigation under monopoly market where two intra-group firms or businesses make a transaction between each other. Unlike the perfect competition that has been discussed in this chapter or unlike the oligopoly competition that will be discussed in chapter 12, there is no external market in there.

CHAPTER 11– TRANSFER PRICING ANALYSIS UNDER IMPERFECT COMPETITION: MONOPOLY MARKET

Unlike perfect competition, in monopolies, there is one single seller with a plenty amount of buyers. The seller, because of its power this way, is known as monopolist. The product the monopoly provides to the market is such differentiated that it is quite hard to find a substitute in the market. Entry into the monopoly market is very hard (e.g. economies of scale, exclusive input control, rapid production expansion facility, advertising, limit pricing etc.). Concerning the quality and the amount of the information concerning the nature and the structure of the market, although there is no such an *a priori* requirement, it could also be likely that market consumers (purchasers of the good offered by the monopoly) may have inadequate information (e.g. attributes of the goods, alternative prices etc.). All these general characteristics of monopolies suggest that monopolists, unlike the small sellers in perfect competition, are not price takers. As they can indeed influence the market price owing to the monopoly power or strength they have, they might rather partially set the price (Mathis and Koscianski (2002)).

Hitherto, monopoly power has been meant to refer to pure monopoly power as there is one single seller of the product in the market. In the real life, there are frequently, albeit not perfect, product substitutes in the market. It could be that there can be one single monopolist in the market. The monopolist may exert some influence on the market price, yet, it can not price its product as much as it wants. This is again a demand and supply issue; meaning that, the higher the price, the lower the demand will be. Monopolist will know that if it charges too high price for the product it offers, it

may not get the aggregate demand since there may be some loss on the degree of demand for the product. Therefore, monopolists are assumed to have a demand curve with negative slope (Mathis and Koscianski (2002)).

As already mentioned, the monopolist that can affect the market price is not a price taker unlike a regular seller (producer) in perfect competition. Thus, being a monopolist necessitates that the market price be higher than the marginal revenue. In more technical words, both over the short and long runs, the firm profit maximization happens at the point where marginal revenue (price) cuts off marginal cost, given that price is higher than the marginal revenue. Hence, in monopolies, there are some spaces for extra or abnormal firm profits or returns (Mathis and Koscianski (2002)).

The transfer pricing literature that has been comprehensively examined in the preceeding chapters has cited several studies concerning the monopoly stream. We have seen that as of the current state, the transfer pricing literature on monopolies is quite narrow. Among these, Hirshleifer (1956) is the early and indeed yet the leading study. He argues that in monopolies, as different from perfect competition, the transfer prices will be established differently. In particular, if there are two divisions in a business, one product provider and one purchaser, the transfer price of the buying or purchasing unit will be the identical figure of what the marginal cost volume of the supplying firm unit will be. On the other hand, in perfect competition, since prices are equal to marginal costs, the transfer price will be set at such a point where the marginal revenue cuts off the marginal costs. We have seen the assumptions underlying this conjecture and following consequences in detail.

Thomas (1980) makes a transfer pricing analysis in the context of some imperfect competition states. What he basically suggests is that firm divisions may be willing to maximize their profits but not always to maximize the profit volume of the entire firm which he defines as central office (headquarter). In other words, it will be naïve or rather delusive to argue that the divisional managers will always try to maximize their solo or individual book profits by producing in such a level which is the optimum one for the whole business. This indicates the goal incongruence problem that Hirshleifer (1956) did not consider. Hirshleifer rather suggested how transfer pricing, both divisionally and parentally, will look under what goal congruence state stipulates for the intra-firm divisions and the central office.

Thomas envisages two firm divisions, a manufacturing and a distributing division, which Hirshleifer studied before. Assuming that there is no intermediate market, manufacturing division acts as internal monopoly and Distributing division acts as internal monopsony. Namely, there is only one seller and one buyer of the firm product that is transferred between the firm divisions. Thomas treats the intra-firm divisions as to their having increasing, decreasing or horizontal marginal costs. He shows that transfer outputs, transfer prices, total profits, divisional book profits do all differentiate across both the divisions besides the central office, given all the three cost states.

Baldenius *et al.* (1999a) consider market-based transfer prices within the setting of the intra-firm discounts that are the following materializations of the cost variances between external and internal selling transactions. They suggest that if the supplying firm division has a monopoly power over the other intra-firm divisions, it is not the cost differences accounting for the suitability of the discounts on the intra-company transactions. Performing a sensitivity analysis of the degree of optimal discounts, the scholars contend that the market-based prices with a discount offer that is optimally set might well perform. Baldenius *et al.* (1999b) treat the basis to build the transfer prices. They argue that negotiated-based transfer prices might offer better venues than cost-based pricing scheme. However, they also note that when buyer investments are core to the firm and the selling business unit has inadequate flexibility, a standard cost-based transfer pricing scheme can prove to be more efficient way of pricing than the pricing with negotiation.

Baldenius *et al.* (2004) show how managerial and taxational objectives of a business organization could be combined to refer to transfer pricing. They particularly examine pricing patterns of multinationals when the (income) taxation regimes are subject to differ for the individual corporate divisions or units. They contend that the optimal (internal) transfer price is supposed to be a product of a weighted average of the pre-tax marginal cost and the favored price that the terms of arm's length reveal or stipulate. Göx and Schöndube (2004) suggest that the removal of the agency problem may serve for the establishment of the firm commitment when we can not monitor the transfer prices. The reason is the setting of the transfer prices above the marginal costs. Assuming that the pricing decision is delegated to the manager, the scholars further argue that disturbing the agency problem may also be helpful in striking the right

balance between incentives and risks while lowering the degree of the intensity of competition.

Buus (2006) shows that some mark-up figure added up to the average cost of the supplying intra-firm division may reveal the optimal transfer price figure, irrespective of the specific terms of market for intermediate or final product (goods or services, tangibles or intangibles). One would argue that the scholar favors the cost-based transfer pricing scheme. Discussing external and internal transfer pricing in multidivisional businesses, Baldenius and Reichelstein (2006) suggest that we may see a double marginalization once the internal corporate transfers are priced at the prevailing market value. The scholars propose that when the capacity is constrained, an appropriately selected proportional discount enhances the aggregate business profits. Supposing that external market demand has a constant price elasticity, ε , and the unit variable cost for the internal company transfer is $c_i(\theta) = c(\theta) - k$, the transfer price, TP (p), will be obtained as: $TP(p) = p^*[1 - (1/\varepsilon)] - k$, where k is the incremental revenue figure. In here, TP is basically equal to the external marginal revenue, adjusted with internal marginal revenue figure.

All the upper studies have already been investigated in the literature review part. Despite the fact that all those tackle transfer prices from different perspectives, none of them shows the interaction between transfer prices and cost advantages at all. Before going any further, I want to highlight an issue which is economies of scale. Thomas (1980) argues that, one of the firm divisions may have a lower cost scheme since it may exploit economies of scale advantage over the other. This is not something fancy, because, we know that economies of scale that might occasion through division of labor, specialization etc. may lessen costs of the firms (e.g. production costs etc.) as businesses will be able to produce more economic units with the same amount of costs figure. In other words, from the perspective of production efficiency, the business organizations benefiting from economies of scale advantage will obtain more economic utility.

This dissertation is not interested in the influence of economies of scale or scope on the establishment of transfer prices. Rather, it is interested in treating transfer pricing issue with the state of cost advantage which is firm-specific. There is no study like this, to my knowledge, that explores the effect of cost advantages on transfer prices and hence on operating profit figures of the businesses either in monopolies or oligopolies.

Even though economies of scale advantage may be one of the technical reasons underlying firm cost advantages, as corporate governance might by definition include scale economies, this study will advocate that it is the significant difference of governance structures or skills that creates cost advantages or causes cost disadvantages. But, it does not mean at all that, governance is the exclusive foundation for generating corporate cost advantage, as stressed several times. The next chapter examines monopoly market without cost advantage.

11.1- Monopoly Market Without Cost Advantage

In this chapter, I will build a model and show how transfer prices may be set under monopolies when none of the intra-group firms or businesses has any cost advantage. Suppose that there are two intra-group firms, financing business and purchasing business, each belongs to the firm ABC running in a particular business. The financing business lends fund (money) to the purchasing business for the satisfaction of its purchasing need. The financing business is the only seller (provider) of the product (fund) while the purchasing business is the only purchaser of the product (fund) the financing business supplies to. The purchasing business uses this fund to buy some special products and sells them to several manufacturing businesses in the market that further process and sell out.

The average unit operating revenue (price) function for both the businesses, P(R) is as follows.

$$P(R) = \alpha - \psi q$$

conditional on P, α, $q > 0$. q represents the output quantity. The financing business, F, has a cost structure of $C_f = \beta + \gamma q$ and the purchasing business, P, has $C_p = \beta + \gamma q$, conditional on C_f, C_p, $\beta > 0$. C_f stands for the average unit operating cost of the financing business, C_p for the average unit operating cost of the purchasing business. Costs are everywhere differentiable such that $C_f' > 0, C_p' > 0$.

Among the main assumptions underlying the above model are:

- there are no taxes
- there are two intra-group firms transacting under the terms of bilateral monopoly market, in particular:
  - the financing business acts as internal monopoly (monopolist), the purchasing business acts as an internal monopsony (monopsonist)
- both the intra-group firms have an identical bargaining power

- there is no capacity constraint
- costs are symmetrical
- there is no another transaction
- the intra-group firms earn one source of operating revenue or income which is the sales revenue and bear one source of operating expense which is the cost of sales
- there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the intra-group firms
- both the intra-group firms have increasing cost structures, meaning that none of the intra-group firms has cost advantages over the other (or any cost saving)

The reason underlying the last assumption is that operating or sales costs are the same with cost of funding in this model; as fund or money transfer, being the main (ordinary) course of business of the intra-group firms, is the subject-matter of the intra-group firms' trade. As the governance structure or quality of neither the intra-group firms is assumed to be good nor better than the other, both the businesses have increasing cost structures. I will provide the model resolution as the following.

The objective (pay-off) function of the financing business (monopoly) can be specified as $\Pi = P^*q_f - (\beta + \gamma q_f)^*q_f$, where P represents the average unit transfer price that the financing business will charge and q_f represents the output or quantity the financing business will be willing to supply. Following Hirshleifer (1956) and Thomas (1980), marginal revenue, MR, will sum the marginal cost volume of the purchasing business, MC_p, and the transfer price of the financing business which is TP^f. [308] Namely:

$$MR = MC_p + TP^f \qquad (1)$$

Deriving the total revenue (TR) which is $(\alpha - \psi q))^*q$ as regards q, we will obtain MR as $\alpha - 2\psi q$. Since the total cost volume of the purchasing business (TC_p) is $(\beta + \gamma q)^*q$, deriving it wrt. q will result in $\beta + 2\gamma q$. $\beta + 2\gamma q$ is the marginal cost function of the purchasing business which is MC_p. Accordingly:

$$TP^f = (\alpha - 2\psi q) - (\beta + 2\gamma q) \text{ or equivalently } TP^f = \alpha - \beta - 2q(\psi + \gamma) \qquad (2)$$

[308] This is due to the fact that, when the financing business acts as an internal monopoly, it will let the internal monopsony, the purchasing business, equalize its net revenues [$TR - TP^f$] to its marginal costs [MC_p], at the output level that is optimal to the financing business [q_f]. For this and for a concrete algebraic analysis, see Thomas (1980) for instance.

We should incorporate the value of TP^f into the objective function of the financing business in the place of P and optimize it as for q_f. Therefore,

$$\partial(\alpha - \beta - 2q(\psi + \gamma)q_f - (\beta + \gamma q_f)^* q_f)/\partial q_f = 0 \qquad (3)$$

which can be rewritten as:

$$q_f^* = \frac{\alpha - 2\beta}{2(3\gamma + 2\psi)} \qquad (4)$$

This is the optimal transfer quantity result for the financing business. From the equation (4), it is obvious that the financing business of the firm ABC will be willing to supply or provide funds at the point where α exceeds 2β. Incorporating the equation (4) into the equation (2), we get an optimal dollar transfer price value of the financing business as follows:

$$TP^f = \alpha - \beta - 2\left(\frac{\alpha - 2\beta}{2(3\gamma + 2\psi)}\right)(\psi + \gamma) \qquad (5)$$

Concerning the resulting properties of the internal monopsony, the purchasing business, we should note that the transfer price of the purchasing business, TP^p, will be set equal to the marginal cost of the financing business per se.[309] Since $C_f = \beta + \gamma q$, $TC_f = (\beta + \gamma q)^* q$. Plugging q_p into q and deriving it with respect to q_p results $\beta + 2\gamma q_p$, which is the marginal cost function the financing business is exposed to. This suggests that, if we obtain the optimized quantity value of the purchasing business we will have the transfer price of the purchasing business too. We know that as in the case of financing business, purchasing business will maximize its profits. Therefore,

$$\Pi = (\alpha - \psi q_p)q_p - (\beta + \gamma q_p)q_p - (\beta + 2\gamma q_p))\, q_p \qquad (6)$$

$$\partial \Pi / \partial q_p = 0 \qquad (7)$$

$$q_p^* = \frac{\alpha - 2\beta}{2(3\gamma + \psi)} \qquad (8)$$

[309] This is because when the purchasing business acts as an internal monopsony, it will let the internal monopoly, the financing business, equalize its revenues [TP^p] to its marginal costs [MC_f], at the output level that is optimal to the purchasing business [q_p]. For this and a concrete algebraic analysis, see Thomas (1980) for instance.

Therefore, the optimal transfer price of the purchasing business, TP^p, is:

$$\beta + 2\gamma[\frac{(\alpha - 2\beta)}{2(3\gamma + \psi)}] \qquad (9)$$

A Numerical Example: Service Transaction

Supposing that all the assumptions specified in this chapter hold, consider that the group firm ABC has a revenue (price) function of P(R) = 100 – 0,5q where P(R) represents average unit operating revenue (income) and q represents output quantity. It has two firms, financing business (F) and purchasing business (P). The financing business lends fund (money) to the purchasing business for some purchasing need. The intra-group firms have cost functions such that C_f = 20 + 0,1q and C_p = 20 + 0,1q, where C_f stands for the average unit operating cost of the financing business and C_p is for the average unit operating cost of the purchasing business (P). Cost and revenue figures are in dollars.[310]

Since the financing business acts as internal monopoly and the purchasing business as internal monopsony in this case, we would have two different quantity volumes and transfer prices. Namely, for F, the transfer output and the transfer price will read 23 units and $ 52 respectively. On the other hand, for P, the transfer output and the transfer price will be 38 units and $ 28 respectively.

Solution. Total pay-off of the financing business (monopoly) may be functionalized as $\Pi = P*q_f - (20 + 0,1q_f)*q_f$, where P represents the average unit transfer price that the financing business will consider and q_f represents output or quantity of the financing business. Since MR will be equal to the aggregation of the marginal cost volume of the purchasing business and the transfer price of the financing business, we will have:

$$MR = MC_p + TP^f \qquad (1)$$

TR = (100 – 0,5q)*q and as a consequence of deriving it with respect to (wrt.) q, MR = 100 – q. Since TC_p = (20 + 0,1q)*q, deriving it wrt. q results in 20 + 0,2q which is MC_p. Accordingly,

$$TP^f = 80 - 1,2q_f \qquad (2)$$

[310] Suppose that this transaction happens in the year 2007. Suppose also that the intra-group firms do not have any other transaction in 2007.

Plugging TP^f into Π in the place of P and max Π wrt. $q_f = \partial\Pi/\partial q_f = 0$ that yields

$$q_f^* \approx 23 \qquad (3)$$

Since the optimal quantity of the financing business is 23 units, we know that, from the equation 2, the transfer price of the monopoly (TP^f) will be approximately $ 52. Notice that, the transfer price in perfect competition is the price level where marginal revenue equals marginal cost. This is because in perfect competition, markets are in equilibrium where prices are identical to marginal cost. Firms in perfect competition take the market price as given. However, we know that, in imperfect competition like monopoly, price is not equal to marginal cost, but rather to sum of net marginal revenue and marginal cost. This is due to the fact that, prices are assumed to be greater than marginal costs so that firms in those imperfect markets may sustain equilibrium to stay in the market in the long run. Theory tells us that net marginal revenue, NMR, can be obtained by deriving pay-off or objective function of a given intra-group firm with respect to quantity. In perfect competition, since NMR is equal to zero, (transfer) price is given to be marginal cost alone. On the other hand, in imperfect competition, depending on the magnitude of NMR, transfer price might be lower or probably higher than marginal cost volume.

For the internal monopsony which is the purchasing business, the calculations are different in that transfer price of the purchasing business, TP^p, is equal to the marginal cost of the financing business itself. Since $C_f = 20 + 0{,}1q$, $TC_f = (20 + 0{,}1q)*q$. Plugging q_p into q and deriving it wrt. q_p will result in $20 + 0{,}2q_p$, which is the marginal cost structure of the financing business. This suggests that, once we have the optimized quantity value of the purchasing business we will have the transfer price of the purchasing business as well. We know that as in the case of the financing business, the purchasing business will maximize its profits. Therefore,

$$\Pi = (100 - 0{,}5\,(q_p))q_p - (20 + 0{,}1(q_p))q_p - (20 + 0{,}2(q_p))q_p \qquad (4)$$

$$\max \Pi \text{ wrt. } q_p$$

$$q_p^* \approx 38 \qquad (5)$$

Thereby TP^p will read equal to almost $ 28.

Hence the result.■ The next chapter examines monopoly market with cost advantage.

11.2- Monopoly Market With Cost Advantage

In this chapter, I will build a model and show how transfer prices may be set under monopolies when at least one of the intra-group firms has cost advantage over the others. In this case, one of the given intra-group firms is assumed to internalize (have) cost advantage sustained from good corporate governance structures. Suppose that there are two intra-group firms, financing business (F) and purchasing business (P), each belongs to the group firm ABC making a particular business. The financing business lends fund (money) to the purchasing business for the satisfaction of its purchasing need. The financing business is the only seller (provider) of the product (fund) while the purchasing business is the only purchaser of the product (fund) the financing business supplies to. The purchasing business uses this fund to buy some special products and sells them to several manufacturing businesses in the market that further process and sell out.

The average unit operating revenue (price) function for both the businesses, P(R), is given as follows.

$$P(R) = \alpha - \psi q$$

conditional on P, α, $q > 0$. q, represents the output quantity. The financing business, F, has a cost structure of $C_f = \beta - \gamma q$ and the purchasing business, P, has $C_p = \beta + \gamma q$, conditional on C_f , C_p , $\beta > 0$. C_f stands for the average unit operating cost of the financing business, C_p for the average unit operating cost of the purchasing business. Costs are everywhere differentiable such that $C_f' < 0, C_p' > 0$.

More specifically, among the main assumptions underlying the above model are that:

- there are no taxes
- there are two intra-group firms transacting under the terms of bilateral monopoly market, in particular:
  - the financing business acts as internal monopoly (monopolist), the purchasing business acts as an internal monopsony (monopsonist)
- both the intra-group firms have an identical bargaining power
- there is no capacity constraint
- costs are asymmetrical
- there is no another transaction
- the intra-group firms earn one source of operating revenue or income which is the sales revenue and bear one source of operating expense which is the cost of

sales

- there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the intra-group firms
- the financing business has decreasing cost structure (cost advantage) while the purchasing business has increasing cost structure (cost disadvantage)

The reason underlying the last assumption is that operating or sales costs are the same with cost of funding in this model; as fund or money transfer, being the main (ordinary) course of business of the intra-group firms, is the subject-matter of the intra-group firms' trade. As the governance quality of the financing business is assumed to be sufficiently good and significantly better relative to the purchasing business, the financing business with cost advantage has a downward cost function while the purchasing business without any cost advantage has an upward cost function, both of which are everywhere differentiable for the purposes of optimization. I will provide the model resolution as the following.

The objective (pay-off) function of the financing business (monopoly) can be specified as $\Pi = P*q_f - (\beta - \gamma q_f)*q_f$, where P represents the average unit transfer price that the financing business will charge and q_f represents the output or quantity the financing business will be willing to supply. Following Hirshleifer (1956) and Thomas (1980), marginal revenue, MR, will sum the marginal cost volume of the purchasing business, MC_p, and the transfer price of the financing business which is TP^f.[311] Namely:

$$MR = MC_p + TP^f \qquad (1)$$

Deriving the total revenue (TR) which is $(\alpha - \psi q))*q$ as regards q, we will obtain MR as $\alpha - 2\psi q$. Since the total cost volume of the purchasing business (TC_p) is $(\beta + \gamma q)*q$, deriving it wrt. q will result in $\beta + 2\gamma q$. $\beta + 2\gamma q$ is the marginal cost function of the purchasing business which is MC_p. Accordingly:

$$TP^f = (\alpha - 2\psi q) - (\beta + 2\gamma q) \text{ or equivalently } TP^f = \alpha - \beta - 2q(\psi + \gamma) \qquad (2)$$

We should incorporate the value of TP^f into the objective function of the financing business in the place of P and optimize it as for q_f. Therefore,

$$\partial(\alpha - \beta - 2q(\psi + \gamma)*q_f - (\beta - \gamma q_f)*q_f)/\partial q_f = 0 \qquad (3)$$

which can be redefined as:

[311] See footnote supra 308.

$$q_f^* = \frac{\alpha - 2\beta}{2(\gamma + 2\psi)} \quad (4)$$

From the equation (4), it is obvious that the financing business of the group firm ABC will always lend or provide (supply) fund at the point where α exceeds 2β. Incorporating the equation (4) into the equation (2), we get an optimal dollar transfer price value of the financing business as follows:

$$TP^f = \alpha - \beta - 2\left(\frac{\alpha - 2\beta}{2(\gamma + 2\psi)}\right)(\psi + \gamma) \quad (5)$$

Concerning the resulting properties of the internal monopsony, the purchasing business, we should note that the transfer price of the purchasing business, TP^p, will be set equal to the marginal cost of the financing business per se.[312] Since $C_f = \beta - \gamma q$, $TC_f = (\beta - \gamma q)*q$. Plugging q_p into q and deriving it with respect to q_p results $\beta - 2\gamma q_p$, which is the marginal cost function the financing business is exposed to. This suggests that, if we obtain the optimized quantity value of the purchasing business we will have the transfer price of the purchasing business. We know that as in the case of the financing business, purchasing business will maximize its profits. Therefore,

$$\Pi = (\alpha - \psi q_p)q_p - (\beta + \gamma q_p)q_p - (\beta - 2\gamma q_p))q_p \quad (6)$$

$$\partial \Pi / \partial q_p = 0 \quad (7)$$

$$q_p^* = \frac{\alpha - 2\beta}{2(\psi - \gamma)} \quad (8)$$

Therefore, the optimal transfer price of the purchasing business, TP^p, is obtained as:

$$\beta - 2\gamma\left[\frac{\alpha - 2\beta}{2(\psi - \gamma)}\right] \quad (9)$$

A Numerical Example: Service Transaction

Supposing that all the assumptions specified in this chapter hold, consider that the group firm ABC has a revenue (price) function of P(R) = 100 – 0,5q where P(R) represents average unit operating revenue (income) and q represents output quantity. It

[312] See footnote supra 309.

has two firms, financing business (F) and purchasing business (P). The financing business lends fund (money) to the purchasing business for some purchasing need. The intra-group firms have cost functions such that $C_f = 20 – 0{,}1q$ and $C_p = 20 + 0{,}1q$, where C_f stands for the average unit operating cost of the financing business and C_p is for the average unit operating cost of the purchasing business (P). Cost and revenue figures are in dollars.[313]

As to be noticed from the cost functions (specifications) of the intra-group firms, unlike the monopoly case where none of the businesses has any cost advantage, in this monopoly case, the financing business has cost advantage over the purchasing business that has no such advantage. The reason is, as mentioned and assumed before, that the governance quality of the financing business is assumed to be sufficiently good and significantly better than that of the purchasing business suffering from cost disadvantage. Since the financing business acts as internal monopoly and the purchasing business as internal monopsony in this case, we will again have two different quantity volumes and transfer prices. Namely, for F, the transfer output and the transfer price will read 27 units and $ 48 respectively. On the other hand, for P, the transfer output and the transfer price will be 75 units and $ 5 respectively.

Solution. Total pay-off of the financing business (monopoly) may be functionalized as $\Pi = P^*q_f – (20 – 0{,}1q_f)^*q_f$, where P represents the average unit transfer price that the financing business will consider and q_f represents the output quantity of financing business. Since MR equals the sum of marginal cost volume of the purchasing business and transfer price of the financing business, we will have:

$$MR = MC_p + TP^f \qquad (1)$$

$TR = (100 – 0{,}5q)^*q$ and therefore $MR = 100 – q$. Since $TC_p = (20 + 0{,}1q)^*q$, MC_p will be equal to $20 + 0{,}2q$. Accordingly,

$$TP^f = 80 – 1{,}2q_f \qquad (2)$$

Plugging TP^f into Π in the place of P and max Π wrt. $q_f = \partial \Pi/\partial q_f = 0$ that yields

$$q_f^* = 27 \text{ units} \qquad (3)$$

Since the optimal transfer quantity of the financing business is 27 units, from the equation 2, the optimal transfer price of the monopoly (TP^f) will be ca. $ 48. As with

[313] Suppose that this transaction happens in the year 2007. Suppose also that the intra-group firms do not have any other transaction in 2007.

the previous case, for the internal monopsony which is the purchasing business, calculations are different such that transfer price of the purchasing business, TP^p, is equal to the marginal cost of the financing business. Since $C_f = 20 - 0{,}1q$, $TC_f = (20 - 0{,}1q)*q$. Plugging q_p into q and deriving it wrt. q_p resolves to $20 - 0{,}2q_p$, which is the marginal cost of the financing business. Similar to the financing business, the purchasing business will maximize its profits as well. Therefore,

$$\Pi = (100 - 0{,}5\,(q_p))q_p - (20 + 0{,}1(q_p))q_p - (20 - 0{,}2q_p)q_p \qquad (4)$$

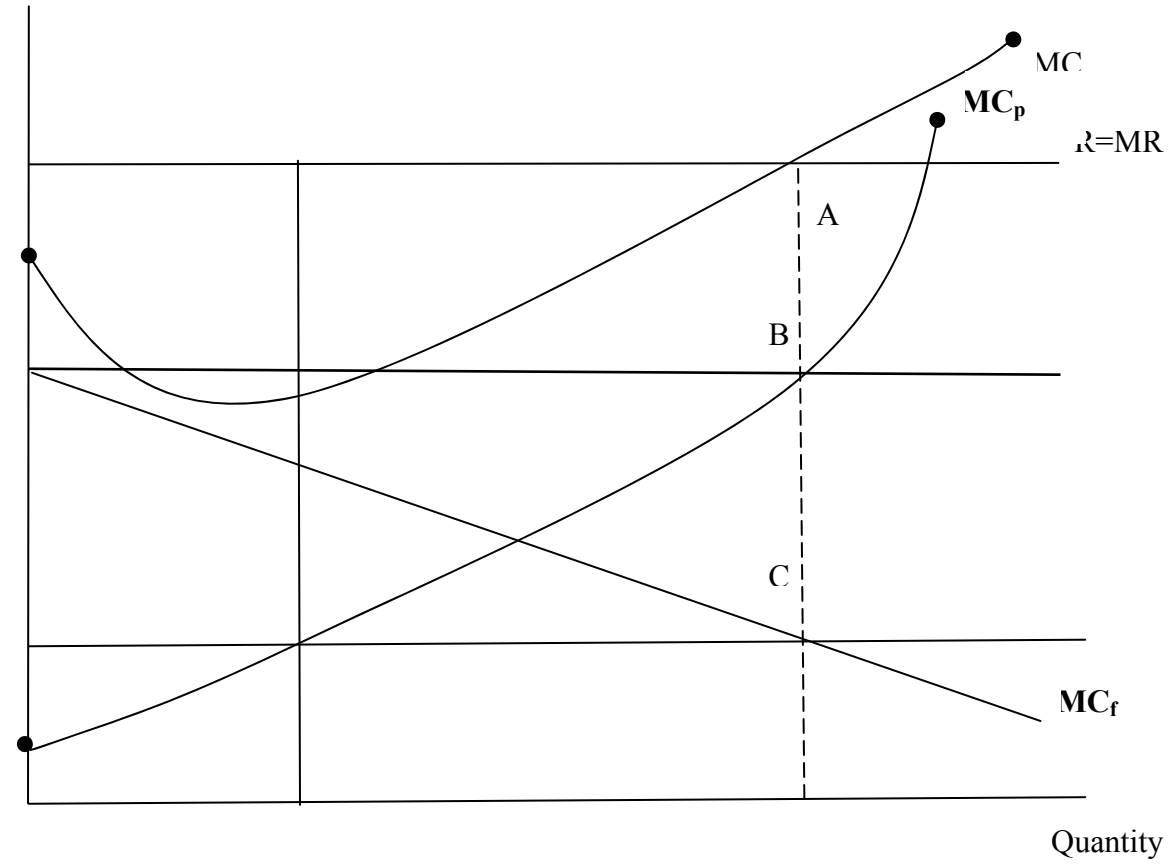
$$\text{Max } \Pi \text{ wrt. } q_p$$

$$q_p^* = 75 \text{ units} \qquad (5)$$

Therefore TP^p will be equal to \$ 5. Hence the result. ■

The figure below [314] depicts what is suggested, where the same notation is used.

Figure 11.1: Decreasing And Increasing Costs: Financing Business Has Cost Advantage Over The Purchasing Business



[314] Figure has been adapted from Thomas (loc.cit., 267).

The next chapter makes a theoretical transfer pricing investigation under oligopoly competition where intra-group firms not only transact but compete. Firms are particularly meant to be the banks over there. Unlike the bilateral monopoly state, there is an external market for the transferred product there.

CHAPTER 12– TRANSFER PRICING ANALYSIS UNDER IMPERFECT COMPETITION: OLIGOPOLY MARKET

" The Cournot and Stackelberg models are alternative representations of oligopolistic behavior. Which model is the more appropriate depends on the industry. For an industry composed of roughly similar firms, none of which has a strong operating advantage or leadership position, the Cournot model is probably more appropriate. On the other hand, some industries are dominated by a large firm that usually takes the lead in introducing new products or setting price; the mainframe computer market is an example, with IBM the leader. Then the Stackelberg model may be more realistic." [315]

This chapter makes a transfer pricing analysis in oligopoly markets that we see around in common. Although monopolies are the most extreme cases, oligopolies fall into the category of imperfect competition like them. However, unlike monopolies, oligopolies depict the real world situations better. In the daily life, it is hard to see monopoly markets (except for state-owned enterprises or such) but quite common to observe oligopolies.

Firstly, in oligopolies where there are a few sellers or producers in the market with a plenty amount of buyers or consumers. Since the number of sellers of a certain good is few, they possess a notable amount or share of the market. Secondly, the products or goods the sellers are willing to offer are either homogeneous or somewhat differentiated over each other. Thirdly, like monopolies, there are tough entry barriers in oligopolies. The market entry is quite difficult owing to the similar reasons underlying monopolies such as the industry structure, need for economies of scale or hefty capital requirements (e.g. financial institutions). Fourthly, despite the fact that it is not a prerequisite (to label a market as oligopoly), it might be likely that the information available to the buyers or consumers, such as prices or availability of substitutes, may be missing or incomplete (Mathis and Koscianski (2002)).

[315] Pindyck and Rubinfeld (2001, p.437)

Unlike monopoly or perfect competition market types, there is not one single oligopoly market model. There are rather various oligopoly theories or approaches, based on different assumptions and therefore resulting in different outcomes. Among these approaches are the Cartel model, Cournot model, Stackelberg model, Bertrand model, Dominant Firm model, Sweezy Kinked Demand Curve model or such. In all these, the market equilibria vary, meaning that the quantity (output) and price figures of the competing firms are different in each of these approaches. Because of this difference, the (optimal) market prices that are obtained in equilibrium are subject to fundamentally vary as well.

The approaches such as Cartel model or the like rely on explicit collusions (contractual agreements) among the market competitors (competing firms). In the real life, this is not allowed as it will be the breach of anti-trust or competition laws. Therefore this option has not been considered as an appropriate approach to perform our analyses. A similar motive applies to the Dominant Firm Model although it would be relevant to conduct the transfer pricing analysis in oligopolies using the Dominant Firm model.

In Dominant Firm model, it is assumed that there is a firm which has the highest market share, called the dominant firm. All the other firms are very small such that they can not really compete with the dominant firm. Because of this power, dominant firm may influence the market price, while all the small firms remain only as price takers. This type of oligopoly approach may be exercised through a price leadership model since the dominant firm can act as a price leader (Mathis and Koscianski (2002)).

As mentioned in the upper passages, the Dominant Firm model may also be quite difficult to be applicable or indeed even not permissible in the real life. It could be that competition laws, regulations or other legal arrangements governing some specific industries do not allow firms in the market to be dominant. This is because firms with that inproportionately huge market power might revert to monopolies in the long-run. As to be seen from the empirical documentation part of this dissertation where Turkish commercial banks are analyzed, the banking Statute in particular is so stringent that it stipulates a diffused ownership structure of market share by the involving banks. Diffused ownership, unlike blockholder ownership, is meant that there should not be one single bank in the market that has the largest portion of the market share (e.g. customer portfolio, total assets, total sales, total turnover, profit margin etc.). It could be

that there may be some banks that have significantly higher market share relative to the other banks in the market, but this should be to a lesser degree than holding a single dominant position in the market. Therefore, dominant firm model, albeit reasonable to be applicable in the transfer pricing analysis in this dissertation, is not examined.[316] The Stackelberg model fits more to the scope over here than the dominant firm model.

In Cournot and Stackelberg competitions, firms in the market compete on quantities. However, in Bertrand type of competition for instance, market firms compete on price. Due to its main property, Bertrand oligopoly model may appear to be the most reasonable approach to conduct transfer pricing analysis as in reality, one may see price competition more often than non-price competitions. However, it is the opposite. Since Cournot and Stackelberg models perceive the quantities as vehicles to combat the competition but not the price, solution algebra (i.e. equilibrium levels that simultaneously optimize the competing firms) yields more reasonable outcomes than those in Bertrand.

Stiglitz (1997) defines Betrand competition as the oligopoly setting where each competing firm chooses such a price to maximize its profits given that rival's price will remain invariant. He states that if rival maintains its price unchanged, the oligopolist can be able to steal many of its rival's customers through lowering its price even a little bit. Frank (2003) states that in Bertrand, as in Cournot, the choice of selling at such a price that is marginally lower than the competition is the preferred strategy for the competing firms. The firm that slightly underprices (overprices) relative to the other firm will capture (lose) the entire market. Price cutting will continue until it reaches its natural economic limit which is marginal cost. At the price-marginal cost equality, as there will be no incentive to cut any further, there would be a stable equilibrium where the involving firms will have an equal market share. Şahin (1999) notices that firms competing in Bertrand are such naïve that they do not learn from their past experiences and strictly believe that prices of their competitors will remain as sticky. Therefore, although firms can maximize their own profits they can not maximize aggregate (industrial) profit. As to be realized, the assumptions underlying the Bertrand oligopoly

[316] Nevertheless, for the purposes of comparison, the results obtainable under the dominant firm oligopoly model are available in the chapter '*Oligopoly Competition With Cost Advantage: Stackelberg Competition*'. Comparing the findings, it will be seen that the effect of the cost advantage on transfer prices is significant as and similar to the one in Stackelberg analysis.

approach are unrealistic. In this aspect, as with the Cartel or Dominant Firm models, the transfer pricing analysis in this dissertation is not built on the Bertrand model, too.

This dissertation is particularly interested in showing the effects of cost advantage in building or in the establishment of transfer prices. As to be explained later on, I believe that the two oligopoly models that better fit to demonstrate such interdependence are Cournot and Stackelberg models. The main reason is that the strength of the market competitors in these oligopoly approaches is the key to competition. Particularly, the Cournot model is examined for the transfer pricing analysis without cost advantage as in Cournot, it is assumed that the sizes of the competing firms are almost identical to each other. In other words, there is neither scope nor space for cost advantages in Cournot type of oligopoly competition. The Stackelberg model is rather examined due to its appropriateness to treat the transfer pricing analysis with cost advantage as Stackelberg, at least in its sequential version, is rather geared towards explaining the state of the market in terms of the size difference of the competing firms. This is reasonable. In the real life, there are many firms with different marketing strategies (e.g. different quality products and services etc.), different capabilities and eventually different natures. All these factors even suffice to create some cost advantages.

As with monopolies, the transfer pricing literature that has been comprehensively examined in the preceeding chapters has cited several studies concerning the oligopoly stream. We have seen that as of the current state, the transfer pricing literature on oligopolies is quite narrow. Among these, Schjelderup and Sorgard (1997) argue that the delegation of authority as well as the nature of the competition influences the role the transfer prices are expected to play. The scholars believe that transfer prices may be employed to achieve strategic and tax saving goals of a given business. They suggest that, if affiliates or liasons of a multinational business compete in the market with the terms oligopoly competition stipulates, the central office (headquarter) of the multinational may not strive for accomplishing its profit maximization goal. This is up to the reactions of its market competitors.

Zhao (2000) demonstrates that it is possible to employ transfer prices as a rent-shifting tool by a multinational which is in part decentralized and has one competitor in the market. He believes that transfer prices can be used to well manage the subsidiaries of a multinational business. The transfer price value may be affected through whether the product of the rival firm is final or intermediate and whether the rival firm is

diffused or not. The scholar contends that the transfer prices will get lower as the rival firm is getting decentralized and integrated.

Nielsen *et al.* (2001) argue that under the terms of oligopolistic competition, the profit shifting problem through transfer prices does not fade away even if formula apportionment approach instead of the separate accounting approach is followed. From the transfer pricing literature, remember that the OECD adopts the exercise of arm's length principle to each and every transaction of the multinationals located in the Member countries. Such exercise or applicability relies on the accurate enforcement of a separate accounting system.

In their model, Nielsen *et al.* (2001) assume that there is a multinational with two affiliates, each located in one of the two countries, Country A and Country B. The affiliate in the country B has a local rival. S_B^* is the optimal quantity volume that the competitor is willing to pick up. Given the competitor's sales, the affiliate of the multinational in country B realizes a revenue of $R_B (S_B, S_B^*)$, with $\partial^2 R_B / \partial S^2_B \leq 0$, and $\partial R_B / \partial S_B^* < 0$. Global profits of the multinational that are subject to tax levy are given as $\pi^T = \pi^A + \pi^B$. The profit/objective function of the affiliate in country B is as such $\pi^B = R_B(S_B, S_B^*) - qS_B$. The scholars suggest that formula apportionment technique does even tend to increase profit shifting activities multinationals are undertaking. Further, they show that if the multinational's affiliates compete under oligopoly rivalry state, manipulating transfer prices can make the multinational better off both tax-saving wise and strategic wise.

Kind *et al.* (2002) investigate the influence of economic integration on the level of equilibrium taxes. Building a symmetric two country model with two multinational enterprises competing on quantities, the scholars show that trade liberalization rises up if multinational enterprises belong to home-country residents. Moreover, it is conjectured that increased international ownership results in higher tax rates in equilibrium. In their model, Kind *et al*. assume that costs to incur to disguise transfer price manipulation have been assumed to be exogenous and tax-deductable.

Modifying the setting by Kind *et al.*, Amerighi (2006) builds a symmetric two country model in the context of a partial equilibrium where two multinational enterprises compete on quantities and try to manipulate their transfer prices. As different from Kind *et al.* (2002) and as similar to Peralta *et al.* (2006), costs to incur to disguise transfer price manipulation are incorporated into the function of the

enforcement level because it is assumed to be endogenous in the model Amerighi sets up. Further, these costs are non tax-deductable. The scholar shows that stronger enforcement of the arm's length principle, through the pressure of the government or an increased economic integration, rises tax rates in equilibrium.

More recently, Komoriya (2007) studies transfer prices of decentralized multinational firms under asymmetric oligopoly. He argues that if the corporate tax rate of the host country is materially or significantly higher than that of the home country, the firm efficiency will be reliant of the source of the cost differences. The efficient firm will have a higher mark-up (add-up) ratio than that of the inefficient firm. In this case, transfer prices of the multinational firms will be strategic complements. The scholar posits that if the corporate tax rate diffentials between the home and host countries are not that significant, these findings will not be applicable any more. Indeed, as the findings will just be the opposite, transfer prices of the multinational firms will not be strategic complements but rather be strategic substitutes.

All the upper studies have already been comprehensively investigated in the literature review part. Despite the fact that all those tackle transfer prices from different aspects, none of them shows the interaction between transfer prices and cost advantages at all. As stated early on, concerning the oligopoly analyses, this dissertation contributes to the literature through exploring the effect of cost advantages on the establishment of transfer prices and hence on the level of firm operating profit figures.

The next chapter examines oligopoly competition without cost advantage where the banking firms compete under Cournot.

12.1- Oligopoly Competition Without Cost Advantage: Competition Under Cournot

In this chapter, I will build a model and show how transfer prices may be set under oligopolies, particularly in Cournot competition, when none of the competing firms has any cost advantage over the other. Consider that there are two commercial banks, bank L and bank F. Both the banks borrowing from each other and the market lend fund to each other and to the market. There is no other bank in the market who supplies fund. The duopoly banks belong to the same group firm (e.g. a financial holding corporation).

Suppose that the unit revenue (price) function for the industry is $P(R)\ [q_l + q_f]$, wherein, the subscript l stands for the banking firm L, and f for the banking firm F and q

for the quantity. As one may see, market clearing price [P(R)], average unit operating revenue, is given to be a function of aggregate or industry output. Specifically,

$$P(R) = \alpha - \psi Q$$

conditional on P, α, $Q > 0$. Q, the global quantity or the quantity demanded at the optimal price level, represents the sum of output volumes, therefore is equal to the ($q_l + q_f$) of each competing firm. That is, $Q = \sum q_l + q_f$.

The banking firm *L* in the market has a cost structure of $C_l(q_l)$, where $C_l = \beta + \gamma q_l$, and the banking firm F has a cost structure of $C_f(q_f)$, where $C_f = \beta + \gamma q_f$; conditional on C_l , C_f , $\beta > 0$. C_l stands for the average unit operating cost of the bank L and C_f for the average unit operating cost of the bank F. Costs are everywhere differentiable such that $C_l' > 0$, $C_f' > 0$. This will make sure that none of the banks realizes any operating cost saving.

Among the main assumptions underlying the above model are that:

- there are no taxes
- there are only two commercial banking firms (banks) in the market, L and F
- banks belong to the same group firm
- banks that borrow from each other and the market at arm's length terms provide fund to each other and to the market at arm's length terms
- since both the banks entered the banking market at the same time, they make simultaneous moves each time as there is no first mover's advantage
- banks fight under the terms of oligopoly in general and in particular Cournot Game
- there is no capacity constraint
- costs are symmetrical
- there is no another transaction
- banks earn one source of operating revenue or income which is the sales revenue and bear one source of operating expense which is the cost of sales
- there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the banks
- both the banks have increasing cost structures, meaning that none of the banks has cost advantages over the other (or any operating cost saving)

The reason underlying the last assumption is that operating or sales costs are the same with cost of funding in this model; as fund or money transfer, being the main (ordinary) course of business of the banks, is the subject-matter of the market trade. As the governance structure or quality of neither the banking firms is assumed to be good nor better than the other, both the banks have increasing cost structures. Before passing on to the model resolution, remember that in Cournot model, in spite of the fact that firms react to the changes in the level of the output offered by their competitors, they are assumed not to expect the competitors to revise their decisions, to respond to the changes, in their own output volumes. This is an assumption stipulating that the conjectural variations of the oligopolists are equal to zero (Mathis and Koscianski (2002)).[317] Equivalently, revising the assumptions, it will be noticed that the competing banks make simultaneous moves that are particular to the repeated games. I will provide the model resolution as the following.

Under Cournot competition, as opposed to Bertrand competition, firms compete on quantity volumes as in Stackelberg competition. From the conventional properties of Cournot game, we know that sales revenue is the product of price and quantity and that firms' cost functions can be defined as specified in the preceeding passages of this chapter. In here, unlike Stackelberg, as the moves are simultaneous, none of the competing firms knows exactly what the output or quantity levels of the rival firms will be. What they need to do is to predict or forecast each other's actions. In order to find the individual equilibria, we first should specify the objective functions of the each competing banking firms. Namely, pay-off (profit) or objective functions of any competing banking firms (i) might be written up as such:

$$\Pi_i (q_l, q_f) = (\alpha - \psi(q_l + q_f)).q_i - C_i(q_i) \qquad (1)$$

For the purposes of maximization, we need to respectively derive Π_l and Π_f as to q_l and q_f through setting them to zero. Accordingly,

$$\partial\Pi_l / \partial q_l = 0 \text{ or, } \partial((\alpha - \psi(q_l + q_f))q_l - (\beta + \gamma q_l)q_l)) / \partial q_l = 0 \qquad (2)$$

$$\partial\Pi_f / \partial q_f = 0 \text{ or, } \partial((\alpha - \psi(q_l + q_f))q_f - (\beta + \gamma q_f)q_f))/\partial q_f = 0 \qquad (3)$$

[317] Remember that conjectural variation refers to how one firm thinks that others (competitors) will respond to its self-adjustments in some strategic variables. It allows strategic behavior and interactions among the competing firms. For this, see for instance Mathis and Koscianski (2002), Nicholson (2005) etc.

$$q_l = \frac{\alpha - \beta - \psi q_f}{2\left(\gamma + \psi\right)} \text{ and } q_f = \frac{\alpha - \beta - \psi q_l}{2\left(\gamma + \psi\right)} \qquad (4)$$

Incorporating both the optimized quantity parameters will yield the solution set, (q_l^*, q_f^*). The solution set is obtained as such:

$$q_f^* = \frac{(\alpha - \beta) + (\frac{2(\alpha - \beta)(\gamma + \psi)}{-\psi})}{(\frac{4(\gamma + \psi)(\gamma + \psi)}{-\psi}) + \psi} \text{ or } q_f^* = \frac{-(\alpha - \beta)(2\gamma + \psi)}{\psi^2 - 4(\gamma + \psi)^2} \qquad (5)$$

From the statement (4), we also know that:

$$\begin{aligned} 2q_l\left(\gamma + \psi\right) &= \alpha - \beta - \psi q_f \\ 2q_f\left(\gamma + \psi\right) &= \alpha - \beta - \psi q_l \end{aligned} \qquad (6)$$

We see that $q_l^* = q_f^*$. Therefore, $q_l^* = \frac{-(\alpha - \beta)(2\gamma + \psi)}{\psi^2 - 4(\gamma + \psi)^2}$ (7)

These are the optimal transfer output or quantity levels for the banking firms.

From the Cournot approach, we know that there must be one general market price which is the transfer price. The transfer prices of each competing bank are the same as the market price since market price is available in this case and transaction happens at arm's length terms. Market price becomes available as the competing banking firms are the market firms. Accordingly, the transfer price, TP, will be the same as

$$\alpha - \psi(Q^*) \text{ or } \alpha - \psi\left(q_l^* + q_f^*\right) \qquad (8)$$

Placing both the optimized quantity parameters into the upper transfer pricing equation, we will obtain the transfer price. Thereby,

$$\text{Transfer Price, TP} = \alpha - \psi[\frac{-2(\alpha - \beta)(2\gamma + \psi)}{\psi^2 - 4(\gamma + \psi)^2})] \qquad (9)^{318}$$

[318] For some fundamental properties, explanations and notations used for Cournot model that is discussed in this chapter, refer for instance to Aliprantis and Chakrabarti (2000), Mathis and Koscianski (2002), Varian (2006) or to Cournot Competition@http://en.wikipedia.org/wiki/Cournot_competition (03.04.2007).

A Numerical Example: Financial Services Industry

Supposing that all the assumptions specified in this chapter hold, consider that there are two commercial banks, the bank L and the bank F, running in a banking industry in the country X. Bank L and Bank F who belong to the group firm A are the only commercial banks providing fund to the market and to each other at arm's length terms. Suppose also that these two banks compete with each other under the boundaries of Cournot game. The average unit operating revenue (price) (R) = 100 – 0,5Q, C_l = 20 + 0,1q_l and C_f = 20 + 0,1q_f, where Q represents the aggregate output quantity and is therefore equal to the sum of the output of L (q_l) and the output of F (q_f), C_l stands for the average unit operating cost of L and C_f for the average unit operating cost of F. Calculate the transfer price ($) and the corresponding fund volumes (units) each bank will offer to the market at the equilibrium and will consider when to transact with each other.[319]

Following the suggested resolution, in this example, output and transfer price will read 47 units and 53 $ for each of the banks respectively.

Solution. In order to resolve the problem, in the light of backward induction, one needs first to identify the objective function of the bank F and to derive it as to its quantity. In so doing, best reaction may be obtained. Accordingly,

$$\Pi_l = (100 - 0{,}5\,(q_l + q_f))\,q_l - (20 + 0{,}1q_l)\,q_l \qquad (1)$$

$$\text{Max } \Pi_l \text{ wrt. } q_l \text{ or } \partial\Pi_l/\partial q_l$$

$$80 - 0{,}5q_f - 1{,}2q_l = 0 \qquad (2)$$

$$1{,}2q_l + 0{,}5q_f = 80 \text{ or } 2{,}4q_l + q_f = 160 \qquad (3)$$

$$\Pi_f = (100 - 0{,}5\,(q_l + q_f))\,q_f - (20 + 0{,}1q_f)\,q_f \qquad (4)$$

$$\text{Max } \Pi_f \text{ wrt. } q_f \text{ or } \partial\Pi_f/\partial q_f$$

$$80 - 0{,}5q_l - 1{,}2q_f = 0 \qquad (5)$$

$$q_l + 2{,}4q_f = 160 \qquad (6)$$

Solving the statements (2) and (6) together, we will have:

$$q_l^* = q_f^* \approx 47 \text{ units}$$

[319] Suppose that this transaction happens in the year 2007. Suppose also that intra-group banks do not have any other transaction in 2007.

Therefore, the transfer price, TP, must be 100 – 0,5(47+47), which is 53 $.

The upper result is consistent with the economic intuition. As a result of the nature of the game; the quantities (transfer outputs) of the competing banks must be identical owing to cost symmetry, and there is a single market price which is the transfer price as the transaction happens at arm's length terms. Notice that we do not have any comparability problem here, indeed we have perfect comparables available. It is because for one thing, fund being the service product that is transferred between the affiliated intra-group banking firms is the same as the service product exchanged in the market which is the fund with identical character and terms. Further, the transacting parties, the affiliated intra-group banking firms, are the same as the market firms that are per se intra-group banking firms again which are nothing else but bank L and bank F.

12.2- Oligopoly Competition With Cost Advantage: Competition Under Stackelberg

As in the case of monopolies, cost advantage affects (transfer) pricing patterns of businesses in oligopoly markets as well. Operating either cross border (i.e. a multinational group) or domestically, businesses do not have the same economic properties. Put it differently, some businesses might enjoy cost advantage over the others who try to survive in the market without any cost advantage. This might occasion from a plenty of technical reasons. For instance, those with cost advantage might have lower cost of funding or sourcing (therefore higher leverage and profitability) opportunities as compared to the others. In addition to the usual governance covenants (e.g. higher managerial skills, better know-how, lower agency costs, lower transaction costs, scale economies, better stakeholder rights, better disclosure policies etc.), this could reason from a well recognized brand name or prestige in the market (e.g. more customer portfolio, higher customer retention ratio, high reputation etc.), size, or in general from decent or relatively better corporate governance skills. Firms with good governance structures do much better in the market than their competitors without as they will have cost advantage. This may well apply to a banking industry where competitors are in principle banks.

Think about a financial services industry that is served by various commercial banks. Some banks might actually have strong advantages than the others. The forefront pro among them could be the cost advantage that is highlighted in this dissertation.

Apparently, a commercial bank with lower degree of cost of funding (hence cost of capital) for instance might grant a loan (fund) to both individuals (customers) and corporations (clients) at more favorable terms (e.g. lower interest rate, longer due date, flexible pay-back options etc.) than the ones with higher funding or sourcing cost. Put differently, in order for a bank with higher cost of capital to grant a loan of any capacity (e.g. individual loan, commercial loan, real estate loan, property loan, education loan or whatsoever), it would need to charge such interest rates that might be significantly higher as to those in others in the market. The reason, as stressed many times, is that they suffer from the absence of cost advantage. In other words, since those banking firms do not have any cost advantage, their costs of financing their operating expenses will be higher than those of the banks with cost advantage. Adding up some profit margin (a cost-plus figure) on to this cost volume will result in a higher price for the loans that they are willing to grant. This issue closely regards product differentiation which the businesses competing under Cournot are not expected to exhibit.

The upper passages imply that, cost advantage might lead to different cost schemes even in the businesses that are both competitors of each other and that are legal properties of the same multinational or group as well. Businesses with different cost figures might also need to price their products and services differently. Probably, commercial banks with higher cost of funding will tend to offer higher interest rates on (time) deposits as well. The reason for this is naturally to attract individual customers or corporate clients. This further increases the costs of funding for those banks. On the other hand, banks that enjoy cost advantage will not need to set interest rates that high since they simply will not need to do so. This is what we observe in the real life commercial banking practices around the globe.

Remember that in deposit banking terms, the spread that is the difference between the rate of interest that is charged on a loan [i.e. the main source of income/revenue for commercial banks] and the rate of interest that is offered on deposits [i.e. the main source of cost/expense for commercial banks] is called *credit margin*. Credit margin is the main source of profit [i.e. operating profit] for commercial banks. Banks do have different volumes of credit margin.

The upper margin variation causes different operating profit figures. Banks with cost advantage, the ones who lead the market in the real life, probably realize higher profit (credit) margins than the banks without any cost advantage, the ones who follow the

market leaders. One of the major reasons underlying this tie is the lower cost of capital that the leading banks with cost advantage do have relative to the following banks with cost disadvantage. For the followers, it is not easy to change (decrease) the cost of capital figure in the short run as the leaders are still in the market. Therefore, the following banks without cost advantage, in order to cover resulting gap in operating profit and indeed to survive in the banking market, will need to concentrate more on the income items that are expected to generate financial and/or even extraordinary profit. On the contrary, the leading banks might even overlook their financial profit components since they may already feel satisfied with their operating income denominators.[320] These combine to imply that, at the end of the day, the leading banks may tend to price their products and services differently from their followers.

In the following discussion of the dissertation, I will run two affiliated banking firms (commercial banks). They are affiliated because both are owned by a financial group firm. I will assume that bank with cost advantage will act in a leader fashion while the other one will therefore have to act in a follower fashion. I feel that, restricting the numbers of the affiliated banks to two and assuming that they are the only market competitors, will facilitate a more comprehensible and effective understanding of transfer pricing that is by definition a complex issue.

Tippett and Wright (2006) have argued that washing out the assumptions underlying frictionless markets might influence optimal transfer pricing rules. In particular, some accounting procedures may be employed to cover the missing goal congruence that the agency frameworks might lead to. The scholars make two assumptions. One is general (market) and one is specific (technical/information) assumption. Concerning the general one, they assume that demands and costs of the competing business divisions are isolated of each other in an imperfectly competitive (intermediate and final) market. Concerning the specific one, the scholars assume that the agency costs are non-zero where the utility functions of the managers and shareholders significantly vary. The scholars conjecture that, when this is the case, transfer prices should be set equal to

[320] This does not mean that, the leading commercial banks with cost advantage are not wise enough to think of benefiting from their sources that are supposed to yield financial income. That will not be rational. What is rather implied in here is that, the leaders will not become aggressive on those sources, as would not be the case in their followers that do not possess any cost advantage. The bottom line is that, in order to survive in the market, banks that do lack cost advantage will do their best to satisfy an economic degree of earnings before interest rate and taxes, with (EBITDA) or without (EBIT) depreciation and amortization, and hence realize a reasonable net profit after tax volume (NPAT). As to be seen; there is an assumption here, which is that, in rational markets, operating profits comprise the largest portion of EBIT or NPAT volumes of commercial banks.

marginal cost in manufacturing division with a standard overhead absorption costing system used. Notice that absorption costing, unlike variable costing, is known as full costing in the literature where all the cost figures that a business incurs in a given period are recorded as the cost (expense) items in their financial statements. Unlike Tippett and Wright (2006), I assume that there is a dependence among the activities or decisions of the involving banks (e.g. Atkinson et al. (2001) etc.).

Stackelberg model that is one of the conjectural variation models allows us to see what happens if at least one of the competing (banking) firms may behavior strategically (e.g. Mathis and Koscianski (2002), Nicholson (2005) etc.). Here below, I build a model and show how transfer prices may be set under oligopolies, particularly in Stackelberg, when one of the banks that has any cost advantage over the other leads the market.

Suppose now that there are only two commercial banks in the market, bank L being the leader bank and bank F being the follower bank. Competing under Stackelberg game, both the banks borrowing from each other and the market lend fund to each other and to the market. There is no other bank in the market who supplies fund. The duopoly banks belong to the same group firm. Let the average unit revenue (price) function for the industry be P(R) $[q_l + q_f]$, at which, the subscript l stands for the leader (banking) firm, and f for the follower (banking) firm or competitor, q for the quantity. As one may see, price is given to be a function of aggregate or industry output. Specifically,

$$P(R) = \alpha - \psi Q$$

conditional on P, α, $Q > 0$. Q, the global quantity or the quantity demanded at the optimal price level, represents the sum of output volumes, therefore is equal to the $(q_l + q_f)$ of each competing firm. That is, $Q = \sum q_l + q_f$, where $q_l \neq q_f$.

The leading banking firm *L* in the market has a cost structure of $C_l(q_l)$, where $C_l = \beta + \gamma q_l$, and the following banking firm F has a cost structure of $C_f(q_f)$, where $C_f = \beta + \gamma q_f$; conditional on C_l ,C_f, $\beta > 0$. C_l stands for the average unit operating cost of the leading bank and C_f for the average unit operating cost of the following bank. Costs are everywhere differentiable such that $C_l' < 0$, $C_f' > 0$. This will make sure that the leader realizes an operating cost saving due to its cost advantage.

Among the main assumptions underlying the above model are that:

- there are no taxes
- there are only two commercial banking firms (banks) in the market, the leader

who is the bank L and the follower who is the bank F

- banks belong to the same group firm
- banks that borrow from each other and the market at arm's length terms provide fund to each other and to the market at arm's length terms
- banks fight under the terms of in general oligopoly and in particular Stackelberg competition with a sequential game structure
- the leader is the one who moves first. In particular, the leader (bank L) has entered the banking market before the follower (bank F) did, therefore has a first mover's advantage
- there is no capacity constraint
- costs are asymmetrical
- banks earn one source of operating revenue or income which is the sales revenue and bear one source of operating expense which is the cost of sales
- there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the banks
- the leader has a cost advantage over the follower, therefore has a decreasing cost structure while the follower has an increasing cost structure

The reason underlying the last assumption is that operating or sales costs are the same with cost of funding in this model; as fund or money transfer, being the main (ordinary) course of business of the banks, is the subject-matter of the market trade. As the governance quality of the bank L being the leader is assumed to be sufficiently good and significantly better relative to the bank F being the follower, the bank L with cost advantage has a downward cost function while the bank F without any cost advantage (or with cost disadvantage) has an upward cost function, both of which are everywhere differentiable for the purposes of optimization.

Before passing on to the model resolution, remember that unlike duopoly firms competing in Cournot oligopoly model, in Stackelberg model with sequential game, firms react to the changes in the level of the output offered by their competitors, as well as foreseeing the competitors to revise their decisions, to respond to the changes, in their own output volumes. This suggests that, the Stackelberg model relaxes the assumption on the absence of the conjectural variation underlying the Cournot model.

This is because the competing banks make sequential moves that are particular to the sequential games. As before, I will provide the model resolution as the following.

As mentioned before, under Stackelberg competition, unlike Bertrand competition, firms compete on quantity volumes as in Cournot competition. The technique in solving Stackelberg problem would be to run a regular backward induction method; meaning that, to obtain an equilibrium, best response or reaction function of the follower (bank F) must first be identified and operationalized afterwards. Thus, strategy profile that serves best the problems of each player will be construed, given the strategies of the other player.

Owing to the nature of backward induction, the leader has to consider first what the best response of the follower might be; namely, leader has to figure out how the follower would respond, given the quantity arrangement it will make. The leader then will determine such a quantity that would register as the best response to the expected response of the follower. It will be the one to maximize its profit. The follower, as a reaction, in equilibrium, opts for such a quantity that would read an optimal amount as it would register the best for itself, given the move of the leader.

Since sales revenue is the product of price and quantity and sales cost is a function dependant of quantity, profit of the follower or the follower's problem might be stated as:

$$\Pi_f = P(q_l + q_f).q_f - C_f(q_f) \qquad (1)$$

where the letters have obvious meanings. This is the follower's objective function which relies on the quantity or output choice the leader makes. Calculating such a value of q_f maximizing Π_f given q_l which is the output of the leader, we will get the best response of the follower. Thus, Π_f will be optimized as per q_f. In other words, the output that accomplishes the objective of the follower is obtained this way. At this output level where marginal revenue crosses marginal cost, profit maximization is realized for the follower that is constrained by the leader's own output selection.

For the purposes of maximization, deriving Π_f as to q_f and setting that to zero will look:

$$\partial\Pi_f/\partial q_f = [[\partial P\,(q_l + q_f)/\partial q_f]^*q_f] + (P(q_l + q_f)) - [\partial C_f(q_f)/\partial q_f] = 0 \qquad (2)$$

As we have obtained the best response state of the follower, we can gather the leader's best reaction function as well. The leader knows that the follower's quantity or

output choice is affected by its actions. The profit of the leader (leader's objective function) or the leader's problem is:

$$\Pi_l = P(q_l + q_f(q_l)).q_l - C_l(q_l) \qquad (3)$$

where $q_f(q_l)$ symbolizes the follower's output given the output of the leader which has been calculated before. Analogically, calculating such a value of q_l maximizing Π_l given $q_f(q_l)$ which is the follower's best reaction function, we will obtain the leader's best response. In so doing, the quantity volume achieving the leader's objective will be identified. The probable maximum value of Π_l as per q_l is thus to be obtained as well. Deriving Π_l as to q_l and setting it to 0 would look as follows:

$$\partial\Pi_l/\partial q_l = [[\partial P(q_l + q_f)/\partial q_f] * (\partial q_f(q_l)/\partial q_l) * q_l] + (P(q_l + q_f(q_l))) - [\partial C_l(q_l)/\partial q_l] = 0 \qquad (4)$$

In order to resolve the problem, in the light of backward induction, one needs first to identify the objective function of the follower and to derive it as to its quantity. In so doing, best reaction may be obtained. Accordingly,

$$\Pi_f(q_l, q_f^*) = (\alpha - \psi(q_l + q_f))\, q_f - (\beta + \gamma q_f)\, q_f \qquad (5)$$

Max Π_f wrt. q_f or $\partial\Pi_f/\partial q_f$

$$\alpha - \psi q_l - 2\psi q_f - \beta - 2\gamma q_f = 0 \qquad (6)$$

$$q_f^* = \frac{\alpha - \beta - \psi q_l}{2(\gamma + \psi)} \qquad (7)$$

Since $q_f^* \geq 0$, from the equation (7), we see that:

$$(q_f^*) * (2(\gamma + \psi)) = \alpha - \psi q_l - \beta \qquad (7a)$$

Therefore,

$$q_l^* = \frac{\alpha - \beta - 2q_f^*(\gamma + \psi)}{\psi} \qquad (7b)$$

Incorporating both the optimized quantity parameters will yield the solution set, (q_l^*, q_f^*), which is built as follows. Since we exactly know where the follower can optimize its quantity, we can treat the problem of the leader firm. Likewise, we should first write out the objective/profit function of the leader. That is;

$$\Pi_l(q_l, q_f^*) = P(q_l + q_f)\, q_l - (\beta - \gamma q_l) q_l \qquad (8)$$

In the above expression, objective function is to be rearranged by plugging q_f^* into q_f. Then, it turns out that:

$$\Pi = (\alpha - \psi(q_l + ((\frac{\alpha - \beta - \psi q_l}{2(\gamma + \psi)}))q_l - (\beta - \gamma q_l)q_l \qquad (9)$$

Max Π wrt. q_l will reveal the optimized unit value of q, which is q_l*. Accordingly,

$$q_l^* = \frac{\alpha - \beta - \psi \frac{(\alpha - \beta)}{2(\gamma + \psi)}}{[2(\psi - \gamma)] - [2(\frac{(\psi)(\psi)}{2(\gamma + \psi)})]} \text{ or } q_l^* = \frac{(\alpha - \beta)(2\gamma + \psi)}{[4(\psi - \gamma)(\gamma + \psi)] - [2(\psi^2)]} \qquad (10)$$

From the statement (7), we know that:

$$q_f^* = \frac{\alpha - \beta}{2(\gamma + \psi)} + (\frac{-\psi}{2(\gamma + \psi)})(\frac{(\alpha - \beta)(2\gamma + \psi)}{[4(\psi - \gamma)(\gamma + \psi)] - [2(\psi^2)]}) \qquad (11)$$

These are the optimal transfer output or quantity levels for the banking firms. From the previous discussion, we know that there must be one single market price which is the transfer price in this case. As in the preceeding state, the transfer prices of each competing bank are the same as the market price since market price is available in this case and transaction happens at arm's length terms. Market price becomes available as the competing banking firms are the market firms. Accordingly, the transfer price,

$$TP = \alpha - \psi(Q^*) \text{ or } \alpha - \psi(q_l^* + q_f^*) \qquad (12)$$

Placing both the optimized quantity parameters into the upper transfer pricing equation, we will obtain the transfer price. Accordingly, the transfer price, TP, will be equal to:

$$(\alpha - \psi[(\frac{(\alpha - \beta)(2\gamma + \psi)}{[4(\psi - \gamma)(\gamma + \psi)] - [2(\psi^2)]}) + \frac{\alpha - \beta}{2(\gamma + \psi)} + (\frac{-\psi}{2(\gamma + \psi)})\frac{(\alpha - \beta)(2\gamma + \psi)}{[4(\psi - \gamma)(\gamma + \psi)] - [2(\psi^2)]}] \qquad (13)^{321}$$

[321] Stackelberg model with sequential game where the leader sets quantity first is also known as quantity leadership in the literature. For this and for some fundamental properties, explanations and notations used for Stackelberg model that is discussed in this chapter, refer for instance to Aliprantis and Chakrabarti (2000), Mathis and Koscianski (2002), Varian (2006) or to Stackelberg Competition@http://en.wikipedia.org/wiki/Stackelberg_competition (03.04.2007). Stackelberg model with sequential game where the leader sets quantity first is also known as quantity leadership in the literature.

A Numerical Example: Financial Services Industry

Supposing that all the assumptions specified in this chapter hold, consider that there are two commercial banks, the bank L being the leader and the bank F being the follower, running in a banking industry in the country X. Bank L and Bank F who belong to the group firm A are the only commercial banks providing fund to the market as well as to each other at arm's length terms. Consider also that these two banks compete with each other under the boundaries of Stackelberg model (sequential game) as follows. The average unit operating revenue (price) (R) = 100 – 0,5Q, $C_l = 20 – 0,1q_l$ and $C_f = 20 + 0,1q_f$, where Q represents the aggregate output quantity and is therefore equal to the sum of the output of the leader bank (q_l) and the output of the follower bank (q_f), C_l stands for the average unit operating cost of the leading bank and C_f for the average unit operating cost of the following bank. Calculate the transfer price ($) and the corresponding fund volumes (units) that each bank will offer to the market at the equilibrium and will consider when to transact with each other.[322]

Following the suggested resolution, in this example, for the bank L being leader and the bank F being follower, the output volumes will be 122 units and 16 units respectively. The transfer price which commonly applies to both the banks will be approximately $ 31 per each bank.[323]

Solution. In order to resolve the problem, in the light of backward induction, one needs first to identify the objective function of the follower and to derive it as to its quantity. In so doing, best reaction may be obtained. Accordingly,

$$\Pi_f = (100 – 0,5\,(q_l + q_f))q_f – (20 + 0,1q_f)q_f \qquad (1)$$

$$\text{Max } \Pi_f \text{ wrt. } q_f$$

$$80 – 0,5q_l – 1,2q_f = 0 \qquad (2)$$

$$q_f^* \approx 67 – 0,42q_l \qquad (3)$$

Now that we know at which level the follower may optimize its quantity, we can deal with the problem of the leader firm. Likewise, we should first write out the objective/profit function of the leader. That is;

[322] Suppose that this transaction happens in the year 2007. Suppose also that intra-group banks do not have any other transaction in 2007.

[323] Given the same data, similar results might also be verified with the dominant firm oligopoly model, where the leader may be considered as the dominant banking firm and the follower as the small banking firm..

$$\Pi_l = P(q_l + q_f)\, q_l - (20 - 0{,}1\, q_l)\, q_l \qquad (4)$$

In the above expression, objective function is to be rearranged by plugging q_f^* into q_f. Then,

$$\Pi = (100 - 0{,}5\,(q_l + ((67 - 0{,}42q_l))\, q_l - (20 - 0{,}1q_l)\, q_l \qquad (5)$$

$$\text{Max } \Pi \text{ wrt. } q_l \qquad (6)$$

$$q_l^* \approx 122,\ q_f^* \approx 16 \qquad (7)$$

The transfer price, TP, will be therefore 100 – 0,5(122+16), which is ca. 31 $.

The upper result is consistent with the economic intuition. Since it is particularly assumed that (i) banks fight under the terms of Stackelberg model with sequential game, (ii) information is perfect and (iii) the bank L being the leader has a first mover's advantage over the bank F remaining as a follower. When that is the case, as a result of the nature of the game, the quantity (transfer output) of the leading bank (bank L) will rank much higher than that of the following bank (bank F) –so do the outcomes already tell us. The next chapter will provide a further technical examination on the main findings and results obtained under the monopoly and oligopoly market analyses.

CHAPTER 13─ EQUILIBRIA

In this chapter, I will provide an in-depth and at-length discussion of the theoretical analyses performed in this part of the dissertation, starting from the transfer pricing investigation in monopolies first.

13.1- What The Theoretical Examination Says For The Businesses in Monopoly: Need For Compromises

With or without cost advantage, the financing business being the monopoly will always want to charge a price (transfer price) that is higher than the one the purchasing business being the monopsony will be willing to pay. The financing business that turns out to be monopoly due to the absence of service providers will set the volume of the quantity (transfer output) at such a point which will be lower than what the purchasing business will be willing to pay out to the financing business. This is not suprising since we know that this is the expected result of being in monopoly market; i.e. the nature of monopoly markets.

Changing the scenario from 'without cost advantage' to 'with cost advantage' influences the degree of the values; meaning the level of transfer prices and the level of transfer outputs. The reason is that cost advantages differ transfer pricing establishments of the intra-group firms even though both the firms make a transaction under monopoly market in both the cost states. The table below summarizes the theoretical results obtained under both the monopoly cases.

Table 13.1: Model Results Under Monopoly		
Imperfect Competition Type: Monopoly	**Model Results: Optimal Functions In Equilibrium**	
Intra-Group Firms	***Financing Business***	***Purchasing Business***
TP_n^*	$\alpha - \beta - 2(\frac{\alpha - 2\beta}{2(3\gamma + 2\psi)})(\psi + \gamma)$	$\beta + 2\gamma[\frac{(\alpha - 2\beta)}{2(3\gamma + \psi)}]$
TP_c^*	$\alpha - \beta - 2(\frac{\alpha - 2\beta}{2(\gamma + 2\psi)})(\psi + \gamma)$	$\beta - 2\gamma[\frac{\alpha - 2\beta}{2(\psi - \gamma)}]$
q_n^*	$\frac{\alpha - 2\beta}{2(3\gamma + 2\psi)}$	$\frac{\alpha - 2\beta}{2(3\gamma + \psi)}$
q_c^*	$\frac{\alpha - 2\beta}{2(\gamma + 2\psi)}$	$\frac{\alpha - 2\beta}{2(\psi - \gamma)}$

In the upper table, TP_n^* and q_n^* respectively refer to the optimal transfer prices and quantities in the monopoly case where none of the intra-group firms has any cost advantage. TP_c^* and q_c^* respectively refer to the optimal transfer prices and quantities in the monopoly case where the financing business utilizes cost advantage respective to the purchasing business. Notice that in the cost advantage case; the optimal quantity (q_c^*) for the financing business will be higher than the optimal quantity (q_n^*) for the financing business in without cost advantage case. Likewise, the optimal quantity (q_c^*) for the purchasing business will be higher than the optimal quantity (q_n^*) for the purchasing business. On the other hand, the optimal transfer price (TP_c^*) for the financing business will be lower than the optimal transfer price (TP_n^*) for the financing business. Similarly, the optimal transfer price (TP_c^*) for the purchasing business will be lower than the optimal transfer price (TP_n^*) for the purchasing business. This makes sense because when prices get higher, quantities should get lower or vice versa. Recall that the demand curve is downward sloping in monopolies.

Table 13.2: Findings From Numerical Examples Under Monopoly

Imperfect Competition Type: Monopoly	**Findings: Optimal Values in Equilibrium**	
Intra-Group Firms	***Financing Business***	***Purchasing Business***
TP_n^*	52 $	28 $
TP_c^*	48 $	5 $
q_n^*	23 units	38 units
q_c^*	27 units	75 units

The above table summarizes the numerical findings building on theoretical results obtained under both the monopoly cases. In the upper table, TP_n^* and q_n^* refer to respectively the optimal values of the corporate transfer prices and quantities in the monopoly case where none of the intra-group firms has any cost advantage. TP_c^* and q_c^* refer to respectively the optimal values of the corporate transfer prices and quantities in the monopoly case where the financing business utilizes cost advantage over the purchasing business.

As to be seen from the upper tables, the level of the product (fund as transfer output) the monopoly, the financing business, is willing to offer is higher in the state with cost advantage than the state without cost advantage. Therefore, transfer price that the monopoly with cost advantage will consider is lower in the state with cost advantage than the state without cost advantage. For the monopsony, the purchasing business, the situation is different. The amount of the product it wants to obtain is higher in the state with cost advantage than the state without cost advantage. In other words, monopoly's having a cost advantage influences not only itself but also the position of the monopsony which is the purchasing business.

However, the values that have been gathered through the theoretical models and numerical cases are the individual optima for both the intra-group firms. They do not represent a unique solution where there is a set satisfying the common interests of the entire involving parties. This is because there is a discrepancy between the price and the quantity offers the financing business is willing to propose and the price and the quantity volumes the purchasing business is willing to accept. In other words, irrespective of the cost advantage states, there is a duality problem as we have two different transfer prices and two different transfer outputs in each the state. In order for making the internal corporate transaction eventually happen, those differentiating values have to be matched in one combination that will reveal one single transfer price and one single transfer output figure in the end.

The solution is rather intuitive and compromising. As stated in the upper passage, since we have two different transfer prices and transfer quantities in each the monopoly scenario, we have to find a cut-off point where the transacting intra-group firms, the financing and purchasing businesses, may come to an agreement. This implies a need for negotiation that will yield a common solution. Put differently, both the contractual parties, the intra-group firms, need to come to a common ground through negotiating

the terms of this trade. The next step then is to discuss how this settlement may be achieved.

Looking back the assumptions, we see that the intra-group firms have identical amount of bargaining power, which is indeed the key to resolving this duality problem. The financing business, despite the fact that it is the monopoly, can not push the purchasing business to accept whatever the transfer price or the transfer selling amount it may offer to. Remember that the purchasing business is the only purchaser of the product (fund) by the financing business. Therefore, it has the power of the monopsony. The same applies to the purchasing business as well. It can not push the financing business as the financing business is the only provider or supplier of the product.

The upper passages suggest that, halving the aggregate transfer prices (the sum of the optimal or individual transfer prices obtained for each intra-group firms) and the aggregate transfer outputs (the sum of the transfer quantities obtained for each intra-group firms) may generate a common solution, as the tables below illustrate. Remember that as it is assumed that there is no capacity constraint, whatever the purchasing business wants to gather from the financing business, the financing business is always in a position to satisfy the demand of the purchasing business. Therefore, halving the values makes sense. The below table shows the model resolution under monopoly that writes the duality problem off. The letters have obvious meaning.

Table 13.3: Model Resolution Under Monopoly: Solving The Duality Problem	
Imperfect Competition: Monopoly	**Bargaining Solution: Transfer Pricing Under Equal Treatment of Bargaining Strengths**
Intra-Group Firms	***Financing/Purchasing Business***
$\mathbf{TP_n^*}$	$\frac{[\alpha - \beta - 2(\frac{\alpha - 2\beta}{2(3\gamma + 2\psi)})(\psi + \gamma)] + [\beta + 2\gamma[\frac{(\alpha - 2\beta)}{2(3\gamma + \psi)}]}{2}$

TP_c^*	$\frac{[\alpha - \beta - 2(\frac{\alpha - 2\beta}{2(\gamma + 2\psi)})(\psi + \gamma)] + [\beta - 2\gamma[\frac{\alpha - 2\beta}{2(\psi - \gamma)}]}{2}$
q_n^*	$\frac{[\frac{\alpha - 2\beta}{2(3\gamma + 2\psi)}] + [\frac{\alpha - 2\beta}{2(3\gamma + \psi)}]}{2}$
q_c^*	$\frac{[\frac{\alpha - 2\beta}{2(\gamma + 2\psi)}] + [\frac{\alpha - 2\beta}{2(\psi - \gamma)}]}{2}$

Similarly, resolution on the numerical findings will appear followingly, where the letters have obvious meaning.

Table 13.4: Resolution on The Findings From Numerical Examples Under Monopoly: Solving The Duality Problem	
Imperfect Competition: Monopoly	**Bargaining Solution: Transfer Pricing Under Equal Treatment of Bargaining Strengths**
Intra-Group Firms	***Financing/Purchasing Business***
TP_n^*	40 $ (= (52 + 28)/2)
TP_c^*	27 $ (= (48 + 5)/2)

$\mathbf{q_n^*}$	31 units (= (23 + 38)/2)
$\mathbf{q_c^*}$	51 units (= (27 + 75)/2)

On the realization of the bargaining process, the (unique) transfer price with cost advantage, TP_n^*, will read a figure (27 $) that is lower than the (unique) transfer price without cost advantage (40 $) which is TP_c^*. In contrary to the transfer price, the amount of the transfer output offered, q_n^*, will be higher (51 units) in the state of cost advantage than the amount of transfer output in the state without cost advantage (31 units) which is q_c^*. The reason for this inverse relationship is that the demand curve is downward sloping in monopolies.

At this point, one can question what if the contractual (involving) parties, the financing and purchasing businesses, do not have the same negotiation or bargaining powers. The answer to this is also clear. In that case, the terms of negotiation will be exclusively up to the degree of bargaining powers of the intra-group firms. For instance, if the financing business were to have more bargaining power than the purchasing business, it would set the terms of negotiation more favorably (e.g. a higher transfer price and a lower transfer quantity volume) at the expense of the purchasing business. On the opposite, if the purchasing business were to have more bargaining power, the terms the negotiation stipulates in that case would favor (e.g. a lower transfer price and a higher transfer quantity volume) itself at the expense of the financing business.

Another fundamental question concerns the level of capacity. In our case, the financing business has been assumed to have an unlimited capacity. We also know the answer to ‘ what if the fund providing (financing) business does not have an unlimited capacity ’. In this case, there would be an upper bound which is the maximum amount of the units the financing business may offer to the purchasing business. If the bargaining strength of the purchasing business were to be higher than that of the financing business which were to have a restricted capacity to serve with, the purchasing business would yet obtain the maximum amount of transfer outputs the financing business can provide.

13.2- What The Theoretical Examination Says For The Businesses Transacting And Competing in Oligopoly

As in the case of monopoly, two oligopoly cost states have been examined; i.e. (a) oligopoly competition without cost advantage and (b) oligopoly competition with cost advantage. The former state pertains to Cournot competition model and the latter state pertains to Stackelberg competition model, in both of which two commercial banks, bank L and bank F compete. Unlike the transfer pricing investigation in monopoly where intra-group firms belonging to the identical firm make transactions with each other; in here, competing banks belonging to the same group make transaction to the market as well as with each other.

We have apparently seen that changing the scenario from 'without cost advantage' to 'with cost advantage' profoundly influences the degree of the values; meaning the level of transfer prices and the level of transfer outputs. The reason is that cost advantages differ banks' transfer pricing establishments even though both the banks compete under oligopoly competition. The table below compiles the model results gathered in Cournot and Stackelberg oligopoly approaches.

Table 13.5: Model Results Under Oligopoly: Cournot and Stackelberg Equilibria

Imperfect Competition: Oligopoly	**Model Results: Optimal Functions In Equilibrium**	
Intra-Group Banking Firms	***The Bank L***	***The Bank F***
TP_n^*	$\alpha - \psi\left[\frac{-2(\alpha - \beta)(2\gamma + \psi)}{\psi^2 - 4(\gamma + \psi)^2}\right]$	

TP_c^*	$(\alpha-\psi)[(\frac{(\alpha-\beta)(2\gamma+\psi)}{[4(\psi-\gamma)(\gamma+\psi)]-[2(\psi^2)]})+\frac{\alpha-\beta}{2(\gamma+\psi)}+(\frac{-\psi}{2(\gamma+\psi)})\frac{(\alpha-\beta)(2\gamma+\psi)}{[4(\psi-\gamma)(\gamma+\psi)]-[2(\psi^2)]}]$	
q_n^*	$\frac{-(\alpha-\beta)(2\gamma+\psi)}{\psi^2-4(\gamma+\psi)^2}$	$\frac{-(\alpha-\beta)(2\gamma+\psi)}{\psi^2-4(\gamma+\psi)^2}$
q_c^*	$\frac{(\alpha-\beta)(2\gamma+\psi)}{[4(\psi-\gamma)(\gamma+\psi)]-[2(\psi^2)]}$	$(\alpha-\psi)[(\frac{(\alpha-\beta)(2\gamma+\psi)}{[4(\psi-\gamma)(\gamma+\psi)]-[2(\psi^2)]})+(\frac{\alpha-\beta}{2(\gamma+\psi)})$ $+(\frac{-\psi}{2(\gamma+\psi)})(\frac{(\alpha-\beta)(2\gamma+\psi)}{[4(\psi-\gamma)(\gamma+\psi)]-[2(\psi^2)]})]$

In the upper table, TP_n^* and q_n^* respectively refer to the optimal transfer prices and transfer quantities of each bank under Cournot competition in oligopoly where neither the bank L nor bank F has any cost advantage. TP_c^* and q_c^* respectively refer to the optimal transfer prices and transfer quantities of each bank under Stackelberg competition in oligopoly where the bank L with cost advantage is the leader and the bank F without cost advantage (with cost disadvantage) is the follower.

Considering the numerical commercial banking case results, in the chapter where none of the banks has any cost advantage, owing to cost symmetries, the quantities (funds as transfer outputs) that the bank L and F are willing to supply are the same and 47 units each. The transfer price which is the market price is 53 $. In this case, transfer price is identical to the market price as market price is available and intra-group transaction happens at arm's length terms. Further, fund being the service product that is transferred between the affiliated intra-group banking firms is the same as the service product exchanged in the market which is the fund with identical character and terms. Besides, the transacting parties, the affiliated intra-group banking firms, are the same as the market firms that are per se intra-group banking firms again which are nothing else

but bank L and bank F. Therefore, there is not any comparability problem involved at all.

The upper passage implies that it is the price the banks will consider to apply to the other market players who are particularly the individual customers or corporate (institutional) clients demanding for such funds. This is also the price the banks will consider to apply when transacting with each other. Recall that banking firms belonging to the same group firm are the only ones competing in the market. Therefore they are market firms as well. To conduct this theoretical investigation, Cournot oligopoly approach has been followed, due to its nature (appropriateness) for the absence of cost advantage state. Notice that things (prices and output levels) might change if the bank L and the bank F were making the fund transfer to each other at non-arm's length terms. The reason is that transfer price would deviate from the market price then.

In the subsequent case, the bank L that has cost advantage due to decent governance structure acts as a leader and the bank F that has cost disadvantage acts as a follower. This is the oligopoly state with cost advantage. The bank L being the leader will set the volume of its quantity such that it is significantly higher than that of follower. Considering the numerical commercial banking case results, the transfer price which is the market price, will read 31 $. The quantity (fund as transfer output) that the leader bank is willing to supply is 122 units and the quantity (fund as transfer output) that the follower bank is to supply is 16 units. Transfer price will again be the same with the market price, for the market price is available now and the intra-group transaction happens at arm's length terms. Due to the reasons specified in the preceeding oligopoly case, there is no comparability problem involved.

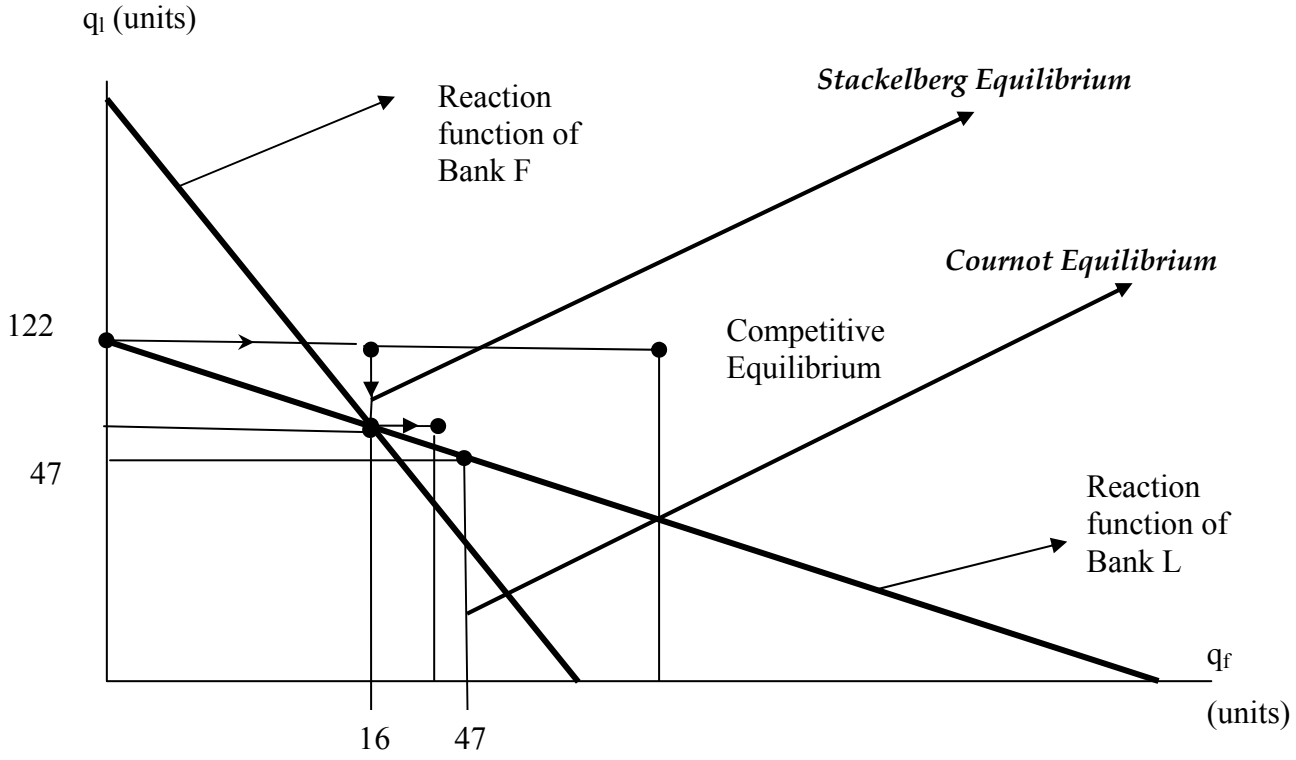
Table 13.6: Findings From Numerical Examples Under Oligopoly

Imperfect Competition: Oligopoly	**Findings: Optimal Values in Equilibrium**	
Intra-Group Banking Firms	***The Bank L***	***The Bank F***
TP_n^*	53 $	
TP_c^*	31 $	

q_n^*	47 units	47 units
q_c^*	122 units	16 units

The above table summarizes the results, where the letters have obvious meanings. The numerical findings over there should not be suprising since we know that this is the expected result of being in Stackelberg competition with sequential game. The inverse relationship between transfer price and aggregate output (summing the individual quantities of the banks) suggests that as the aggregate output rises, the transfer price will be lower. This is the case here. The aggregate output level in Stackelberg competition which is 138 units (= 122+16) is much higher than the one we got in Cournot competition which 94 units (= 47+47). Since the transfer price is specified as a function of '$\alpha - \psi(Q^*)$', where Q* refers to the optimized volume of the aggregate quantity, the transfer price in Stackelberg that is 31 $, is less than the transfer price in Cournot that is 53 $.

Figure 13.1: Equilibria Under Cournot and Stackelberg Competitions



Last but not least, unlike the monopoly cases, there is no need for bargaining or negotiation over here as there is no duality problem for the banks to fix. The above figure depicts the transfer quantity outcomes in equilibria that have been obtained in oligopoly markets.[324] q_l refers to the optimized quantity or output of the bank L in Cournot Competition and the bank L (leader) in Stackelberg competition, while q_f refers to the optimized quantity of the bank F in Cournot Competition and the bank F (follower) in Stackelberg competition. The next part makes an exhaustive application which includes analytical and empirical examinations.

PART IV: APPLICATION

The preceeding part has conducted a theoretical transfer pricing examination which serves as a rigor basis for this part, as application in this research expounds upon the specific results obtained in the course of theorization. This part being Part IV clearly shows how cost advantages affect the operating profits of the businesses running their operations under imperfect competition. Therefore, it is another major contributive part this dissertation relies on.

Part IV consists of four main chapters. Chapter 14 and Chapter 15 discuss the effects of transfer pricing analyses on corporate financial statements. Chapter 14 is particularly interested in showing the effects of transfer pricing analysis on the financial statements of the businesses transacting under monopoly market. Chapter 15 is particularly interested in showing the effects of transfer pricing analysis on the financial statements of the businesses transacting and competing under oligopoly market. Chapter 16 discusses the taxational effects of transfer pricing analysis on the corporate financial statements. For the purposes of seeing whether the obtained results, findings or implications are consistent with the stylized facts, chapter 17 makes an empirical investigation on Turkish banking industry.

In order to fully grasp the influence of transfer pricing investigations, we will first need to understand the idea and present some essential properties underlying the corporate financial statements. The main financial statements are balance sheets and income statements. A balance sheet shows the financial position (stance) of a given business, as of a point in time. On the other hand, an income statement reveals information on the financial performance of a business; therefore, it does not represent a

[324] Figure has been adapted from Ünsal (2001, p. 416).

point in time but rather a certain period or frame of time. Therefore, in a typical balance sheet, an equation, known as basic accounting equation, has to be satisfied as:

Total Assets (Sources) ≡ Total Liabilities + Owner's Equity (Resources)

In the upper statement, "total assets", the denominator on the left hand side, is meant to refer to the sum of the entire asset claims a business has. In other words, assets which are often dubbed '*actives (active accounts or items) of a balance sheet*' are the economic sources of a business to perform its operations. Total Liabilities and Owner's Equity, the right-hand side denominators, account for how a business finances its assets. For instance, if the business A is a self-financed enterprise, its total assets will read equal to its owner's equity since there will be not any liability (debtedness) at all. If the business A prefers to finance all its sources (assets) using debts/borrowings, its total assets will be equal to its total liabilities since all the corporate sources would be financed using a complete foreign source (debt) in this case. In the real life, usually, businesses make use of both their own resources (e.g. capitals, reserves, profits etc.) and external or foreign resources (e.g. financial liabilities, trade payables, advances taken, deferred income and expense accruals etc.) to finance their assets. Therefore, liabilities and owner's equity which are often dubbed '*passives (passive accounts or items) of a balance sheet*' are the resources firms exploit to finance their sources (assets).

Assets boil down to two main components; i.e. current assets and fixed (non-current) assets. The regular criteria to classify the assets so are (i) liquidity and (ii) term structure of the asset items. For instance, a cash item is to be found under the uppermost portion of the current assets while trade receivables such as notes receivable account with a collection due date of two years will appear as a fixed asset in the balance sheet. Liabilities may be decomposed into two parts as well; i.e. short-term liability and long-term liability. The regular criterion to cascade so is the term structure of the liabilities used. This implies that a bank loan that is due within six months from now is to show up as a short-term liability while a bank loan that is due within three years from now will appear as a long-term liability item. The Appendix I depicts a sample comprehensive balance sheet format that is used in Turkish accounting and financial reporting system (i.e. uniform chart of accounts).[325] The given format is known as report-type balance sheet format.

[325] See TURMOB, @www.turmob.org.tr. TURMOB refers to The Union of Certified Public Accountants and Sworn-in Certified Public Accountants of Turkey.

Balance sheets may also be represented in a comparative fashion, meaning that the figures of the succeeding years may be available in one unique disclosed balance sheet of a business. The table below depicts this.

Table 13.7: Annual (Comparative) Balance Sheet of IBM (in millions of US $)

Assets	**Dec' 07**	**Dec' 06**	**Dec' 05**
Current Assets			
Cash	16,146.0	10,656.0	13,686.0
Net Receivables	30,476.0	28,655.0	26,193.0
Inventories	2,664.0	2,810.0	2,841.0
Other Current Assets	3,891.0	2,539.0	2,941.0
Total Current Assets	53,177.0	44,660.0	45,661.0
Net Fixed Assets	15,081.0	14,439.0	13,756.0
Other Noncurrent Assets	52,173.0	44,134.0	46,331.0
Total Assets	120,431.0	103,233.0	105,748.0
Liabilities and Shareholder's Equity	**Dec' 07**	**Dec' 06**	**Dec' 05**
Current Liabilities			
Accounts Payable	22,273.0	18,006.0	17,292.0
Short-Term Debt	12,235.0	8,902.0	7,216.0
Other Current Liabilities	9,802.0	13,182.0	10,644.0
Total Current Liabilities	44,310.0	40,090.0	35,152.0
Long-Term Debt	23,573.0	13,780.0	15,425.0
Other Noncurrent Liabilities	24,078.0	20,857.0	22,073.0
Total Liabilities	91,961.0	74,727.0	72,650.0
Shareholder's Equity			

Preferred Stock Equity	--	--	--
Common Stock Equity	28,470.0	28,506.0	33,098.0
Total Equity	28,470.0	28,506.0	33,098.0

Source: adapted from http://www.hoovers.com/ibm/--ID__10796,period__A--/free-co-fin-balance.xhtml, accessed on apr. 23, 2008.

As with balance sheets, income statements may be prepared in comprehensive or concise formats. Including these, they may also be represented as comparative statements as well. Below is the annual income statement of IBM that includes the last three years of the financial performance data of IBM as follows.

Table 13.8: Annual (Comparative) Income Statement of IBM (in millions of US $)

	Dec 07	**Dec 06**	**Dec 05**
Sales Revenue	98,786.0	91,424.0	91,134.0
Cost of Goods Sold (COGS) (-)	57,057.0	53,129.0	54,602.0
Gross Profit	41,729.0	38,295.0	36,532.0
Selling, General &Adm. Expenses (-)	23,012.0	20,483.0	21,968.0
Depreciation & Amortization (-)	5,201.0	4,983.0	5,188.0
Operating Profit	13,516.0	12,829.0	9,376.0
Non-Operating Income	1,584.0	766.0	3,070.0
Non-Operating Expenses (-)	611.0	278.0	220.0
Income (Earnings) Before Taxes	14,489.0	13,317.0	12,226.0
(Corporate) Income Taxes (-)	4,071.0	3,901.0	4,232.0
Net Income (Profit) After Taxes (NPAT)	10,418.0	9,416.0	7,994.0

Source: adapted from http://www.hoovers.com/ibm/--ID__10796,period__A--/free-co-fin-income.xhtml, accessed on apr. 23, 2008.

The upper comparative income statement of IBM sets an example of concise income statement. As different from comprehensive income statement format, concise or sum-up income statements include solely the major components (accounts) of income statements. They do not reveal a detailed breakdown of income or expense figures. An example of a comprehensive income statement format prepared in conformity with

Turkish accounting and reporting system (i.e. 'the uniform chart of accounts') is given in the Appendix II.[326] The next chapter shows the effects of transfer pricing analysis on the financials of the intra-group firms that make a transaction under bilateral monopoly market.

CHAPTER 14– THE EFFECTS OF TRANSFER PRICING ANALYSIS ON THE FINANCIAL STATEMENTS OF THE BUSINESSES TRANSACTING UNDER MONOPOLY MARKET

The transfer pricing analysis concerning the monopoly market in this dissertation applies to intra-company dealings that are the transactions occurring within a group firm. On the other hand, the oligopoly chapter has discussed the transfer pricing issue for the intra-group banking firms belonging to the same group firm and being the market firms. Remember that in the chapters concerning the establishment of the transfer pricing algorithms of the monopoly market, there have been two intra-group firms, one acting as an (internal) monopoly (fund provider or supplier) and the other one acting as an (internal) monopsony (the party reguesting fund). The fund provider has been the financing business and the fund providee has been the purchasing business.

Remember also that unlike oligopoly states where a single transfer price has been obtained, in monopoly states, two different transfer prices have been gathered. The solution there was compromising. Since we have obtained two different prices and quantities, through arbitration (bargaining), one unique transfer price and transfer quantity have been achieved to be built. In doing so, the technique was to halve those optimal transfer price and output figures as the bargaining powers of both the intra-group firms were even.

In the previous discussions, it has been shown that, cost advantage resulting from good governance skills in particular has led the transfer prices and corresponding (transfer) quantities of the intra-group firms to be established quite differently from each other. In this part of the dissertation, the effects of two particular monopoly states on the financial statements of the involving group firms, 'monopoly market without cost advantage' and 'monopoly market with cost advantage', will be discussed. In the former state, none of the intra-group firms has any cost advantage over the other. Therefore, cost functions of both the firms tend to increase in here. In the latter state, one of the

[326] See www.turmob.org.tr for this.

intra-group firm, the financing business, has cost advantage over the purchasing business due to the fact that its governance structure is assumed to be sufficiently good and significantly better than that of the purchasing business. Therefore, cost function of the financing business tends to decline while the cost function of the purchasing business being the monopsony keeps increasing in there.

Notice that the financial outlook (appraisal) that will be built below may easily be generalizable not only to the remaining cases but also to any other cases that might be construed for the purposes of transfer prices and cost advantage association.

14.1- Monopoly Market Without Cost Advantage

Concerning the chapter 'monopoly market without cost advantage', it has been assumed that none of the intra-group firms has any cost advantage. Thus, they are both subject to increasing cost structures. From the numerical example, remember that average unit operating revenue (price) (R) = 100 – 0,5q, C_f = 20 + 0,1q and C_p = 20 + 0,1q, where q represents the average unit output quantity, C_f stands for the average unit operating cost of financing business, F, and C_p is for the average unit operating cost of purchasing business, P. Cost and revenue figures were given in dollars. Remember also that financing business is monopoly being the exclusive fund provider and purchasing business is monopsony being the exclusive fund providee or grantee. In this case, it has been shown that, the (compromising) transfer price is 40 $ and the (compromising) output is 31 units, which is the common solution set.

In order to concretely show the effects of the upper transfer pricing analysis on the regular financial statements (income statements and balance sheets) of the intra-group firms, we need to establish in first place the close interaction among transfer prices, transfer outputs/quantities and operating profit or loss figures. Once this is done, it will be possible to build the financials (financial statements) appropriately. As the previous chapters have suggested, without knowing about the operating profit/loss denominator, it is not possible to come to the net profit after tax (NPAT) volume which is the bottom line of the business income statements. And, without having an NPAT volume, it will not be possible to draft a business balance sheet. Therefore, establishing the interplay between the numbers transfer pricing analysis suggested and the resulting operating profits/losses is the key to the discussion of this part of the dissertation. The next section examines this issue.

14.1.1. The Interplay Between Operating Profits And Transfer Prices

In all the models, it has been assumed that average unit operating cost is the sum of average unit operating variable cost and average unit operating fixed cost. Generally speaking, a variable cost changes as the units produced or sold changes, while a fixed cost remains the same even if there is no production or sales as of a point of time or even if the units produced or sold change. From cost and managerial accounting literatures, we know that overheads or overhead costs are the hardest cost items to be apportioned to the respective cost units for which some costs may incur. The main reason is that overheads consist of costs that are either fixed costs or both fixed and variable costs, besides indirect costs. In this respect, overheads are known as mixed costs in the accounting literature. Indirect costs (e.g. indirect labor costs, indirect material costs etc.) are among the overheads for instance. This is relevant for manufacturing businesses.

In this dissertation, operating (sales) costs particularly refer to funding or sourcing costs as our service transactions rely on fund exchange. Sales costs are given to be a combination of both fixed costs and variable costs. Back in our case, the average unit cost structures of the financing and purchasing businesses are known. Specifically, '$C_f = 20 + 0{,}1q$' is the average unit operating cost of the financing business, while '$C_p = 20 + 0{,}1q$' is the average unit operating cost of the purchasing business. As revenues (incomes) are entirely operating revenues (incomes), costs are entirely operating costs or expenses. Remember that it is assumed that (i) there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the intra-group firms, (ii) the intra-group firms earn only one source of operating revenue or income which is the sales revenue and bear only one source of operating expense which is the cost of sales. Building on the upper statement, there remains no difference between an average unit cost (revenue) and average unit operating cost (revenue). In other words, total operating costs (expenses) which are costs of sales will be equal to total costs (expenses) while total operating revenue (income) which is sales revenue will read equal to total revenues (income) in this dissertation.[327]

[327] As the following discussions are to verify, such definition will indeed prove to be quite useful since the results will be sufficiently concrete and tractable to gather and to make inferences.

We know that total sales costs correspond to the product of average unit cost by the number of units sold or delivered. We have then:

*Total (Operating) Costs = [Average Unit (Operating) Costs] * [Number of Services Delivered/Sold]*

Thereby, it turns out that ((20 + 0,1q)*q) will be the total (operating) cost figure of the financing business, while ((20 + 0,1q)*q) will be the total (operating) cost figure of the purchasing business q is the transfer output or quantity corresponding to the related transfer price. Therefore, the compromising (common) transfer output figure of the financing business that has been found as 31 units corresponding to a compromising transfer price of 40 $ should be considered as q for the financing business. Likewise, the compromising transfer output figure of the purchasing business that has been found as 31 units corresponding to a compromising transfer price of 40 $ should be considered as q for the purchasing business. The common solution numbers for both the businesses are the same, owing to the bargaining procedure as we have seen.

We know that total revenue is equal to the product of price by quantity. Price refers to the transfer price of the respective businesses. In other words,

*Total Revenue = Transfer Price * Transfer Output or equivalently,*

$$Total\ Revenue = p^* q$$

where the letters have obvious meanings.

We know that the difference between total revenue and total cost will deliver a profit or lost volume. As total revenue is the same as total operating revenue (income) and total cost is the same as total operating cost (expense) here, the difference will directly generate an *operating profit or loss* figure. In case total revenues outweigh total costs, there will be an operating profit for the businesses concerning the specific transaction as regards to a specified period of time. If the opposite holds, since there will be a negative contribution, there will be operating loss. Hence, operating profit might be written as follows:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense) *(3)*

Using the findings obtained from the respective numerical case, we may obtain the operating profit figures for both the businesses now. For the financing business:

Operating Profit = $[TR^f] – [TC_f]$ which may be restated as:

$$Operating\ Profit = [TP^f * q_f] – [C_f * q_f] \quad (4)$$

where TR^f stands for the total operating (sales) revenue of the financing business, TC_f for the total operating (sales) cost volume of the financing business, TP^f for the transfer price of the financing business, q_f for the corresponding transfer output of the financing business and C_f for the average unit operating cost volume of the financing business. As to be easily recalled, the transfer price of the financing business is 40 $ and the transfer output is 31 units. Hence, the operating profit for the financing business will read the following:

Operating Profit = [40 * 31] – [(20 + 0,1*(31)) * 31] which is ca. 524 $.

For the purchasing business:

Operating Profit = $[TR^p]$ – $[TC_p]$ which may be restated as:

$$Operating\ Profit = [TP^p * q_p] - [C_p * q_p] \qquad (5)$$

where TR^p stands for the total operating (sales) revenue of the purchasing business, TC_p for the total operating (sales) cost volume of the purchasing business, TP^p for the transfer price of the purchasing business, q_p for the corresponding transfer output of the purchasing business and C_p for the average unit operating cost volume of the purchasing business. As the transfer price of the purchasing business is 40 $ and transfer output is 31 units, the operating profit for the purchasing business will read the following:

Operating Profit = [40 * 31] – [(20 + (0,1*31)) * 31], which is ca. 524 $.

Remember the assumption that the intra-group firms earn only one source of operating revenue or income which is the sales revenue and bear only one source of operating expense which is the cost of sales. Accordingly; total operating expense volume above, TC, is found to be the same as *cost of sales* and total operating income volume above, TR, is found to be the same as *sales revenue*. All the other incomes or expenses will be non-operating incomes or expenses which are assumed to be zero (0). Acknowledging this, the next chapter establishes the income statements of the financing and purchasing businesses as the following.

14.1.2. The Income Statements of The Financing & Purchasing Businesses

From the previous chapter, it has been seen that both the intra-group firms, the financing business and the purchasing business, realize a positive figure of operating profits that are close to each other. The reason is that they share an equal power of bargaining. The previous chapters have also provided us with different income statement formats. From them, we know that, without knowing operating profit figures, we can not go ahead with the preparation of the statement. The bottom line, the net

profit after tax (NPAT) figure, is absolutely up to the accurate identification of the operating profit figures of the businesses. For the financing business, a concised income statement is given as follows.

Table 14.1: Annual Income Statement For The Financing Business: Monopoly Market Without Cost Advantage

Annual Income Statement For The Financing Business For The Period Ending 2007 (in $)	
	Dec' 07
Sales Revenue	1240
Total Costs (-)	716
Operating Profit	524
Non-Operating Income	0
Non-Operating Expenses (-)	0
Income (Earnings) Before Taxes (EBT)	524
(Corporate) Income Taxes (-)	105
Net Income (Profit) After Taxes (NPAT)	419

It is assumed that being annual and in US dollars, the upper income statement is prepared for the year ending 2007. The income statement construed right above is a traditional one that we frequently see around in the real life; therefore the costing system here uses the full costing approach. Remember that unlike variable costing system where only the variable costs are shown as operating costs, in full (absorption) costing systems, not only variable but fixed costs incurring during a specific period of time is recorded as cost (expense) items in the income statements –as did our income statement as well.

It could also be that the upper income statement might have been prepared using the variable costing system. We know that the financial statements prepared according to not full but to variable costing system should only entail variable elements, not fixed ones. Therefore, even though there will be no difference at the bottom line, in net profit

after tax figure, the operating profit volumes will yet differ, depending upon which costing system we use.[328] In our case, for instance in the cost structures of the businesses, we are given a hybrid form of cost figures (fixed and variable average unit operating costs) as said early on, suggesting the use of full costing approach. Therefore, we may not use this system here. Besides, this is not at the scope of this dissertation.

The one above is a hypothetical income statement; therefore, the items such as non-operating income or expenses are also assumed to be zero there. Further, the level of the income tax rate the financing business, F, is liable to pay when due, is given as 20 %. It is the tax rate applicable to the earnings before taxes (EBT) figure which is the tax base. Net income after taxes (NPAT) which is 419 $ thus becomes EBT (524 $) netted of the tax debt which is 105 $. The similar assumptions and features holding for the financing business apply to the purchasing business as well. For the purchasing business, a concised income statement may be given as follows.

Table 14.2: Annual Income Statement For The Purchasing Business: Monopoly Market Without Cost Advantage

Income Statement For The Purchasing Business For The Year Ending 2007 (in $)	
	Dec' 07
Sales Revenue	1240
Total Costs (-)	716
Operating Profit	524
Non-Operating Income	0
Non-Operating Expenses (-)	0
Income (Earnings) Before Taxes (EBT)	524
(Corporate) Income Taxes (-)	105
Net Income (Profit) After Taxes (NPAT)	419

[328] Bilginoğlu (1996)

Since we have established the income statements of the intra-group firms which are corporate income taxpayers due to their resulting (positive) EBT volumes, we can now construe their balance sheets as follows. Notice that as long as EBT is positive, there will always be income taxes.

14.1.3. The Balance Sheets of The Financing & Purchasing Businesses

From the income statement accounts, we got 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit after tax balances' (net profit for the period). Provision for taxes or tax provisions and net profit for the period are the figures we need to incorporate into the balance sheets of the intra-group firms.

Figure 14.2: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Financing Business: Monopoly Market Without Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	105
Net Income (Profit) After Taxes (NPAT)	419

Corresponding Balance Sheet Accounts

Provision For Taxes	105
Net Profit For The Period	419

In the balance sheet below, the accounts (figures) except for the net profit for the period and the provision for taxes are hypothetical.

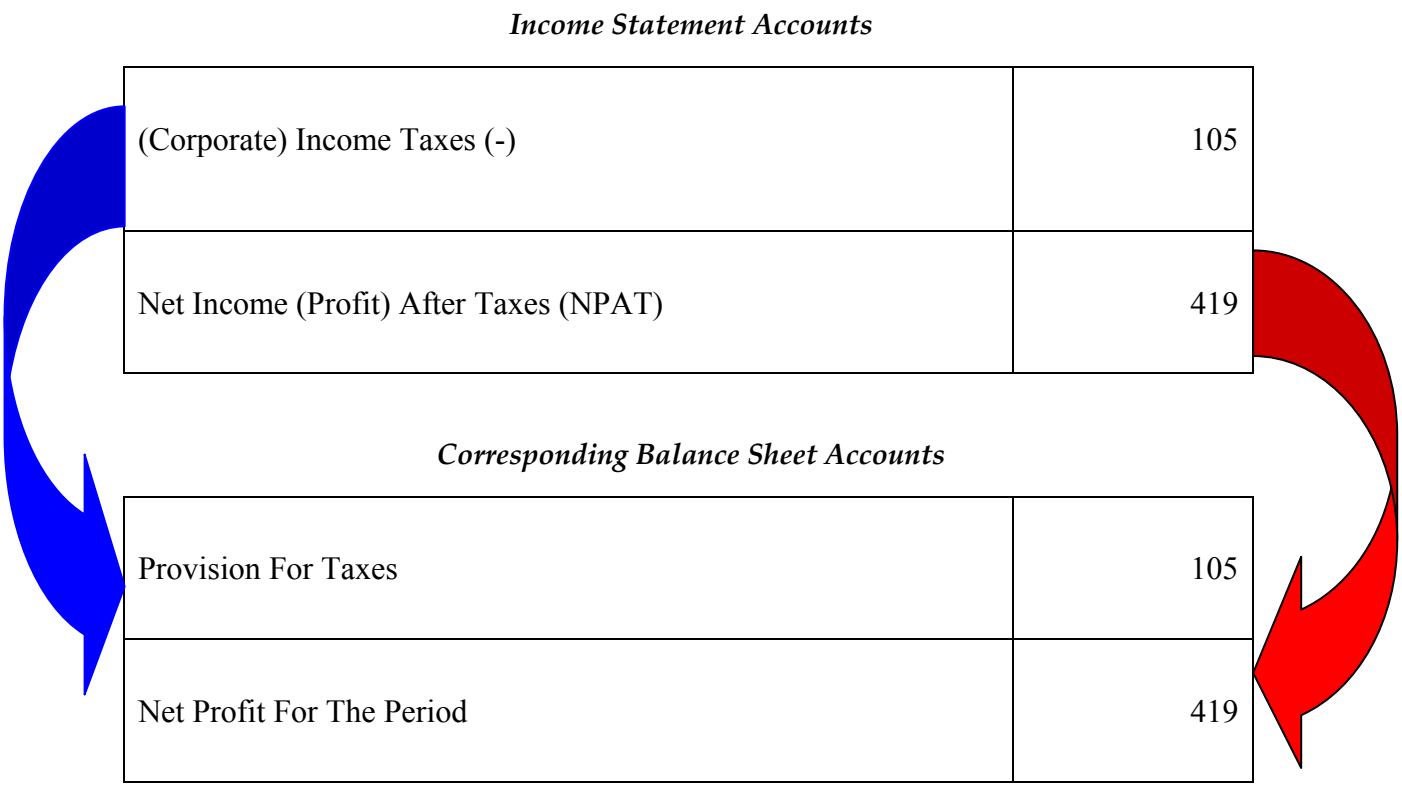
Table 14.4: Annual Balance Sheet of The Financing Business: Monopoly Market Without Cost Advantage

Annual Balance Sheet of The Financing Business As of The Year Ending 2007 (in $)	
Assets	**Dec' 07**
Current Assets	
Cash	288
Banks	424
Inventories	150
Other Current Assets	50
Total Current Assets	912
Net Fixed Assets	44
Other Noncurrent Assets	10
Total Non-Current (Fixed) Assets	54
Total Assets	**966**
Liabilities and Owner's Equity	**Dec' 07**
Short-Term Liabilities	
Accounts Payable	58
Provision For Taxes	105
Other Current Liabilities	-
Total Short-Term Liabilities	163
Long-Term Debt	120
Other Long Term Liabilities	30
Total Long-Term Liabilities	150
Total Liabilities	**313**
Owner's Equity	

Paid up Capital	234
Net Profit For The Period	419
Total Equity	**653**
Total Liabilities & Owner's Equity	**966**

As in the case of the financing business, the purchasing business will need to transpose the relevant income statement accounts (figures) to its annual balance sheet as the following.

Figure 14.3: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Purchasing Business: Monopoly Market Without Cost Advantage (in $)



Now that we know the balances of the relevant accounts of the balance sheet, a snapshot of the annual/yearly balance sheet of the purchasing business could be given as follows. In the balance sheet below, the accounts (figures) except for net profit for the period and provision for taxes are hypothetical. Notice that the purchasing business, a corporate taxpayer like the financing business, seems to have a due tax payable of 105 $

which it did not pay out yet. Once the due tax is paid, a relevant account (e.g. banks account) will decrease as much as the tax liability which is 105 $ since the " provision for taxes " account will disappear from the balance sheet of the purchasing business. The same applies to the financing business as well. The annual balance sheet of the purchasing business is given as the following then.

Table 14.5: Annual Balance Sheet of The Purchasing Business: Monopoly Market Without Cost Advantage

Annual Balance Sheet of The Purchasing Business As of The Year Ending 2007 (in $)	
Assets	**Dec' 07**
Current Assets	
Cash	288
Banks	424
Inventories	150
Other Current Assets	50
Total Current Assets	912
Net Fixed Assets	44
Other Noncurrent Assets	10
Total Non-Current (Fixed) Assets	54
Total Assets	**966**
Liabilities and Owner's Equity	**Dec' 07**
Short-Term Liabilities	
Accounts Payable	58
Provision For Taxes	105
Other Current Liabilities	-
Total Short-Term Liabilities	163
Long-Term Debt	120
Other Long Term Liabilities	30

Total Long-Term Liabilities	150
Total Liabilities	**313**
Owner's Equity	
Paid up Capital	234
Net Profit For The Period	419
Total Equity	**653**
Total Liabilities & Owner's Equity	**966**

14.2- Monopoly Market With Cost Advantage

Concerning the chapter 'monopoly market with cost advantage', it has been stated that one of the intra-group firms, the financing business, has cost advantage over the purchasing business because its governance structure is assumed to be sufficiently good and significantly better than that of the purchasing business. Therefore, cost function of the financing business (monopoly) is declining unlike the cost function of the purchasing business (monopsony) which keeps increasing.

Concerning the specifications of the revenue and cost structures of the intra-group firms, from the numerical example, remember that average unit operating revenue (price) (R) = 100 – 0,5q, C_f = 20 – 0,1q and C_p = 20 + 0,1q, where q represents the average unit output quantity, C_f stands for the average unit operating cost of the financing business and C_p is for the average unit operating cost of the purchasing business. Cost and revenue figures were given in dollars. Remember also that financing business is monopoly being the exclusive fund provider and purchasing business is monopsony being the exclusive fund providee or grantee. Given the findings obtained from the numerical case, it has been shown that, the (compromising) transfer price is 27 $ and the (compromising) output is 51 units, which is the common solution set for both the group firms.

In the previous chapters, establishing the interaction among transfer prices, transfer outputs/quantities and operating profit or loss figures, I have clearly showed the effects of the transfer pricing analysis on the regular financial statements, meaning the income statements and the balance sheets of the intra-group firms. Therefore, there is no need to

build the existing interplay once again. Nonetheless, so as to draft the financials, income statements and balance sheets, we need to first identify the operating profits or losses of the financing and purchasing businesses. As the previous discussions have suggested, an operating profit might be written as follows:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)

More specifically, it has been demonstrated that, we may obtain the operating profit figures for the group firms such that: for the financing business:

Operating Profit = $[TR^f] – [TC_f]$ which may be restated as:

$$Operating\ Profit = [TP^f * q_f] – [C_f * q_f]$$

where TR^f stands for the total operating (sales) revenue of the financing business, TC_f for the total operating cost volume of the financing business, TP^f for the transfer price of the financing business, q_f for the corresponding (transfer) output of the financing business and C_f for the average unit operating cost volume of the financing business. As to be easily recalled from above, the transfer price of the financing business is 27 $ and transfer output is 51 units. Hence, the operating profit for the financing business will read the following:

Operating Profit = [27*51] – [(20 – (0.1*51)) * 51] which is 617 $.

For the purchasing business:

Operating Profit = $[TR^p] – [TC_p]$ which may be restated as:

$$Operating\ Profit = [TP^p * q_p] – [C_p * q_p]$$

where TR^p stands for the total operating (sales) revenue of the purchasing business, TC_p for the total operating cost volume of the purchasing business, TP^p for the transfer price of the purchasing business, q_p for the corresponding (transfer) output of the purchasing business and C_p for the average unit operating cost volume of the purchasing business. Since the transfer price of the purchasing business is 27 $ and transfer output is 51 units, like the financing business, the operating profit for the purchasing business will read the following:

Operating Profit = [27*51] – [(20 + (0,1*51))*51]

which is 97 $. In the preceeding chapter, the operating profit of the purchasing business was 524 $, now, it is tremendiously lower than that. That is because it suffers from the lack of cost advantage, unlike the financing business whose operating profit figure increases from 524 $ to 617 $, as the following chapters will discuss. The next chapter

establishes the income statements of the financing and purchasing businesses followingly.

14.2.1. The Income Statements of The Financing & Purchasing Businesses

For the financing business, a concised income statement may be given as follows.

Table 14.6: Annual Income Statement For The Financing Business: Monopoly Market With Cost Advantage

Annual Income Statement For The Financing Business For The Year Ending 2007 (in $)	
	Dec' 07
Sales Revenue	1377
Total Costs (-)	760
Operating Profit	617
Non-Operating Income	0
Non-Operating Expenses (-)	0
Income (Earnings) Before Taxes	617
(Corporate) Income Taxes (-)	123
Net Income (Profit) After Taxes (NPAT)	494

Following the former monopoly case, being annual and in US dollars, the upper income statement which is hypothetical is prepared for the year ending 2007. The items such as non-operating income or expenses are assumed to be zero. Further, the level of the applicable income tax rate is given as 20 %. Comparing with the income statement items of the financing business in the 'monopoly market without cost advantage' chapter, we see that 'sales revenue' has increased from 1240 $ to 1377 $ and 'total costs' has increased from 716 $ to 760 $. Therefore, 'operating profits' (from 524 $ to 617 $), 'income (earnings) before taxes' (524 $ to 617 $), '(corporate) income taxes' (from 105 $ to 123 $), 'net income (profit) after taxes (NPAT)' (from 419 $ to 494 $),

have all changed. For the purchasing business, a concised income statement may be given as follows.

Table 14.7: Annual Income Statement For The Purchasing Business: Monopoly Market With Cost Advantage

Annual Income Statement For The Purchasing Business For The Year Ending 2007 (in $)	
	Dec' 07
Sales Revenue	1377
Total Costs (-)	1280
Operating Profit	97
Non-Operating Income	0
Non-Operating Expenses (-)	0
Income (Earnings) Before Taxes	97
(Corporate) Income Taxes (-)	19
Net Income (Profit) After Taxes (NPAT)	78

The similar assumptions and features holding for the financing business apply to the purchasing business as well. Comparing with the income statement items of the purchasing business in the 'monopoly market without cost advantage' chapter, we see that 'sales revenue' has increased from 1240 $ to 1377 $ and 'total costs' has increased from 716 $ to 1280 $. Therefore, 'operating profits' (from 524 $ down to 97 $), 'income (earnings) before taxes' (524 $ down to 97 $), '(corporate) income taxes' (from 105 $ down to 19 $), 'net income (profit) after taxes (NPAT)' (from 419 $ down to 78 $), have all changed. The reason for the sharp reduction in the profit figures of the purchasing business is that it has cost disadvantage relative to the financing business, which accounts for such a fundamental change in its financial statement.

Since we have established the income statements of the intra-group firms which are corporate income taxpayers due to their resulting (positive) EBT volumes, we can now

construe their balance sheets as follows. As the EBT volumes of both the group firm are positive, they will pay corporate taxes.

14.2.2. The Balance Sheets of The Financing & Purchasing Businesses

From the income statement accounts, we got 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit after tax balances' (net profit for the period). We have seen that provision for taxes or tax provisions and net profit for the period are the figures we need to incorporate into the balance sheets of the intra-group firms as given above.

Figure 14.4: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Financing Business: Monopoly Market With Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	123
Net Income (Profit) After Taxes (NPAT)	494

Corresponding Balance Sheet Accounts

Provision For Taxes	123
Net Profit For The Period	494

The hypothetical balance sheet of the financing business may hence be established as follows.

Table 14.8: Annual Balance Sheet of The Financing Business: Monopoly Market With Cost Advantage

Annual Balance Sheet of The Financing Business As of The Year Ending 2007 (in $)	
Assets	**Dec' 07**
Current Assets	
Cash	288
Banks	517
Inventories	150
Other Current Assets	50
Total Current Assets	1005
Net Fixed Assets	44
Other Noncurrent Assets	10
Total Non-Current (Fixed) Assets	54
Total Assets	**1059**
Liabilities and Owner's Equity	**Dec' 07**
Short-Term Liabilities	
Accounts Payable	58
Provision For Taxes	123
Other Current Liabilities	-
Total Short-Term Liabilities	181
Long-Term Debt	120
Other Long Term Liabilities	30
Total Long-Term Liabilities	150
Total Liabilities	**331**
Owner's Equity	

Paid up Capital	234
Net Profit For The Period	494
Total Equity	**728**
Total Liabilities & Owner's Equity	**1.059**

In the balance sheet above, as with the discussions in the previous chapters, the accounts (figures) except for the net profit for the period and provision for taxes are hypothetical. Notice that the change (increase) in 'banks' which is 93 $ (from 424 $ to 517 $) can be explained by the change (increase) in earnings before taxes account (from 524 $ to 617 $). One should argue that it does not have to be so always, which would be correct. However, given the hypothetical accounts above, it does not make sense that the intra-group firm may keep an amount of 93 $ in cash, as the opportunity cost of holding that money within will be significantly high. Debiting the banks account will make the business earn at least a reasonable amount of interest returns. More than that, wherever 93 $ is suggested to be posted in the upper balance sheet, it would not change the insight it provides; therefore, it is not so important to us.

Comparing with the balance sheet items of the financing business in the 'monopoly market without cost advantage' chapter, we see that 'net profit for the period' has changed from 419 $ to 494 $ and 'provision for taxes' has changed from 105 $ to 123 $. Therefore, 'banks' (from 424 $ to 517 $), 'total current assets' (912 $ to 1005 $), 'total assets' (from 966 $ to 1.059 $), 'total short-term liabilities' (from 163 $ to 181 $), 'total liabilities' (from 313 $ to 331 $), 'total equity' (from 653 $ to 728 $) and 'total liabilities & owner's equity' (from 966 $ to 1.059 $) have all changed.

As in the case of the financing business, the purchasing business will need to transform the relevant income statement accounts (figures) into its balance sheet.

Figure 14.5: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Purchasing Business: Monopoly Market With Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	19
Net Income (Profit) After Taxes (NPAT)	78

Corresponding Balance Sheet Accounts

Provision For Taxes	19
Net Profit For The Period	78

The outlook of the annual balance sheet of the purchasing business may be presented followingly.

Table 14.9: Annual Balance Sheet of The Purchasing Business: Monopoly Market With Cost Advantage

Annual Balance Sheet of The Purchasing Business As of The Year Ending 2007 (in $)	
Assets	**Dec' 07**
Current Assets	
Cash	285
Banks	0
Inventories	150
Other Current Assets	50
Total Current Assets	485
Net Fixed Assets	44

Other Noncurrent Assets	10
Total Non-Current (Fixed) Assets	54
Total Assets	**539**
Liabilities and Owner's Equity	**Dec' 07**
Short-Term Liabilities	
Accounts Payable	58
Provision For Taxes	19
Other Current Liabilities	-
Total Short-Term Liabilities	77
Long-Term Debt	120
Other Long Term Liabilities	30
Total Long-Term Liabilities	150
Total Liabilities	**227**
Owner's Equity	
Paid up Capital	234
Net Profit For The Period	78
Total Equity	**312**
Total Liabilities & Owner's Equity	**539**

In the above balance sheet, the accounts (figures) except for net profit for the period and provision for taxes are hypothetical. Comparing with the balance sheet items of the purchasing business in the 'monopoly market without cost advantage' chapter, we see that 'net profit for the period' has decreased from 419 $ down to 78 $ and 'provision for taxes' has decreased from 105 $ to 19 $. Therefore, 'banks' (from 424 $ to 0 $), 'cash' (from 288 $ to 285 $), 'total current assets' (912 $ to 485 $), 'total assets' (from 966 $ to 539 $), 'total short-term liabilities' (from 163 $ to 77 $), 'total liabilities' (from 313 $ to 227 $), 'total equity' (from 653 $ to 312 $) and 'total liabilities & owner's equity'

(from 966 $ to 539 $) have all changed (reduced). The change (decrease) in 'banks' and 'cash' which is 427 $ can be explained by the change (decrease) in earnings before taxes account (from 524 $ to 97 $). These produce the following statements:

Proposition 1a: Given that businesses transact with each other under bilateral monopoly market; ceteris paribus, the operating profit figure of the business with cost advantage will be higher than the operating profit figure of the business without cost advantage.

Proposition 1b: Given that businesses transact with each other under bilateral monopoly market; ceteris paribus, asset size, earnings before taxes (EBT) and hence net income/profit after tax (NPAT) figures of the business with cost advantage will be higher than asset size, EBT and therefore NPAT figures of the business without cost advantage.

CHAPTER 15– THE EFFECTS OF TRANSFER PRICING ANALYSIS ON THE FINANCIAL STATEMENTS OF THE BUSINESSES TRANSACTING AND COMPETING UNDER OLIGOPOLY COMPETITION

Unlike the monopoly states where two different transfer prices have been gathered as one of the intra-group firms is the product (fund as a service) provider and the other one is the product providee; in oligopoly states, a single transfer price has been obtained although there has been trade (transaction) between the intra-group banking firms. The banks are the market competitors trying to sell their product (service) both to each other and to the outside (market) at the arm's length terms. Therefore, transfer price at the equilibrium has been advocated to be equal to the market price that has to be a unique number out there.

From the transfer pricing analysis in oligopoly markets, remember that two banks have been assumed to exist, the bank L and the bank F. Like the monopoly market, oligopoly market has been examined through two well known approaches: The Cournot model and The Stackelberg model. Competing at the terms that Cournot model stipulates, it has been assumed that there is no significant difference between the governance skills of the bank L and the bank F, both of which are lacking. On the other hand, in Stackelberg model, it has been assumed that, the governance structure of the bank L is sufficiently good and significantly better than that of the bank F. In other words, the banking firm L has cost advantage while the banking firm F had a relative

cost disadvantage. Because of the first mover advantage, the bank L with cost advantage has been dubbed *the leader* (the leading bank), and the bank F without the cost advantage has been dubbed *the follower* (the following bank) in Stackelberg case.

Before showing the effects of transfer pricing analysis on banks, there is a need to comprehensively discuss the natures of the bank's financial statements as they are quite different from the financial statements applying to the firms in non-financial services industries which have been examined in the preceeding chapters. The financial statement formats that have been used in the discussions so far are relevant for the non-financial businesses such as manufacturing companies, commercial or merchandising companies etc.

15.1- Financial Statements of Banks

As different from the previous chapters where the financial statements (financials) of non-financial institutions have been presented, financial statements (financials) of financial institutions such as banks, brokerage/investment houses or insurance undertakings are different. They have special formats. The main reason underlying this significant variance is the difference originating from the definition of the ordinary course of business of financial institutions. From accounting theory, recall that it is the ordinary course of business that makes the corporate businesses earn operating income, operating expense and hence realize an operating profit or loss that is the operating income, netted of operating expense.

The usual criterion to coin the accounts as operating or not is whether those accounts reveal the regular transactions of a business. 'Regular transaction' phrase refers to the main or the ordinary course of business action of the companies for their operations. For instance, for commercial businesses, we expect that they do realize profits out of the *buy*/*sell* transactions they make. Commercial businesses make profit (arbitrage) in the sell-buy price differences. They sell the goods they do not manufacture but purchase. Therefore, for such businesses, the account 'cost of commercial goods sold' is used to refer to 'cost of sales' incurred to.

Unlike commercial businesses that do not manufacture or produce something, manufacturing businesses realize profits out of the *produce*/*sell* transactions they make. In other words, they sell the goods that they produce on their own. Therefore, the account 'cost of finished goods sold' is used to refer to 'cost of sales' incurred to for such businesses. On the other side, the ordinary course of business for a service

company such as a hotel or a bank for instance is to sell the service they deliver. For this reason, the account 'cost of services sold or delivered' points to 'cost of sales' incurred to for such businesses.

Being different from all the mentioned three business types, financial institutions (firms in financial services industry) have different accounting systems. As introduced right above, the major reason that hinges on this material difference is the ordinary course of business of financial institutions. Banks are the foremost ones among those since they are the largest players in the league of financial services industry. In other words, they are the largest service providing financial businesses across the globe.

As the hitherto discussions suggested, concerning the financial statements of banks, there is a couple of things that may be given in first place. These features will help us to immediately differentiate the accounts of the banks' financials from the accounts of the financials of the non-financial institutions. For instance, deposits the commercial banks collect from their customers, individuals or corporations, appear as a passive item in their balance sheets.[329] It is because deposits are the liabilities (e.g. incurring interest expenses) for the commercial banks. Banks have to pay interests to their customers out of the deposits they hold. However, in a typical non-financial business, deposits fall into asset category as non-financial companies earn interest revenues from the principal amounts of money they deposit to the banks.[330]

Similarly, loans the commercial banks grant are usually categorized as an asset item in their balance sheets, while loans granted to non-financial institutions such as manufacturing companies appear as a liability item/account in their balance sheets. It is owing to the similar reason given above. Banks earn interest revenue out of the loans they grant to their qualifying customers (individuals) or to clients (firms with legal entities). However, typical non-financial businesses have to pay interests for the loans they obtain from the banks.

The upper passages suggest that the main/ordinary course of business of banks, at least of commercial ones, is to make profit, through collecting deposits and thus granting loans, which is a service business. Once the interest amounts banks earn outweigh the interest expenses they are borne, they realize profit. They do realize losses

[329] Customers may include natural persons (i.e. individuals) and legal persons (i.e. firms or companies).
[330] Unless otherwise stated, the term 'bank' refers to the 'commercial or deposit bank' only. Investment banks, such as the ones in Turkey, are not entitled to collect deposits neither from natural persons (i.e. individuals) nor from legal ones (e.g. corporations).

if the opposite holds. The profit banks get this way is roughly known as interest income (profit), and the loss they realize this way is roughly known as interest loss. This interest variation (profit/loss) is also known as '*credit spread or credit (interest rate) margin*' in banking terms as well, which has been mentioned in the preceeding chapters and will be explored in the following chapters in detail.

By the nature of having an ordinary course of business as mentioned, banks usually make reservations for the potential loan losses they might confront in their potential operations. This is for risk management purposes. For banks, there is quite a reasonable risk that they may face when to grant a loan. The risk pertains particularly to the collectibility of the loans. When the loans are not repaid to the banks, those loans become sunk costs for them, which means loss. In that case, banks should write them off from their income statements and balance sheets. In view of reserving (get-ready) for the risks that have not yet taken place, in accounting, we use the account 'provision for doubtful receivables' to control for the risk. Since it is about the receivable side of the banks, bank balance sheets are expected to be affected by recording such entries into their books. Since it also concerns the revenue side of the banks, bank income statements are also expected to be affected with such entries, as the relevant books will signify the operation.

Having said this, to be more precise, the account banks work with after making the said reservations, is known as "net interest income after provision for credit losses" . This is apperantly a regular bank income statement item that corresponds to the 'operating profit' notion we have been comprehensively acquainted with from the previous discussions. A balance sheet format for banks that is used in Turkish accounting and financial reporting system (i.e. uniform chart of accounts) is given in Appendix III.[331] The given format is known as 'report-type balance sheet format'. A bank balance sheet that may be prepared in conformity with international financial reporting standards (IFRS) might be found as follows.

Table 15.1: Consolidated Balance Sheet of Deutsche Bank AG (in accordance with IFRS) (in millions of €)		
	Dec 31, 2007	Dec 31, 2006
Total Assets		

[331] See www.isbank.com.tr.

Table 15.1: Consolidated Balance Sheet of Deutsche Bank AG (in accordance with IFRS) (in millions of €)		
	Dec 31, 2007	Dec 31, 2006
Cash and due from banks	8,632	7,008
Interest-earning deposits with banks	21,615	19,199
Central bank funds sold and securities purchased under resale agreements	13,597	14,265
Securities borrowed	55,961	62,943
Financial assets at fair value through profit or loss		
of which € 158 billion and € 87 billion were pledged to creditors and can be sold or repledged at December 31, 2007 and December 31, 2006, respectively	1,474,103	1,104,650
Financial assets available for sale		
of which € 17 million and € 23 million were pledged to creditors and can be sold or repledged at December 31, 2007 and 2006, respectively	42,294	38,037
Equity method investments	3,366	2,541
Loans	198,892	178,524
Premises and equipment	2,409	3,241
Goodwill and other intangible assets	9,383	8,612
Other assets	182,897	139,021
Income tax assets	2,428	2,120
Deferred tax assets	4,772	4,332
Total assets	**2,020,349**	**1,584,493**
Total Liabilities & Owner's Equity		
Deposits	457,946	411,916
Central bank funds purchased and securities sold under repurchase agreements	178,741	102,200
Securities loaned	9,565	21,174
Financial liabilities at fair value through profit or loss	966,177	694,619

Table 15.1: Consolidated Balance Sheet of Deutsche Bank AG (in accordance with IFRS) (in millions of €)		
	Dec 31, 2007	Dec 31, 2006
Other short term borrowings	53,410	48,433
Other liabilities	171,509	144,129
Provisions	1,295	1,768
Income tax liabilities	4,515	4,033
Deferred tax liabilities	2,124	2,285
Long-term debt	126,703	111,363
Trust preferred securities	6,345	4,771
Obligation to purchase common shares	3,553	4,327
Total liabilities	1,981,883	1,551,018
Common shares, no par value, nominal value of € 2.56	1,358	1,343
Additional paid-in capital	15,808	15,246
Retained earnings	25,116	20,451
Common shares in treasury, at cost	(2,819)	(2,378)
Equity classified as obligation to purchase own shares	(3,552)	(4,307)
Net gains (losses) not recognized in the income statement, net of tax		
Unrealized net gains on financial assets available for sale, net of applicable tax and other	3,635	3,208
Unrealized net gains (losses) on derivatives hedging variability of cash flows, net of tax	(52)	(45)
Foreign currency translation, net of tax	(2,450)	(760)
Total net gains (losses) not recognized in the income statement, net of tax	1,133	2,403
Total shareholders' equity	37,044	32,758
Minority interest	1,422	717
Total equity	38,466	33,475
Total liabilities and equity	**2,020,349**	**1,584,493**

Source: adapted from www.db.com

An income statement format for banks that is used in Turkish accounting and financial reporting system (i.e. uniform chart of accounts) is given in Appendix IV.[332] The given format is known as 'report-type income statement version'. A bank income statement that is prepared in conformity with IFRS may be found as follows.

Table 15.2: Consolidated Income Statement of Deutsche Bank AG (in accordance with IFRS) (in millions of €)

	2007	**2006**
Interest and similar income	67,706	58,275
Interest expense (-)	58,857	51,267
Net interest income	8,849	7,008
Provision for credit losses (-)	612	298
Net interest income after provision for credit losses [Operating Profit]	8,237	6,710
Commissions and fee income	12,289	11,195
Net gains (losses) on financial assets/liabilities at fair value through profit or loss	7,175	8,892
Net gains (losses) on financial assets available for sale	793	591
Net income (loss) from equity method investments	353	419
Other income	1,286	389
Total Non-Interest income	21,896	21,486
Compensation and benefits (-)	13,122	12,498
General and Administrative expenses (-)	7,954	7,069
Policyholder benefits and claims (-)	193	67
Impairment of intangible assets (-)	128	31
Restructuring activities (-)	(13)	192
Total Non-Interest expenses (-)	21,384	19,857
Income before income tax expense (Earnings Before Taxes)	8,749	8,339
(Corporate) Income tax expense (-)	2,239	2,260
Net income (Net Profit After Tax)	6,510	6,079

[332] See www.isbank.com.tr.

Table 15.2: Consolidated Income Statement of Deutsche Bank AG (in accordance with IFRS) (in millions of €)		
	2007	**2006**
Net income attributable to minority interest	36	9
Net income attributable to Deutsche Bank shareholders	6,474	6,070

Source: adapted from www.db.com

The next chapter shows the effects of transfer pricing analysis in the financial statements of the bank L and the bank F, in terms of the numerical results obtained for Cournot model. In other words, banks' financial statements in the state of the oligopoly competition without cost advantage will be scrutinized in there.

15.2- Oligopoly Competition Without Cost Advantage: Cournot Model

In the preceeding discussions; we have seen that in order to show the effects of transfer pricing analysis on the financial statements of the businesses, banks in this case, we need to characterize their operating profit volumes in first place, so that all the other related components (items) can be figured out as well. We know that, an operating profit might be stated as follows:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)

More specifically, we may obtain the operating profit figure for the bank L as:

$Operating\ Profit = [TR^{l}] - [TC_{l}]$ which may equivalently be stated as:

$$Operating\ Profit = [TP^{l} * q_{l}] - [C_{l} * q_{l}]$$

where TR^{l} stands for the total operating revenue of the bank L, TC_{l} for the total operating cost volume of the bank L, TP^{l} for the transfer price of the bank L, q_{l} for the corresponding (transfer) output of the bank L and C_{l} for the average unit operating cost volume of the bank L. From the respective numerical case, recall that the transfer price of the bank L that is equal to the transfer price of the bank F is 53 $ and the transfer output of bank L that is again equal to the transfer output of the bank F is 47 units. Thus, the operating profit for the *bank L* will be the following:

Operating Profit = [53*47] – [(20 + (0.1*47)) * 47] which is 1.330 $.

Similarly, for the *bank F*:

$Operating\ Profit = [TR^{f}] - [TC_{f}]$ which boils down to:

$$Operating\ Profit = [TP^f * q_f] - [C_f * q_f]$$

where TR^f stands for the total operating revenue of the bank F, TC_f for the total operating cost volume of the bank F, TP^f for the transfer price of the bank F, q_f for the corresponding (transfer) output of the bank F and C_f for the average unit operating cost volume of the bank F. As just said, the transfer price of the bank F that is equal to the transfer price of the bank L is 53 $ and the transfer output volume applying to the bank F that is equal to the transfer output of the bank L is 47 units. Hence, the operating profit for the *bank F* will be calculated as the following:

$$\text{Operating Profit} = [53*47] - [(20 + (0{,}1*47))* 47]$$

which is 1.330 $.

As in monopoly case; total revenue is equal to total operating revenue and total cost is equal to total operating cost in here too. This is because of the assumption that there is neither any other type of revenues (other than operating revenue) nor any other type of costs (other than operating cost) for the banks. As it is also assumed that banks earn only one source of operating revenue or income which is the sales revenue and bear only one source of operating expense which is the cost of sales; total operating expense volume above, TC, is found to be the same as *cost of sales* and total operating income volume above, TR, is found to be the same as *sales revenue*. All the other incomes or expenses will be non-operating incomes or expenses that are assumed to be zero (0).

Particularly, the operating profit figures obtained as above will appear as 'net interest income', total revenues as 'interest and similar income' and total costs as 'interest expense' in the income statements of the regular commercial banks. Acknowledging this, the next chapter presents the income statements of the banks competing under Cournot, the bank L and the bank F.

15.2.1. The Income Statements of The Competing Banks

In the preceeding chapter, we have obtained the values that are key to the income statements of the bank L and the bank F. Below is a concised income statement for the bank L. The figures (accounts) *except for* 'interest and similar income', 'interest expense', 'net interest income [Operating Profit], 'income before income tax expense [EBT]', '(corporate) income tax expense' and eventually 'net income [NPAT]', are assumed to be zero.[333]

A concised income statement for the bank L may be given as follows.

[333] Recall the model assumptions.

Table 15.3: Annual Income Statetement of The Bank L: Oligopoly Competition Without Cost Advantage

Income Statement of The Bank L For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	2491
Interest expense (-) [Operating Cost or Expense]	1161
Net interest income [Operating Profit**]**	1.330
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	1330
(Corporate) Income tax expense (-)	266
Net income [Net Profit After Tax**]**	1.064

Similarly, a concised income statement for the bank F is to be found as the following.

Table 15.4: Annual Income Statetement of The Bank F: Oligopoly Competition Without Cost Advantage

Income Statement of The Bank F For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	2491
Interest expense (-) [Operating Cost or Expense]	1161
Net interest income [Operating Profit**]**	1.330
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	1330
(Corporate) Income tax expense (-)	266
Net income [Net Profit After Tax**]**	1.064

It is assumed that being annual and in US dollars, the upper income statements being hypothical are prepared for the year ending 2007.[334] As in the earlier (monopoly) cases,

[334] Recall the model assumptions.

the level of the income tax rate applicable to the banks is given as 20 %. Now that we have established the income statements of the banks that are corporate income taxpayers due to their resulting (positive) EBT volumes, we can now construe their balance sheets as follows.

15.2.2. The Balance Sheets of The Competing Banks

From the income statement accounts, we have obtained 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit after tax balances' (net profit for the period). In the previous chapters, we have seen that, provision for taxes or tax provisions and net profit for the period are the figures we will need to incorporate (transform) into the balance sheets of banks, which is made followingly.

Figure 15.1: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank L: Oligopoly Competition Without Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	266
Net Income (Profit) After Taxes (NPAT)	1.064

Corresponding Balance Sheet Accounts

Provision For Taxes	266
Net Profit For The Period	1.064

Accordingly, the hypothetical balance sheet of the bank L may be established as follows.

Table 15.5: Annual Balance Sheet of The Bank L: Oligopoly Competition Without Cost Advantage

Annual Balance Sheet of the Bank L as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	1990
Goodwill and other intangible assets	340
Other assets	101
Total assets	**5.111**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	266
Long-term debt	1000
Total liabilities	**2.047**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	1064
Total equity	**3.064**
Total liabilities and equity	**5.111**

In the balance sheet above, the accounts (figures) except for 'net profit for the period' and 'provision for taxes' are hypothetical. As with the bank L, the bank F will need to transform the relevant income statement accounts (figures) into its balance sheet as the following.

Figure 15.2: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank F: Oligopoly Competition Without Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	266
Net Income (Profit) After Taxes (NPAT)	1.064

Corresponding Balance Sheet Accounts

Provision For Taxes	266
Net Profit For The Period	1.064

Accordingly, the hypothetical balance sheet of the bank F may be established as follows.

Table 15.6: Annual Balance Sheet of The Bank F: Oligopoly Competition Without Cost Advantage

Annual Balance Sheet of the Bank F as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856

Annual Balance Sheet of the Bank F as of The Year Ending 2007 (in $)	
	Dec' 2007
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	1990
Goodwill and other intangible assets	340
Other assets	101
Total assets	**5.111**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	266
Long-term debt	1000
Total liabilities	**2.047**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	1064
Total equity	**3.064**
Total liabilities and equity	**5.111**

In the balance sheet above, the accounts (figures) except for 'net profit for the period' and 'provision for taxes' are hypothetical.

15.3- Oligopoly Competition With Cost Advantage: Stackelberg Model

Following the preceeding chapters, in order to accurately show the effects of transfer pricing analysis on the financial statements of the banks competing under oligopoly, I will first embody operating profit (net interest income) volumes of banks for all the other related components (items) to be gathered. Remember that in this case, the bank L turns out to be the Leader Bank and the bank F to be the Follower Bank. As the previous discussions have suggested, an operating profit might be written as follows:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)

Or else, the operating profit figure the *leader bank:*

$$Operating\ Profit = [TR^{l}] - [TC_{l}] \text{ which may be restated as:}$$

$$Operating\ Profit = [TP^{l} * q_{l}] - [C_{l} * q_{l}]$$

where TR^{l} stands for the total operating revenue of the leader, TC_{l} for the total operating cost volume of the leader, TP^{l} for the transfer price of the leader, q_{l} for the corresponding (transfer) output of the leader and C_{l} for the average unit operating cost volume of the leader. As to be recalled from the respective numerical case, the transfer price of the leader is 31 $ and the transfer output is 122 units. Hence, the operating profit for the leader will read the following:

Operating Profit = [31*122] – [(20 – (0.1*122)) * 122] which is 2.978 $.

Similarly, for the follower bank:

$$Operating\ Profit = [TR^{f}] - [TC_{f}] \text{ which may be restated as:}$$

$$Operating\ Profit = [TP^{f} * q_{f}] - [C_{f} * q_{f}]$$

where TR^{f} stands for the total operating revenue of the follower, TC_{f} for the total operating cost volume of the follower, TP^{f} for the transfer price of the follower, q_{f} for the corresponding (transfer) output of the follower and C_{f} for the average unit operating cost volume of the follower. Being the same with that of the leader, the transfer price of the follower is 31 $ and transfer output is 16 units. Hence, the operating profit for the follower will read the following:

Operating Profit = [31*16] – [(20 + (0,1*16))*16]

which is 150 $.

From the previous chapter, remember that operating profit figures as obtained right here will appear as ‘net interest income’, total revenues as ‘interest and similar income’

and total costs as 'interest expense' in the income statements of the regular commercial banks, as does the next chapter for the competing banks.

15.3.1. The Income Statements of The Competing Banks

From the preceeding chapter, we have obtained the values that are key to the income statements of the leader (bank L) and the follower (bank F). Below is a concised income statement for the leader. The figures (accounts) *except for* 'interest and similar income', 'interest expense', 'net interest income [Operating Profit], 'income before income tax expense [EBT]', '(corporate) income tax expense' and eventually 'net income [NPAT]', are assumed to be zero. The same applies to the follower as well.[335]

Table 15.7: Annual Income Statetement of The Leader Bank: Oligopoly Competition With Cost Advantage

Income Statement of The Bank L (Leader) For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	3782
Interest expense (-) [Operating Cost or Expense]	952
Net interest income [Operating Profit**]**	2.830
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	2830
(Corporate) Income tax expense (-)	566
Net income [Net Profit After Tax**]**	2.264

Comparing with the income statement items of the bank L in the 'oligopoly competition without cost advantage' chapter, we see that 'interest and similar income' has increased from 2.491 $ to 3.782 $ and 'interest expense' has decreased from 1.161 $ to 952 $. Therefore, 'net interest income (operating profits)' (from 1.330 $ to 2.830 $), 'income before income tax expense (earnings before taxes)' (from 1.330 $ to 2.830 $), '(corporate) income tax expense' (from 266 $ to 566 $), 'net income (net profit after taxes)' (from 1.064 $ to 2.264 $), have all changed. Similarly, a concised income statement of the follower bank is as follows.

[335] Recall the model assumptions.

Table 15.8: Annual Income Statetement of The Follower Bank: Oligopoly Competition With Cost Advantage

Income Statement of The Bank F (Follower) For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	496
Interest expense (-) [Operating Cost or Expense]	346
Net interest income [Operating Profit**]**	150
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	150
(Corporate) Income tax expense (-)	30
Net income [Net Profit After Tax**]**	120

Comparing with the income statement items of the bank F in the 'oligopoly competition without cost advantage' chapter, we see that 'interest and similar income' has decreased from 2.491 $ to 496 $ and 'interest expense' has decreased from 1.161 $ to 346 $. Therefore, 'net interest income (operating profits)' (from 1.330 $ to 150 $), 'income before income tax expense (earnings before taxes)' (from 1.330 $ to 150 $), '(corporate) income tax expense' (from 266 $ to 30 $), 'net income (net profit after taxes)' (from 1.064 $ to 120 $), have all significantly changed (reduced).

As one may immediately see, there is a huge difference between the operating profits and therefore NPAT volumes of the competing banks. The reason is, as consulted several times, the cost advantage arising. The leader bank has a cost advantage over the follower bank. This also explains the sharp reduction in the profit figures of the follower. The next chapter construes the banks' balance sheets.

15.3.2. The Balance Sheets of The Competing Banks

From the previous chapter, we have obtained 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit after tax balances' (net profit for the period). We have seen that provision for taxes or tax provisions and net profit for the period are the figures we need to incorporate into the balance sheets of the banks.

Figure 15.3: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank L (Leader): Oligopoly Competition With Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	566
Net Income (Profit) After Taxes (NPAT)	2.264

Corresponding Balance Sheet Accounts

Provision For Taxes	566
Net Profit For The Period	2.264

The hypothetical balance sheet of the leader may then be established as follows.

Table 15.9: Annual Balance Sheet of The Bank L (Leader): Oligopoly Competition With Cost Advantage

Annual Balance Sheet of the Bank L (Leader) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	3490

Annual Balance Sheet of the Bank L (Leader) as of The Year Ending 2007 (in $)	
	Dec' 2007
Goodwill and other intangible assets	340
Other assets	101
Total assets	**6.611**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	566
Long-term debt	1000
Total liabilities	**2.347**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	2264
Total equity	**4.264**
Total liabilities and equity	**6.611**

In the balance sheet above, as with the discussions in the previous chapters, the accounts (figures) *except for* net profit for the period and provision for taxes are hypothetical. Comparing with the balance sheet items of the bank L in the 'oligopoly competition without cost advantage' chapter, we see that 'net profit for the period' has increased from 1.064 $ to 2.264 $ and 'provision for taxes' has increased from 266 $ to 566 $. Therefore, 'loans' (from 1.990 $ to 3.490 $), 'total assets' (from 5.111 $ to 6.611 $), 'total liabilities' (from 2.047 $ to 2.347 $), 'total equity' (from 3.064 $ to 4.264 $) and 'total liabilities & owner's equity' (from 5.111 $ to 6.611 $) have all changed (increased). The change (increase) in 'loans' which is 1500 $ can be explained by the

change (increase) in earnings before taxes account (from 1.330 $ to 2.830 $). One should argue that it does not have to be so always, which would be correct. Yet, wherever 1500 $ is suggested to be posted in the upper balance sheet which is hypothetical, it would not affect the insight it provides; therefore, it is not so important to us.[336]

As in the case of the leader bank, the follower bank will need to transform the relevant income statement accounts (figures) into its balance sheet as the following.

Figure 15.4: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank F (Follower): Oligopoly Competition With Cost Advantage (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	30
Net Income (Profit) After Taxes (NPAT)	120

Corresponding Balance Sheet Accounts

Provision For Taxes	30
Net Profit For The Period	120

The hypothetical balance sheet of the bank F being the follower may be established as follows.

Table 15.10: Annual Balance Sheet of The Bank F (Follower): Oligopoly Competition With Cost Advantage

[336] Refer to the empirical analysis for a detailed explanation on the probable reasons underlying asset size increase for deposit banks.

Annual Balance Sheet of the Bank F (Follower) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	810
Goodwill and other intangible assets	340
Other assets	101
Total assets	**3.931**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	30
Long-term debt	1000
Total liabilities	**1.811**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	120
Total equity	**2.120**
Total liabilities and equity	**3.931**

In the balance sheet above, as with the discussions in the previous chapters, the accounts (figures) *except for* net profit for the period and provision for taxes are hypothetical. Comparing with the balance sheet items of the bank F in the 'oligopoly competition without cost advantage' chapter, we see that 'net profit for the period' has decreased from 1.064 $ to 120 $ and 'provision for taxes' has reduced from 266 $ to 30 $. Therefore, 'loans' (from 1.990 $ to 810 $), 'total assets' (from 5.111 $ to 3.931 $), 'total liabilities' (from 2.047 $ to 1.811 $), 'total equity' (from 3.064 $ to 3.931 $) and 'total liabilities & owner's equity' (from 5.111 $ to 3.931 $) have all reduced. The change (decrease) in 'loans' which is 1180 $ can be explained by the change (decrease) in earnings before taxes account (from 1.330 $ to 150 $).[337]

Notice also that even though some of the upper accounts are hypothetical, they surely help to show how transfer pricing analysis is to influence the financials of the competing banks. Given that we have a real banking case scenario, the financials will yet look more or less the same way as I did up until here. Having said these, one may come up with the following statements:

Proposition 2a: Given that businesses transact or compete with each other at arm's length terms under oligopoly competition with a Stackelberg game; ceteris paribus, the operating profit figure of the business with cost advantage will be higher than the operating profit figure of the business without cost advantage.

Proposition 2b: Given that businesses transact or compete with each other at arm's length terms under oligopoly competition with a Stackelberg game; ceteris paribus, asset size, earnings before taxes (EBT) and hence net income/profit after tax (NPAT) figures of the business with cost advantage will be higher than asset size, EBT and therefore NPAT figures of the business without cost advantage.

Notice that, in the previous discussions, it has been said that since the transfer prices of the banks, either in oligopoly competition without or with cost advantage states, are assumed to be found as "dealing-at-arm's length", there has been no need to make any transfer pricing adjustments or modifications. In other words, the banks make the transactions between each other at the nature of the third party selling terms. Since there has been not any transfer pricing adjustment, there has been no need for any modification in the amount of the EBT figure. In other words, banks' earnings have not

[337] Refer to the empirical analysis for a detailed explanation on the probable reasons underlying asset size increase for deposit banks.

been treated as ‘constructive dividends’ or ‘concealed earnings’ that are the additional earnings (taxable profits) to be calculated by the tax administrations in the way to be added up to the declared earnings figures of the businesses. In such cases, the declared earning volumes of the banks have been considered as being in line with what the tax administrations will obtain following a tax audit on them.

In one of the following chapters, we will relax the assumption that the contractual/transacting parties, the banking firms, make the transactions at-arm’s-length conditions. When this is the case, as the OECD Guidelines suggest, transfer prices will need to be rearranged, for the purpose of satisfying the arm’s length market conditions. Once the above mentioned adjustments required by tax administrations are made, the income statements and therefore the balance sheets of all the parties will change as well. Therefore, it is very important to know the nature and terms of the arm’s length and to identify the transfer prices of the businesses. The issue goes indeed far beyond taxational matters.

CHAPTER 16– THE TAXATIONAL EFFECTS OF TRANSFER PRICING ANALYSIS ON THE CORPORATE FINANCIAL STATEMENTS

In this chapter, I will examine the taxational effects of the transfer pricing analysis on the financial statements of the businesses, as a part of the accounting cycle. Up until now, the competing banking firms have been assumed to make their transactions or dealings at-arm’s-length. As set out there already, the OECD Guidelines suggest that there is no need to make any transfer pricing adjustment as long as the dealings of the businesses, the transacting or the contractual parties, fall into the nature (terms) of arm’s length conditions in the markets those parties operate in. Therefore, not any pricing modification has been made out there. Absence of pricing modification implies that the taxable incomes (tax bases) of the businesses being the earnings before taxes (EBT) remain the same. As EBT would not change when there is no need for any amendment, net profit after tax (NPAT) will remain unchanged as well since the due tax remains untouched. The next chapter explores this issue.

16.1- Dealing At The Arm’s Length

Transfer pricing can not be considered without its counterparty –the taxes. In other words, making the accounting analysis from the viewpoint of transfer pricing would be lacking without the taxes. In order to clearly show how transfer pricing analysis pertains

to accounting in view of its taxation leg, I want to pick up the 'oligopoly competition'. The analysis that will be performed in this part applies to any other cases in this dissertation, including 'monopoly market without cost advantage' or 'monopoly market with cost advantage'.

Remember that, both the banks, bank L and bank F, are transacting with each other. They are market competitors as well. We have seen that, transfer price is equal to the market price there since banks transact at the arm's length. Arm's length applications are either performed or scrutinized through a thorough arm's length review by tax administration officials who are tax experts. The OECD Guidelines imply that, in case of any value modification in line with the nature of the arm's length, the figure that needs to be reshaped will be the transfer price, not the others. Once the (declared) transfer price will be adjusted, all the other components will be self-adjusting.

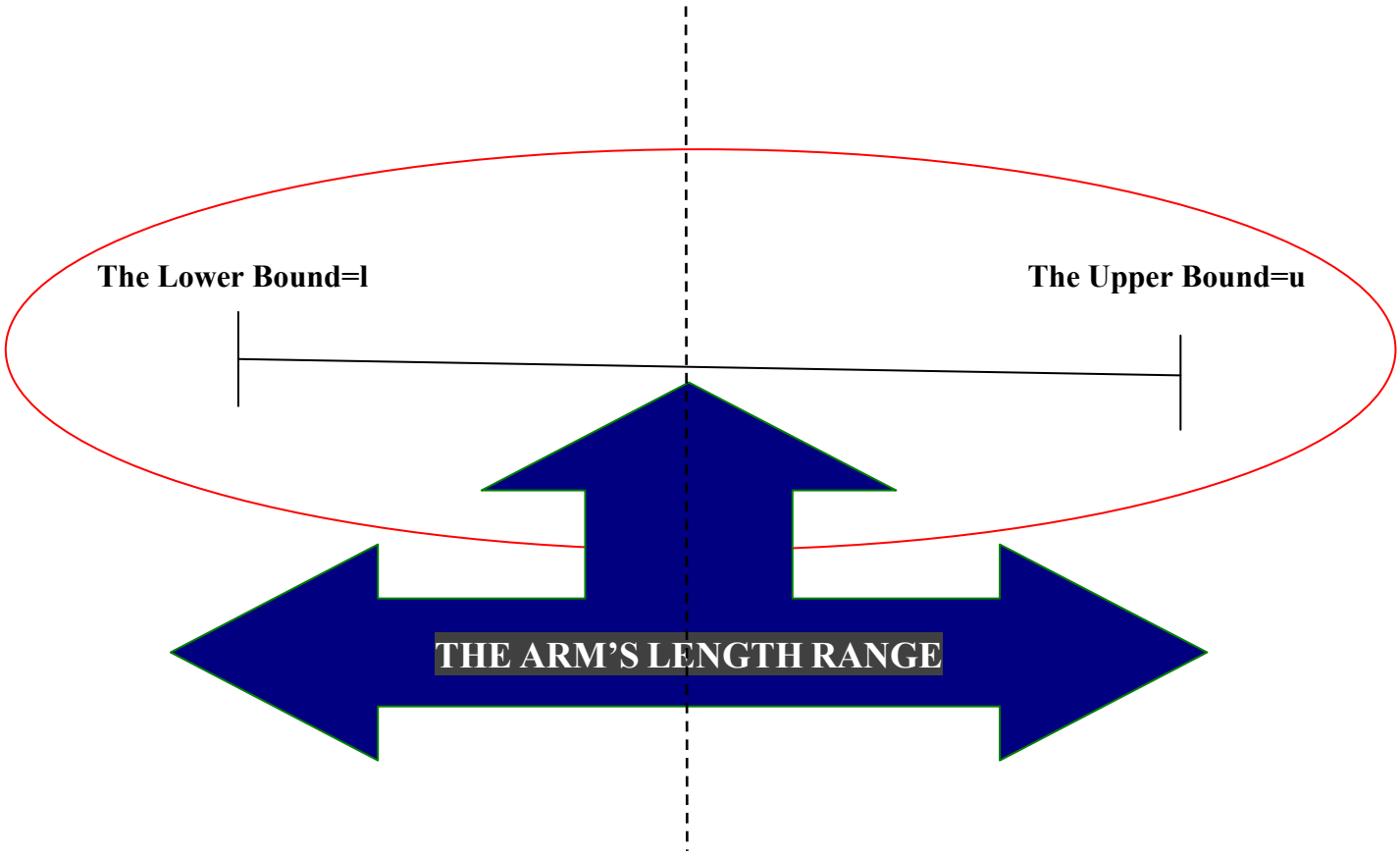
Considering the observations (values) ranging from the lowest possible to the highest possible, tax administrations establish the arm's length ranges. The CUP method, the most preferred transactional transfer pricing approach, is of salience in this. It illustrates the best (simplest) case when to identify transfer prices and exercise the resulting (adjusted) tax bases. The article 2.6 of the OECD Guidelines says that the CUP method compares the price charged for property or services transferred in a controlled transaction to the price charged for property or services transferred in a comparable uncontrolled transaction in comparable circumstances. If there is any difference between the two prices, this may indicate that the conditions of the commercial and financial relations of the associated enterprises are not arm's length, and that the price in the uncontrolled transaction may need to be substituted for the price in the controlled transaction.[338]

The comparability spectrum of the CUP is provided in the following article of the same Guidelines suggesting that, an uncontrolled transaction is comparable to a controlled transaction for the purposes of the CUP method if one of two conditions is met: (a) none of the differences (if any) between the transactions being compared or between the enterprises undertaking those transactions could materially affect the price in the open market; or (b) reasonably accurate adjustments can be made to eliminate the material effects of such differences. Where it is possible to locate comparable uncontrolled transactions, the CUP Method is the most direct and reliable way to apply

[338] Guidelines (2.6)

the arm's length principle. Consequently, in such cases the CUP Method is preferable over all other methods.[339]

Figure 16.1: Dealing at The Arm's Length Range



For the purposes of the clarification of the arm's length parlance, the wording 'tax administration' refers to the taxation authorities such as the Treasuries or the Ministries of Finance as in for instance the Internal Revenue Service (IRS) of the U.S. or the Ministry of Finance of Turkey etc. Tax administrations are the judicial venues with the taxation authorizations. Thus, in our case, the tax administration for the involving banks will be the tax authority located in the territory (country) they are liable to pay their corporate taxes to. As both the banks have been assumed to be established in the same country (X); the respective tax administration would be the same.

[339] Guidelines (2.7)

The transfer prices that have been found are the ones that the taxpayers (the said banks) are required to report to the official bodies. That is why they are the declared transfer prices. The upper figure is a general representation of the dealing-at-arm's length range. It says that, for a given transaction, the reported transfer price (X $) falls into the arm's length range established between the values of l $ and u $. Specifically, l $ is the lower bound of the arm's length range and u $ is the upper bound of the arm's length range. Namely, by the transfer pricing analysis, the lowest price that is available from the market is set (found) by the tax administration as l $. By the same transfer pricing analysis, the highest price value that is available in the market is set (found) by the tax administration as u $. These bounds are the market prices the third parties in the same market will charge or be charged for their transfers.

In our case, the dealing between the banks is at arm's length terms as the reported (declared) or the detected transfer price is equal to the market price. There is no deviation at all. Specifically, in the Cournot competition, the transfer price being the same as the market price is 53 $; in the Stackelberg competition, the transfer price being the market price is 31 $. Since there is only one market price in each the states, we will not face an arm's length range but rather a specific arm's length point, which is a desirable situation in terms of the arm's length principle (e.g. OECD Guidelines, Kökbulut (loc.cit.) etc.).

Figure 16.2: Dealing at The Arm's Length Point: Cournot Competition

(Transfer Price=Market Price=53 $)

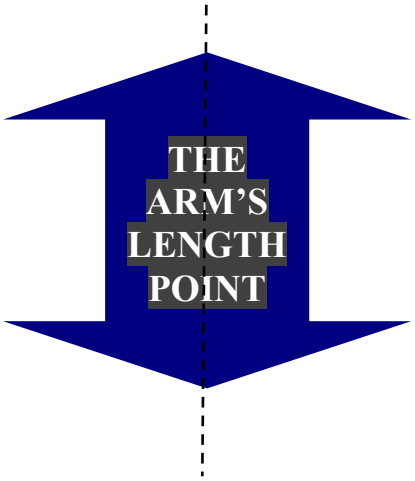
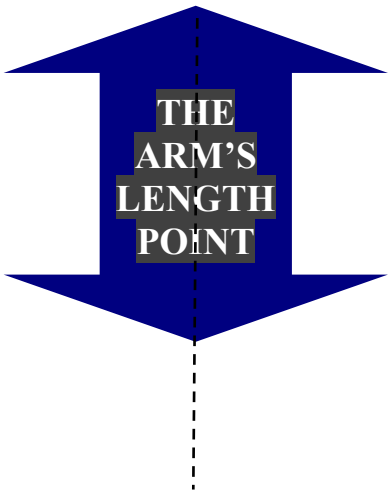


Figure 16.3: Dealing at The Arm's Length Point: Stackelberg Competition

(Transfer Price=Market Price=31 $)

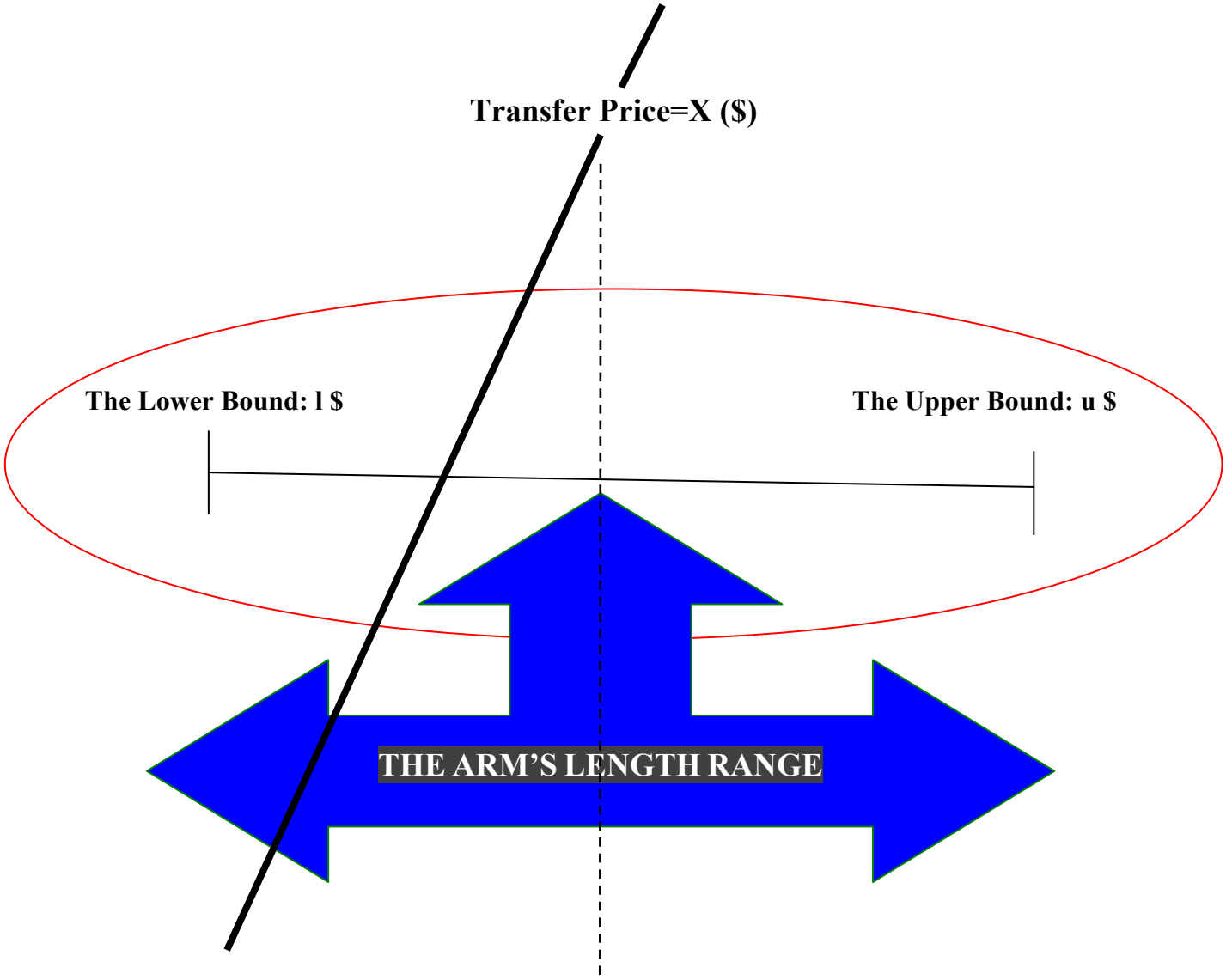


The above figures depict the situations where the transactions (dealings) of the banking firms are found at arm's length. The dealings of the banks have been undertaken at arm's length [third-party or independent selling] conditions/terms. As the OECD Guidelines propose, there will be no requirement for the transacting banking businesses to amend their transfer prices in such cases. Therefore, there will be also no need to amend the tax bases, the reported taxable incomes (EBT) as well, for the operating profit volumes reported (calculated) before remain unchanged.

16.2- Dealing Outside The Arm's Length

In this chapter of this part, in order to clearly see the taxational effects of transfer pricing analysis on the financial statements of the businesses, I will relax the assumption "dealing-at-arm's length" and will now presume that, the transactions of the banking businesses that have been reviewed in the preceeding cases are not compatible with third party's terms and conditions. This implies a breach or violation of the arm's length principle. As the OECD Guidelines stipulate that, this will require a modification in the degree of the transfer prices of those businesses and therefore in the level of their taxable incomes (corporate tax bases). It will in turn change everything, as will the following discussions show.

Figure 16.4: Dealing Outside The Arm's Length Range



Relaxing the assumption that the involving businesses, bank L and F, competing under oligopoly, make their dealings at arm's length, it is now assumed to be right the opposite. Figure 16.4 above illustrates that, for a given transaction, the reported or detected transfer price (X $) falls outside the arm's length range established between the values of l $ and u $. Once again, l $ is the lower bound of the arm's length range and u $ is the upper bound of the arm's length range. These bounds are the market prices the third or independent parties in the same market will charge or be charged for their transfers. Put it differently, by the transfer pricing analysis, the lowest price that is available from the market is set (found) by the tax administration as l $. With the same transfer pricing analysis, the highest price value that is available in the market is set (found) by the tax administration as u $.

The upper figure tells us that the respective transaction is not made in concordance with the terms of arm's length nature. The transfer price that is reported to or detected by the officials, X $, does not reflect the factual (third-party) conditions that are expected to be observed in the market where the transacting businesses are running. If the banks' heads being the corporate taxpayers can not explain some rationale why their transactions have exceeded beyond the identified arm's length range, there will always be an amendment towards the satisfaction of the arm's length terms found by the tax administration. On the other hand, as long as the heads of the banks can give reasonable reasons to convince the officials of the tax administration, there may not be an amendment of the (declared) transfer pricing. Yet, the reasons should be literally such strong to justify the breach of the arm's length range.

As already given in the literature review discussions, the OECD Guidelines specify the subtle issue uncovered in the upper passages. The article 1.48 of the Guidelines stipulates that if the relevant conditions of the controlled transaction, price or margin, fall outside the arm's length range stipulated by the tax administration, the taxpayer should in principle have the opportunity to present the arguments that the conditions of the transaction satisfy the arm's length principle, and that the arm's length range includes their findings. If the taxpayer is however unable to establish this fact, the tax administration must then decide how to adjust the conditions of the controlled transaction in view of the arm's length range consideration.[340]

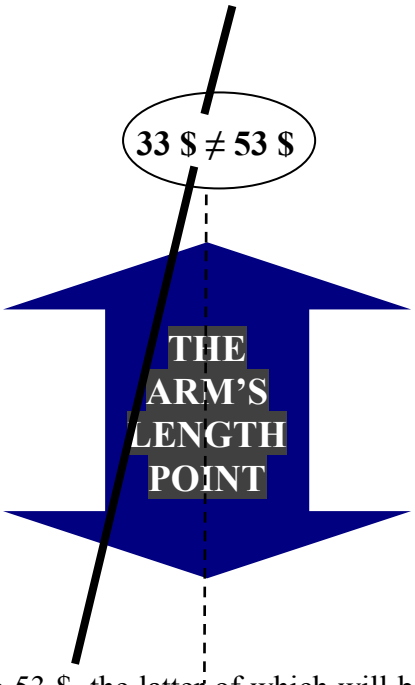
We know that if the tax administration intends to adjust the transfer price volume reported by the transacting businesses, it will normally do it towards the mid-value of the arm's length established by itself, i.e. towards an amount which averages the sum ranging from l $ through u $, the two extreme values of the range above. In principle, it can arrange the transfer price anywhere falling into the territory of the arm's length range. It can be the median as well. However, an arbitrary modification is not the usual practice we see around. I will first show how a deviation between transfer and arm's length prices results in, for the Cournot competition. Then I will move on with the Stackelberg competition.

Suppose that the transfer price that the competing banks decide to use for their internal transactions is 33 $. In this case, the dealing between the leader and the follower is not at arm's length terms any more as the reported (declared) transfer price

[340] Guidelines (1.48)

(33 $) significantly differs from the market price which is 53 $. There is a material difference now. Like in the previous case, since there is only one market price, we will not face an arm's length range but rather a specific arm's length point as the below figure illustrates.

Figure 16.5: Dealing Outside The Arm's Length Point: Cournot Competition



We need to amend 33 $ to 53 $, the latter of which will be an accepted price by the authorities. Amending the former transfer price, 33 $, to the latter transfer price (market price) of 53 $, implies a difference of a-20$-transfer price per (transfer) unit. This difference is the main difference leading the other transfer pricing covenants (i.e. operating profit, EBT, tax, NPAT etc.) to be affected. The next question now is how to proceed after this point, which is a complex issue necessitating the replication of the previous analyses.

Before calculating the adjusted or the amended financials, given the transfer price of 33 $, we first need to figure out the operating profit, EBT, tax, NPAT figures of the banks as we do not know them. Recall that the operating profit figure can be specified followingly:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)

The operating profit figure of the bank L has then been given as:

$$Operating\ Profit = [TR^{l}] - [TC_{l}]$$ which may be restated as:

$$Operating\ Profit = [TP^{l} * q_{l}] - [C_{l} * q_{l}]$$

where the letters have obvious meaning. Transfer price of the bank L is 33 $ and the transfer output is yet 47 units. Hence, the operating profit for the bank L will read the following:

Operating Profit = [33*47] – [(20 + (0.1*47))*47] which is 390 $.

Similarly, for the follower bank:

$$Operating\ Profit = [TR^{f}] - [TC_{f}]$$ which may be restated as:

$$Operating\ Profit = [TP^{f} * q_{f}] - [C_{f} * q_{f}]$$

where the letters have obvious meaning. Like the bank L, the transfer price of the bank F is 33 $ and transfer output is yet 47 units. Hence, the operating profit for the bank F will read the following:

Operating Profit = [33*47] – [(20 + (0,1*47))*47]

which is 390 $.

We have seen that operating profit figures will appear as 'net interest income', total revenues as 'interest and similar income' and total costs as 'interest expense' in the income statements of the regular commercial banks. We also know that the figures (accounts) except for 'interest and similar income', 'interest expense', 'net interest income [Operating Profit], 'income before income tax expense [EBT]', '(corporate) income tax expense' and eventually 'net income [NPAT]', are assumed to be zero. This is the case for both the banks.[341]

Table 16.1: Annual Income Statement of The Bank L: Before The Amendment (Adjustment)

Pre-Adjusted Income Statement of The Bank L For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	1551

[341] Recall the model assumptions.

Pre-Adjusted Income Statement of The Bank L For The Period Ending 2007 (in $)	
	Dec' 2007
Interest expense (-) [Operating Cost or Expense]	1161
Net interest income [Operating Profit**]**	390
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	390
(Corporate) Income tax expense (-)	78
Net income [Net Profit After Tax**]**	312

Similarly, a concised income statement of the bank F is as follows.

Table 16.2: Annual Income Statement of The Bank F: Before The Amendment (Adjustment)

Pre-Adjusted Income Statement of The Bank F For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	1551
Interest expense (-) [Operating Cost or Expense]	1161
Net interest income [Operating Profit**]**	390
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	390
(Corporate) Income tax expense (-)	78
Net income [Net Profit After Tax**]**	312

We have obtained 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit after tax balances' (net profit for the period) for the bank L and F. We have seen that provision for taxes or tax provisions and net profit for the period are the figures we need to incorporate into the balance sheets of the banks.

Figure 16.6: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank L: Before The Amendment (Adjustment) (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	78
Net Income (Profit) After Taxes (NPAT)	312

Corresponding Balance Sheet Accounts

Provision For Taxes	78
Net Profit For The Period	312

The balance sheet of the bank L could then be established as follows.

Table 16.3: Annual Balance Sheet of The Bank L: Before The Amendment (Adjustment)

Pre-Adjusted Annual Balance Sheet of the Bank L as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	1050
Goodwill and other intangible assets	340

Pre-Adjusted Annual Balance Sheet of the Bank L as of The Year Ending 2007 (in $)	
	Dec' 2007
Other assets	101
Total assets	**4.171**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	78
Long-term debt	1000
Total liabilities	**1.859**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	312
Total equity	**2.312**
Total liabilities and equity	**4.171**

As in the case of the bank L, the bank F will need to transform the relevant income statement accounts (figures) into its balance sheet as the following.

Figure 16.7: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank F: Before The Amendment (Adjustment) (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	78
Net Income (Profit) After Taxes (NPAT)	312

Corresponding Balance Sheet Accounts

Provision For Taxes	78
Net Profit For The Period	312

The hypothetical balance sheet of the bank F can be established as the following.

Table 16.4: Annual Balance Sheet of The Bank F: Before The Amendment (Adjustment)

Pre-Adjusted Annual Balance Sheet of the Bank F as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	1050
Goodwill and other intangible assets	340
Other assets	101
Total assets	**4.171**

Pre-Adjusted Annual Balance Sheet of the Bank F as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	78
Long-term debt	1000
Total liabilities	**1.859**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	312
Total equity	**2.312**
Total liabilities and equity	**4.171**

We have pre-adjusted or pre-amended financial figures of the competing banks along the transfer price of 33 $ which needs to be amended toward the arm's length point of 53 $. After controlling the deviation between the reported/detected transfer price (33 $) and the ought-to-be/the one at-the-arm's length transfer price (53 $), we first need to recalculate the operating profit volumes of the banks. Since the total revenues are to change, the operating volumes are to change as well. There will be no change in the total costs as the output or quantity will remain the same. One may write the following statement:

$$Operating\ Profit_{new} = [LTR] - [LTC]$$ that may be restated as:

$$Operating\ Profit_{new} = [LTP * q] - [C * q]$$

where Operating $Profit_{new}$ stands for the latter operating profit figure, LTR for the latter total operating (sales) revenue, TC for the total operating cost volume, LTP for the latter transfer price, q for the corresponding (transfer) output and C for the average unit operating cost volume.

The desired transfer price is 53 $ for both the banks with the outputs remaining unchanged (47 units for both). Hence, the new operating profit value for the banks will read the following. For the bank L:

Operating Profit = [53*47] – [(20 + (0.1*47))*47] which is 1.330 $.

Similarly, for the bank F:

Operating Profit = [53*47] – [(20 + (0.1*47))*47]

which is 1.330 $.

We do not need to redo all the financial operations since they will be exactly the same as chapter 15.2 (oligopoly competition without cost advantage). The figures and financial statements in there will reveal the adjusted or amended figures and financial statements we need here. The table below summarizes the changing items of the income statements of the banks competing under Cournot. Notice that they have to be same.

Table 16.5: Comparison of The Changing (Adjusting) Items of The Income Statements of The Bank L and Bank F: Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank L and The Bank F (in $)		
Changing Income Statement Figures of The Bank L &F	**Pre-Adjustment**	**Post-Adjustment**
Operating Revenue or Income	1.551	2.491
Operating Profit	390	1.330
Income (Earnings) Before Taxes, EBT	390	1.330

Corporate Income Taxes	78	266
Net Income (Profit) After Taxes (NPAT)	312	1.064

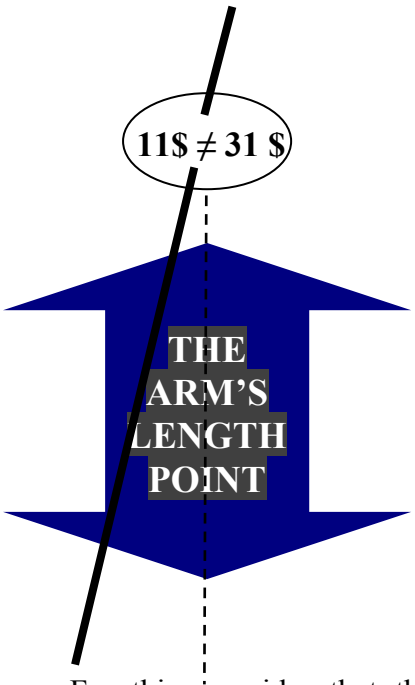
The table below summarizes the changing items of the balance sheets of the banks competing under Cournot. Like income statement; following the adjustment arising due to the breach of arm's length principle, the adjusted balance sheets of the banks are almost entirely different from their previous looks.

Table 16.6: Comparison of The Changing (Adjusting) Items of The Balance Sheets of The Bank L and The Bank F: Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank L and The Bank F (in $)		
Changing Balance Sheet Figures of The Bank L & F	**Pre-Adjustment**	**Post-Adjustment**
Loans	1.050	1.990
Total Assets	4.171	5.111
Provision For Taxes	78	266
Total Liabilities	1.859	2.047
Net Income For The Period	312	1.064
Total Equity	2.312	3.064
Total Liabilities & Owner's Equity	4.171	5.111

Figure 16.8: Dealing Outside The Arm's Length Point: Stackelberg Competition

(Transfer Price=11, Market Price=31) ($)



We are now in Stackelberg. For this, consider that the transfer price that the competing banks decide to use for their internal transactions is 11 $. In this case, the dealing between the leader and the follower is not at arm's length terms any more as the reported (declared) or detected transfer price (11 $) significantly differs from the market price which is 31 $. There is a material difference in between. As there is only one market price, we will not face an arm's length range but rather a specific arm's length point as the upper figure illustrates. We have seen that when we have a specific arm's length point, the amendment will be satisfied at that point. Thus, the changing amount (amendment) will be exactly equal to 20 $ which is the difference between 31 $ and 11 $. We are gonna make our operations accordingly.

Before calculating the adjusted or the amended financials, given the transfer price of 11 $, we first need to figure out the operating profit, EBT, tax, NPAT figures of the banks as we do not know them. Recall that the operating profit figure can be specified followingly:

Operating Profit (Loss) = Total Revenue (Operating Income) – Total Cost (Operating Expense)

The operating profit figure of the bank L has then been given as:

$Operating\ Profit = [TR^{l}] - [TC_{l}]$ which may be restated as:

$$Operating\ Profit = [TP^{l} * q_{l}] - [C_{l} * q_{l}]$$

where the letters have obvious meaning. Transfer price of the leader is 11 $ and the transfer output is yet 122 units. Hence, the operating profit for the leader will read the following:

Operating Profit = [11*122] – [(20 – (0.1*122))*122] which is 390 $.

Similarly, for the follower bank:

$$Operating\ Profit = [TR^f] - [TC_f] \text{ which may be restated as:}$$

$$Operating\ Profit = [TP^f * q_f] - [C_f * q_f]$$

where the letters have obvious meaning. Like the leader, the transfer price of the follower is 11 $ and transfer output is yet 16 units. Hence, the operating profit for the bank F will read the following:

Operating Profit = [11*16] – [(20 + (0,1*16))*16]

which is -170 $. This is an operating loss.

We have seen that operating profit figures will appear as 'net interest income', total revenues as 'interest and similar income' and total costs as 'interest expense' in the income statements of the regular commercial banks. We also know that the figures (accounts) except for 'interest and similar income', 'interest expense', 'net interest income [Operating Profit], 'income before income tax expense [EBT]', '(corporate) income tax expense' and eventually 'net income [NPAT]', are assumed to be zero. This is the case for both the banks.[342]

Table 16.7: Annual Income Statement of The Bank L (Leader): Before The Amendment (Adjustment)

Pre-Adjusted Income Statement of The Bank L (Leader) For The Period Ending 2007 (in $)	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	1342
Interest expense (-) [Operating Cost or Expense]	952
Net interest income [Operating Profit**]**	390
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Income before income tax expense [Earnings Before Taxes**]**	390

[342] Recall the model assumptions.

Pre-Adjusted Income Statement of The Bank L (Leader) *For The Period Ending 2007 (in $)*	
	Dec' 2007
(Corporate) Income tax expense (-)	78
Net income [Net Profit After Tax**]**	312

Similarly, a concised income statement of the bank F is as follows.

Table 16.8: Annual Income Statement of The Bank F (Follower): Before The Amendment (Adjustment)

Pre-Adjusted Income Statement of The Bank F (Follower) *For The Period Ending 2007 (in $)*	
	Dec' 2007
Interest and similar income [Operating Revenue or Income]	176
Interest expense (-) [Operating Cost or Expense]	346
Net interest income [Operating Loss**]**	(170)
Total Non-Interest income [Non-Operating Revenue or Income]	0
Total Non-Interest expenses (-) [Non-Operating Cost or Expense]	0
Loss before income tax expense [Earnings Before Taxes**]**	(170)
(Corporate) Income tax expense (-)	0
Net Loss	(170)

We have obtained 'provision for taxes' (corporate income taxes), 'earnings before taxes' (tax base/taxable income) and 'net profit or loss balances' (net profit for the period) for the bank L and F. As bank F realizes a negative operating loss and therefore a negative EBT, it will not pay any corporate taxes. We have seen that provision for taxes or tax provisions and net profit or loss for the period are the figures we need to incorporate into the balance sheets of the banks.

Figure 16.9: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank L (Leader): Before The Amendment (Adjustment) (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	78
Net Income (Profit) After Taxes (NPAT)	312

Corresponding Balance Sheet Accounts

Provision For Taxes	78
Net Profit For The Period	312

The balance sheet of the bank L could then be established as follows.

Table 16.9: Annual Balance Sheet of The Bank L (Leader): Before The Amendment (Adjustment)

Pre-Adjusted Annual Balance Sheet of the Bank L (Leader) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	1050
Goodwill and other intangible assets	340
Other assets	101

Pre-Adjusted Annual Balance Sheet of the Bank L (Leader) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total assets	**4.171**
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	78
Long-term debt	1000
Total liabilities	**1.859**
Paid-up Capital	1500
Retained earnings	500
Net Profit For The Period	312
Total equity	**2.312**
Total liabilities and equity	**4.171**

As in the case of the bank L, the bank F will need to transform the relevant income statement accounts (figures) into its balance sheet as the following.

Figure 16.10: Transforming The Relevant Income Statement Accounts to The Balance Sheet Accounts of The Bank F (Follower): Before The Amendment (Adjustment) (in $)

Income Statement Accounts

(Corporate) Income Taxes (-)	0
Net Loss	170

Corresponding Balance Sheet Accounts

Provision For Taxes	0
Net Loss For The Period	170

The hypothetical balance sheet of the bank F can be established as the following.

Table 16.10: Annual Balance Sheet of The Bank F (Follower): Before The Amendment (Adjustment)

Pre-Adjusted Annual Balance Sheet of the Bank F (Follower) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Assets	
Cash and due from banks	609
Interest-earning deposits with banks	856
Central bank funds sold and securities purchased under resale agreements	345
Securities borrowed	670
Equity method investments	200
Loans	490
Goodwill and other intangible assets	340
Other assets	101
Total assets	**3.611**

Pre-Adjusted Annual Balance Sheet of the Bank F (Follower) as of The Year Ending 2007 (in $)	
	Dec' 2007
Total Liabilities & Owner's Equity	
Deposits	431
Central bank funds purchased and securities sold under repurchase agreements	150
Securities loaned	130
Financial liabilities at fair value through profit or loss	40
Other short term borrowings	20
Other liabilities	10
Provision For Taxes	0
Long-term debt	1000
Total liabilities	**1.781**
Paid-up Capital	1500
Retained earnings	500
Net Loss For The Period	(170)
Total equity	**1.830**
Total liabilities and equity	**3.611**

We have pre-adjusted or pre-amended the financial figures of the competing banks along the transfer price of 11 $ which needs to be amended towards the arm's length point of 31 $. After controlling the deviation between the reported/detected transfer price (11 $) and the ought-to-be/the one at-the-arm's length transfer price (31 $), we first need to recalculate the operating profit volumes of the banks. Since the total revenues are to change, the operating volumes are to change as well. There will be no change in the total costs as the output or quantity will remain the same. One may write the following statement:

$Operating\ Profit_{new} = [LTR] - [LTC]$ that may be restated as:

$$Operating\ Profit_{new} = [LTP * q] - [C * q]$$

where Operating $Profit_{new}$ stands for the latter operating profit figure, LTR for the latter total operating (sales) revenue, TC for the total operating cost volume, LTP for the latter transfer price, q for the corresponding (transfer) output and C for the average unit operating cost volume.

The desired transfer price is 31 $ in this case for both the banks with the outputs remaining unchanged (122 units for the leader and 16 units for the follower). Hence, the new operating profit value for the leader:

Operating Profit = [31*122] – [(20 – (0.1*122))*122] which is 2.830 $.

Likewise, for the follower:

Operating Profit = [31*16] – [(20 + (0,1*16))*16]

which is 150 $.

As in the preceeding case, we do not need to start over doing all the financial operations because they will be exactly the same as chapter 15.3 (oligopoly competition with cost advantage). The figures and the financial statements in there will reveal the adjusted or amended figures and financial statements we need right down here. The tables below summarize the changing items of the income statements and the balance sheets of the leader.

Table 16.11: Comparison of The Changing (Adjusting) Items of The Income Statements of The Bank L (Leader): Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank L (Leader) (in $)		
Changing Income Statement Figures of The Bank L (Leader)	**Pre-Adjustment**	**Post-Adjustment**
Operating Revenue or Income	1.342	3.782
Operating Profit	390	2.830
Income (Earnings) Before Taxes, EBT	390	2.830

Corporate Income Taxes	78	566
Net Income (Profit) After Taxes (NPAT)	312	2.264

Table 16.12: Comparison of The Changing (Adjusting) Items of The Balance Sheet of The Bank L (Leader): Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank L (Leader) (in $)		
Changing Balance Sheet Figures of The Bank L (Leader)	**Pre-Adjustment**	**Post-Adjustment**
Loans	1.050	3.490
Total Assets	4.171	6.611
Provision For Taxes	78	566
Total Liabilities	1.859	2.347
Net Income For The Period	312	2.264
Total Equity	2.312	4.264
Total Liabilities & Owner's Equity	4.171	6.611

The tables below makes the comparisons of the changing items of the income statements and the balance sheets of the follower.

Table 16.13: Comparison of The Changing (Adjusting) Items of The Income Statements of The Bank F (Follower): Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank F (Follower) (in $)		
Changing Income Statement Figures of The Bank F (Follower)	**Pre-Adjustment**	**Post-Adjustment**
Operating Revenue or Income	176	496
Operating Profit (Loss)	(170)	150
Income (Loss) Before Taxes [EBT]	(170)	150
Corporate Income Taxes	0	30
Net Income (Loss)	(170)	120

We see that, following the adjustment procedure, the bank F being the follower becomes a corporate taxpayer out of its recalculated earnings figure (EBT) which is 150 $. The table underneath compares the changing balance sheet balances of the follower.

Table 16.14: Comparison of The Changing (Adjusting) Items of The Balance Sheet of The Bank F (Follower): Pre-Adjusted Figures Versus Post-Adjusted Figures

Dealing Outside The Arm's Length: The Bank F (Follower) (in $)		
Changing Balance Sheet Figures of The Bank F (Follower)	**Pre-Adjustment**	**Post-Adjustment**
Loans	490	810
Total Assets	3.611	3.931

Provision For Taxes	0	30
Total Liabilities	1.781	1.811
Net Income (Loss) For The Period	(170)	120
Total Equity	1.830	3.931
Total Liabilities & Owner's Equity	3.611	3.931

The upper tables have shown that following the amendment in the detected transfer price, sales revenue will adjust up to its new value. Therefore; operating profit, EBT, corporate income tax and NPAT will all adjust up to their new values. Thereafter, through the transforming process, banks' balance sheet figures that are supposed to react in response to the changes in the income statements will adjust as well. Namely, the changes in the respective items of the above balance sheets are accounted for by the changes in the respective items of the corresponding income statements. Balance sheets that are exposed to significant amendments in subsequent to the adjustments required because of the breach or the violation of the arm's length principle have entirely different looks like income statements.

To sum up the operations so far; what the tax administration does is first to check the validity of the transfer price reported by the businesses (which we indeed did figure out with the theoretical transfer pricing analysis), while building the arm's length values that are identified in line with third party's or independent selling conditions. Tax administrations conduct this procedure, using the most appropriate transfer pricing approach the OECD has acknowledged where available. In our case, it was CUP as we have perfect comparables and data. Second is to compare the reported transfer price with the ought-to-be transfer price. Third, if there is a significant (material) difference in between, is to modify the reported transfer price to the ought-to-be one, as the amendment towards the ought-to-be transfer price value is the objective of the tax administration to satisfy. Any change in the value of transfer prices will have material effects not only in the tax volumes of the businesses but in their financial statements as well. The foremost reason is that change or amendment in the transfer prices

necessitates change in the operating profit or loss figures. Once this is done; since the tax base, the taxable income (EBT), will change, the tax debt of the controlled parties (businesses whose transfer pricing operations are reviewed by the tax authorities) will change as well. Consequently, the very bottom-line figure of the business income statement, the NPAT volume, will change by having a new value. Once the tax amount and NPAT figures are to differ, the business balance sheets beside to income statements will have different outlooks as well, since their liability sides will vary. Recall that as income statements complement balance sheets, adjusting an income statement requires that the related balance sheet items be adjusted as well.

If not any significant difference is detected by the tax administration, or if the controlled parties may validate the reason why they followed those pricing strategies, there will be not any transfer pricing adjustment which this chapter has exemplified. In our case, they are apparently assumed not to be able to document any evidence on using the given transfer prices for their internal transactions. Concluding the applicational part, the next chapter performs an empirical study to document if cost advantages lead the businesses (banking firms) to generate higher operating profits. Empirical investigation relies on the firm-level accounting data obtained from Istanbul Stock Exchange of Turkey, through sampling all the public deposit banks as for the period from the first quarter of the year 2004 through the first quarter of the year 2008.

CHAPTER 17– THE ROLE OF COST ADVANTAGE IN TURKISH BANKING INDUSTRY: EVIDENCE FROM ISTANBUL STOCK EXCHANGE

17.1- Introduction

Banks are special financial institutions as they establish the most important part of the financial and therefore global macroeconomic system. Some scholars point to this fact. For instance, Macey and O'Hara (2001) argue that commercial banks pose unique corporate governance problems for managers and regulators, as well as for claimants on the banks' cash flows (e.g. investors and depositors). Paper by Macey and O'Hara suggests that fiduciary duties should be owed exclusively to shareholders. However, it is argued that in the special case of banks, the scope of the fiduciary duties and obligations of officers and directors need to be broadened to include creditors. Using standard theories of corporate governance, Caprio and Levine (2002) argue that financial intermediaries in general and banks in particular have special attributes that

may aggravate governance problems. Further, involvement of pervasive government induces additional hardships to effective corporate control. Scholars suggest that governance problems in banks may be resolved through concentrating on the role of governmental authorities.

In another relevant study, Levine (2004) argues that as long as banks efficiently mobilize and allocate their funds, capital formation accelerates so does productivity growth. This is because cost of capital to firms will be shrunk as a result of efficient mobilization and an efficient alignment of funds. The scholar also argues that banks are special for at least their two attributes that disturb several traditional governance mechanisms, i.e., (i) greater opaqueness than other industries and (ii) more government regulation. This suggests that ability and incentives of private investors to exert governance over banks be strengthened rather than to rely heavily on government regulators.

Corporate governance that has been advocated to be one of the reasons leading businesses to have cost advantages is an important foundation to banks that are the major global players in the World's economic league as highlighted before. Bank for International Settlements (BIS) makes useful contributions particularly regarding the embeddment of governance concept to the banking system. Among these are the principles for the management of interest rate risk (September 1997), framework for internal control systems in banking organisations (September 1998), enhancing bank transparency (September 1998), and principles for the management of loan risk (issues as a consultative document in July 1999). These papers mainly aim at stressing the strategies and the techniques that are not only available but rather fundamental to sound corporate governance mechanisms. Accordingly, these mechanisms had better include (i) corporate values, codes of conduct and other standards of appropriate behaviour and the system used to ensure compliance with them, (ii) a well-articulated corporate strategy against which success of the overall enterprise and of the contribution of individuals can be measured, (iii) a clear assignment/alignment of responsibilities and decision-making authorities, incorporating a hierarchy of required approvals from individuals to the board of directors, (iv) establishment of a mechanism for a simultaneous interaction and cooperation among the board of directors, senior management and the auditors, (v) strong internal control systems, including internal and external audit functions, feasible risk management functions irrespective of business

lines, and other checks and balances, (vi) special monitoring of risk exposures where conflicts of interest are likely to be huge, including business relationships with borrowers affiliated with the bank, large shareholders, senior management, or key decision-makers within the firm (e.g. traders), (vii) sufficient financial and managerial incentives to act in an appropriate manner offered to senior management, business line management and employees in the form of compensation, promotion and any other recognition, and (viii) appropriate information flows delivered internally and to the public.[343]

According to Basel Committee which makes regular publications for the betterment of the governance systems of banks, corporate governance is of critical importance to the banks in that it stipulates them to (i) establish corporate objectives (e.g. economic returns to owners), (ii) run the day-to-day operations of the business, (iii) take into account the interests of recognized stakeholders, (iv) align corporate activities and behaviors with the expectation that banks will operate in a safe and sound manner, and in compliance with applicable laws and regulations, and (v) protect the interests of depositors as much as possible.[344] Basel Committee - as in the case of OECD among the others - sees the board of directors and senior management as responsible bodies to secure good corporate governance. This might be misleading or confounding. For a decent level of corporate governance to come into existence and to be promoted thereafter, it is needed that a substantial support in general from governments, securities regulators, stock exchanges, auditors and in particular from banking industry associations be facilitated.[345]

Basel Committee on Banking Supervision has published a document in February 2006. In line with 1999 decisions, it has envisaged some principles geared towards securing higher standards on banks' governance qualities. These principles have been combined in eight bullets. The first principle suggests that board members be qualified for their positions, have a clear understanding of their role in corporate governance and be able to exercise sound judgment about the affairs of the bank. The second principle suggests that the board of directors approve and oversee the bank's strategic objectives and corporate values communicated throughout the banking organization. The third principle suggests that the board of directors set and enforce clear lines of responsibility

[343] See Basel Committee on Banking Supervision (1999), @http://www.bis.org.
[344] Ibid.
[345] Ibid.

and accountability throughout the organization. The fourth principle suggests that the board ensure that there is appropriate oversight by senior management consistent with board policy. The fifth principle suggests that the board and senior management effectively utilize the work conducted by the internal audit function, external auditors, and internal control functions. The sixth principle suggests that the board ensure that compensation policies and practices are consistent with the bank's corporate culture, long-term objectives and strategy, and control environment. The seventh principle suggests that the bank be governed in a transparent manner. Being the last, the eight principle suggests that the board and senior management understand the bank's operational structure, including where the bank operates in jurisdictions, or through structures, that impede transparency. This is highlighted as 'know your structure' there.[346]

As suggested early on a couple of times; from the viewpoint of BIS, corporate governance is expressly recognized to be of an indispensable asset, not just at the skin of businesses but also for the entire financial system and economy. In other words, a sound corporate governance should not merely be restricted to and considered as something needed in view of individual organizations, but should be perceived as a critical ingredient in maintaining a good macro financial system and therefore a robust economy as well.[347] Put it differently, corporate governance is one of the key factors determining health of the financial system and transcending its ability to stand against harsh economic shocks and to survive under steady market pressures, which in return would promote financial stability.[348]

Up until now, application of the theoretical investigations has been performed along the effects on the financial statements of the given businesses. Building on the findings obtained from the theoretical part (Part III) of this dissertation, the application part hitherto has explicitly shown that cost advantages positively influence the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments. The results have led several propositions. Inter alia; concerning the businesses transacting under bilateral monopoly, it has been advocated that ceteris paribus, the operating profit of the business with cost

[346] See Basel Committee on Banking Supervision (2006), @http://www.bis.org
[347] See Bollard, @http://www.bis.org/review/r030416b.pdf (15.06.2006).
[348] Ibid.

advantage will be higher than the operating profit figure of the business without cost advantage given some circumstances.

It has further been advocated that ceteris paribus, earnings before taxes (EBT) and hence net income/profit after tax (NPAT) figures of the business with cost advantage will always be higher than EBT and therefore NPAT figures of the business without cost advantage. As for the businesses competing under oligopoly, a similar conjecture applies. Accordingly, it has been shown that ceteris paribus, the operating profit of the business with cost advantage will be higher than the operating profit figure of the business without cost advantage. It has further been shown that ceteris paribus; EBT and hence NPAT figures of the business with cost advantage will always be higher than EBT and therefore NPAT figures of the business without cost advantage or with cost disadvantage.

This chapter conducts an empirical analysis so as to gather some stylized fact results supporting the upper conjectures that this dissertation has advocated and accomplished to satisfactorily justify. Sampling the period from 2004 to 2008 for all the commercial (deposit) banks whose stocks are publicly traded in Istanbul Stock Exchange (ISE), this chapter aims to document if cost advantages imply higher operating business (bank) profits as they contribute to their transfer pricing establishments (patterns). This will provide us with empirical evidence to suggest that businesses (banks) with cost advantage (lower funding costs) have higher operating profits (interest spreads or credit margins) over the businesses (banks) without cost advantage.[349]

The rest of this chapter is hence organized as follows. The next section investigates the related literature, suggesting that this is an early empirical transfer pricing study exploring the effect of cost advantages on the operating profits of the businesses (banks). The section afterwards, 17.3, explores Turkish banking system. Section 17.4 prescribes the data and presents the methodology. Section 17.5 discusses the results, and finally, section 17.6 concludes with some remarks.

17.2- Related Literature

As indicated before, the empirical transfer pricing literature is silent on studying the cost advantage effect on the establishment of the corporate transfer prices and therefore

[349] As stated before; investment banks, such as the ones in Turkey, are not entitled to collect deposits neither from natural persons (i.e. individuals) nor from legal ones (e.g. corporations). It is the commercial bank that is authorized for deposit collection from the depositors. Therefore, commercial banks and deposit banks are interchangeably used in this research.

profits of the corporate businesses including banking firms. There is no empirical study, to my knowledge, that investigates the given link at all. The transfer pricing literature has been rather emerging on other aspects such as transfer pricing practices (e.g. Wu and Sharp (1979), Grubert and Mutti (1991), Hines and Rice (1994), Huizinga and Laeven (2005), Bernard and Weiner (1990), Bernard and Weiner (1992) etc.), decision making process and performance evaluation (e.g. Rome (1992), Borkowski (1992, 1993, 1997) etc.), tax schemes, tax functions, tax competition and planning (e.g. Hallerberg and Bassinger (1998), Garrett (1998), Quinn (1997), Rodrik (1997), Swank and Steinmo (2002), Slemrod (2004), Case *et al.* (1993), Besley and Case (1995), Heyndels and Vuchelen (1998), Brueckner (1998, 2001), Brett and Pinkse (2000), Swenson (2001), Clausing (2001, 2003, 2006), Grubert (2003), Grubert *et al.* (2003), Overesch (2006), Devereux *et al.* (2008) etc.). Some interesting scholar investigations on these research strands have been previously presented in the literature reviews.

Although this empirical investigation is an early one on bank's profits coupled with cost advantage and transfer prices, there are some studies that explore the determinants on the efficiency or rather the profitability of banking industry. The scholars have examined the profitability of the banking industry from different aspects, using different profitability measures and different measurement tools. In those studies, generally, the constituents determining the profitability, how these determinants affect the profitability and the relationships among the factors affecting profitability have been investigated. The most common profitability measures used in those studies are net interest margin, return on asset and return on equity. Starting from the earliest one, I present the related literature as the following.

The early study by Ho and Saunders (1981) that is recognized as one of the most seminal papers on bank interest margins develops a model of bank margins (spreads) where the bank is conceived as being a risk-averse dealer. In the model, the bank acts an intermediary between the fund demanders and suppliers. Deriving from credit risk and assuming that all deposits and loans are freely processed, Ho and Saunders concentrate on the dealer role banks undertake. The scholars also presume that banks have three constituents in their wealth portfolios: (a) an initial (base) wealth that is invested in a diversified portfolio, (b) a net credit inventory that is the difference between market values of deposits and loans and (c) bank's short-term cash or money market position which is the difference between money market loans and borrowings.

In the model by Ho and Saunders, banks are assumed to grant new loans and passively collect deposits. They set the prices of loan and (time) deposit, P_L and P_D respectively such that $P_L = p - b$ and $P_D = p + a$; where p refers to the bank's opinion of the true price applicable to loan and deposit, and *a* and *b* to the fees for the provision of immediacy of service. As the interest margin is the difference between P_L and P_D, it will be the sum of the fees for provision which is a + b. Therefore, it is argued that it is possible to affect the likelihoods of loan and deposit arrivals through the manipulation of the magnitude of the fees or margin (spread).

Ho and Saunders posit that spread relies on four underlying factors such as (i) the degree of managerial risk aversion, (ii) the size of transactions undertaken by the bank, (iii) bank market structure and (iv) the variance of interest rates. Sampling the U.S. commercial banks, they documented that bank spread was positively and significantly related to the variance in the bond rates. Splitting the sample into two groups using asset size, it is reported that the smaller banks recorded an average transactions spread of almost 1/3 of 1 % more than the larger banks. The scholars suggest that this difference happened because of market structure factors inducing smaller banks to realize some additional producer's rent (profit).[350]

Extending the model by Ho and Saunders to incorporate loan heterogeneity (several loans) through following the methodology of Ho and Stoll (1983), Allen (1988) posits that pure interest spreads may decline when cross-elasticities of demand among the bank products are involved. Through a portfolio effect, demand interdependence along the bank products and services generates benefits on diversification. The scholar contends that following the control over rate spreads to maneuver the arrival of demands for transactions, bank can pursue a more active policy in mitigating the risk exposure on its inventories.

Investigating the determinants of bank interest margins under credit and interest rate risks, Wong (1997) develops a firm-theoretical model with several uncertainty and risk aversion elements. The model entitles a joint representation of how regulation, cost, credit risk and interest rate risk terms identify the optimal bank interest margin decision in equilibrium. The scholar shows that bank interest margin links positively to the bank's market power, operating costs, the degree of credit risk and the degree of interest

[350] As the model developed by Ho and Saunders (1981) draws on pure intermediation acitivies, the spread is equal to the difference between lending and deposit rates. For this, see for instance Valverde and Fernandez (2007).

rate risk. Further, it is shown that increase in the level of bank's equity capital negatively impacts the interest spread given that bank is exposed to little interest rate risk. Net position of the bank in the interbank market determines the viability of the effect of increasing market rate on the degree of the spread.

Angbazo (1997) explores the relations among commercial bank net interest margin, default and interest-rate risks and off-balance sheet banking. In order to present a basic setup to identify the risk factors affecting bank net interest margins determination, Angbazo builds an augmented dealership model for interest spreads to control for the determinants of net interest margins. In the model which extends the dealership setup suggested by Ho and Saunders (1981), McShane and Sharpe (1985) and Allen (1988) with the inclusion of the risk on loan defaults, the representative bank is assumed to be a risk averse monopolist dealer in cash.

Sampling for the period 1989-1993 and testing the hypothesis predicting that banks with riskier loans and higher interest-rate risk exposures select such loan and deposit rates to satisfy higher net interest margins, Angbazo shows that the net interest margins of commercial banks reveal premia for the default and interest-rate risks. The net interest margins of money-center banks are sensitive to the default risk, but not to the interest rate risk. At this point, the scholar argues that it is consistent with the fact that money-center banks focus more on the short-term assets and off-balance sheet hedging tools. Unlike money-center banks, (super-) local banking firms are significantly exposed to interest-rate risk but not to default risk. Interestingly, it is concluded that off-balance sheet activities steer a more diffused, margins-yielding asset base than financing with on-balance sheet activities. Further, cross-sectional variations occasioning in interest-rate and liquidity risks pertain to the variations in the off-balance sheet exposure.

Exploring the determinants of commercial bank interest margins and profitability and sampling 80 countries for the period 1988 to 1995, Kunt and Huizinga (1999) document that bank characteristics, macroeconomic circumstances, implicit and explicit bank taxes, overall financial structure, regulation governing deposit insurance schemes or policies and several legal and institutional factors all explain the differences in the level of interest margins and bank profitability. Controlling for the differences in bank activity, leverage and the macroeconomic environment and performing a regression analysis, the scholars make some notable conjectures as follows. First, banks in the

countries where the banking industry is more competitive tend to have smaller margins and therefore tend to be less profitable. In this, bank concentration ratio matters on the bank profitability as the larger banks are inclined to hold higher margins than the others. Second, as long as banks are getting well capitalized, they tend to have higher net interest margins and to be therefore more profitable.[351]

Third, differences in a bank's activity mix influence the level of spread and profitability. Particularly, the scholars suggest that banks with relatively high non-interest earning assets tend to be less profitable than the banks with relatively low non-interest earning assets. Besides, banks that are heavily leveraged on deposits for their financing purposes are less profitable since collecting deposits necessitates more branching and other operating costs. Fourth, in developed countries, foreign banks have lower margins and therefore lower profitability; while in the developing countries, the opposite holds. Fifth, in terms of macro-level effect, the scholars contend that higher (lower) inflation is associated with a higher (lower) realized interest margin and profitability for the banks. Sixth, considering the legal framework, it is reported that as the contract enforcement is better (worse), legal system is more (less) efficient and the corruption degree is less (more), interest margins and profitability tend to get lower (higher).

Studying the interest spreads in banking in Colombia for the period 1974-1996 through using the accounting information (balance sheet and income statement), Barajas *et al.* (1999) explore the determinants underlying the high intermediation margin identified in the Colombian banking sector. Barajas *et al.* separate the sampling period into two partitions: 1974-1988 as preliberalization and 1991-1996 as postliberalization. Estimating a reduced-form equation with the basis of a profit maximization model, the scholars documented that the constituents of the average spread were exposed to changes. The constituents establishing the spread are meant to refer to operating costs, market power, financial taxation and loan quality. Particularly, the sensitivity to the quality of loan rose while the market power fell.

To control for the bank behavior, the above scholars benefit from an intermediation model. To test the market power, following Shaffer (1989 and 1993), a regression equation is built following the assumption of profit maximizing behavior. As different

[351] The scholars argue that this is an expected documentation as banks with higher capital ratios than the others have a lower funding or source costs. In other words; banks with cost advantage have higher net interest margins over the banks suffering from cost disadvantage (higher funding costs for instance).

from the setup suggested by Shaffer, so as to represent bank intermediation spread or margin, the equation allows a reservation for a unique balance sheet relationship between loans and deposits.[352] It is believed that as long as the country advances a sufficient progress in lessening financial taxation and operating costs as well as in enhancing loan quality, the banking spread will likely to be abated.

Sampling 614 banks for the period 1988 and 1995, Saunders and Schumacher (2000) investigate the determinants of bank interest rate margins in six European countries and the U.S. Following the model developed by Ho and Saunders (1981), the scholars break down the bank margins into a regulatory component, market structure component and risk premium component. They find that the regulatory components that are presented in the forms of interest-rate restrictions on deposits, reserve requirements and capital-to-asset ratios significantly influence the bank interest margins. Further, the results suggest that the more (less) segmented or restricted the banking system; the larger (smaller) the monopoly power of the existing banks and hence the higher (lower) their spreads will be. In addition, as macro interest-rate volatility significantly impacts the bank margin, macro policies geared towards reducing interest rate volatility have a positive influence in lessening the bank margins.

Brock and Suarez (2000) explore the behavior of bank spreads in seven countries in Latin America including Argentina, Bolivia, Chile, Colombia, Mexico, Peru and Uruguay for the mid 90s. Following Ho and Saunders (1981), the scholars employ the country data to run two-step regressions. They document that high operating costs and non-performing loans widen the interest margin. They note that the magnitude of these effects varies across the countries. Further, minimum reserve requirements lead banks to maintain a higher spread. The results report that uncertainty being a macro-economic constituent results in rising interest spreads. The scholars conclude that as long as bank margins or spreads are in a narrow band, bank capital requirements may be influential in mitigating the excessive banking risk, otherwise they will not work.

Abreu and Mendes (2001) study the determinants of commercial bank interest margins and bank profitability for some EU countries including Portugal, Spain, Germany and France. Sampling the period of 1986-1999, they use different

[352] The scholars define the relationship as L + R = D + ONL; where L refers to loans, R to reserves with the central bank, D to deposits and ONL to other net liabilities making an exogenous residual. For this, see Barajas (1996) being the early model version on aggregate banking system. See Montes and Carrasquilla (1986) for the individual bank-level setup which was further developed by Carvajal and Zárate (1996).

measurement sets to predict the bank spread. The independent or explanatory variables reflect bank-specific, macroeconomics, regulatory and financial structure indicators. Among the others, they include the ratios of total employment costs to total assets, equity to total assets, loans to total assets, loans to country's domestic credit (market share) as well as unemployment rate, inflation rate, exchange rate and some dummy variables. The scholars have several comments on their findings. First, the determinants underlying net interest margin and pre-tax profits are different, irrespective of proportioning the net interest revenues to either total assets or equity. Second, operating costs relate negatively and pre-tax profits relate positively to net interest margin. This suggests that less efficient banks that have relatively higher operating costs over the others set higher loan rates and lower deposit rates as the margin tends to rise. Third, strongly capitalized banks that have relatively higher self-financing ratios tend to have higher net interest margins as they confront lower expected bankrupcy costs and therefore lower funding costs. Fourth, the loan-to-asset ratio positively affects interest margins and profitability. The reason is the decent monitoring performance on the lending process. Careful watch-out on granting loans made sure that non-performing loans were kept in reasonable levels, which has in turn led the margins and profits to get higher. Fifth, it is reported that the inflation rate significantly contributes to profitability. Particularly, inflation is found to arise higher revenues at the expense of higher costs. Further, bank costs tend to increase more than bank revenues do. This finding is consistent with Wallich (1977) and Petersen (1986) and contradicts Barth *et al*. (1997), Claessens *et al.* (1998), Hanson and Rocha (1986), Kunt and Huizinga (1999), Kunt and Huizinga (2000) and Denizer (2000).

Afanasieff *et al.* (2001) explore the determinants of bank interest spread in Brazil. Following Ho and Stoll (1980) and Ho and Saunders (1981), the scholars model the representative bank as being a risk-averse agent acting as a dealer in the market. The bank is in the capacity to have an immediate provision of loans and deposits. As the bank is assumed to hold illiquid assets, it is exposed to the risk of an unbalanced portfolio of excessive loan demand or inadequate deposit supply. Depositors (suppliers) and borrowers (demanders) are assumed to be available on the basis of a random realization Poission distribution stipulates. Following the two-step methodological approach by Ho and Saunders (1981), Afanasieff *et al.* employ panel data technique to question and measure the relevance of the factors accounting for the spread or margin.

As in Ho and Saunders, the factors are considered as both microeconomic and macroeconomic factors. The scholars document that not micro (firm or bank-specific) but macroeconomic variables significantly affect the bank interest margin pattern in Brazil.

Sampling the period 1986-2000, Kaya (2001) studies the net interest margin in the Turkish Banking industry. Defining the net interest margin as the difference between the rate in loans and the rate in deposits, Kaya finds that interest margin in Turkey that had suffered from high inflation and high real interest rates in the examined period is high as well. Particularly, private banks register higher interest spreads than those of the state-owned banks. The reason underlying this difference is that the state-owned banks, in lieu of their definition of duties, charge lower loan rates and rely on deposits more than efficiency (profitability) in bank intermediation. Using monthly data through performing an OLS regression to uncover the determinants of bank margin, the scholar reports several findings. Firstly, the higher the reserve requirements, the higher the net interest margins or spreads. Secondly, the higher the total bank assets, the lower the net interest margins. Thirdly, a higher amount of banks securities and bank equities implies a higher net interest margin. It is eventually documented that high interest margins are one of the viable determinants signifying high bank profitability.

Eroğlu (2001) studies the cost of sourcing or funding in Turkish banking industry. Sampling the period of 1996 to 2000 for the privately-owned commercial banks operating in Turkish banking industry, Eroğlu reports that during the period of 1996-1999 the average sourcing cost for the banks falls to a range of 86-94 %, in the year 2000 this ratio reduces to 41 %. The results suggest that during the period 1996-1999, over 85 % of the sourcing costs stemmed from interest payments and devaluation of Turkish Lira. Within the same period, the influence of the legal requirements registered an amount below 10 %. Besides, the operating costs, commission fees and liquid assets for daily transactions that are accepted to be the indicators of the banking sector effectiveness and productivity fluctuated between 3.3-4.6 %. The scholar contends that the most important cause underlying the sharp reduction in the level of the average sourcing costs in the year 2000 is the interest and exchange differential. This share corresponding to over 85 % of all the costs of sourcing has gone down to 70.5 %.

Kasman (2001) explores the relationship between profit and market concentration for the individual banking market in Turkey. He employs a new model developed by

Berger (1995) to test four competing hypotheses for the Turkish banking industry over the years 1988 to 1996. It is documented that there is neither positive nor statistically robust relationship between market concentration and profitability of the banking sector. Therefore, market concentration in the Turkish banking industry is found to have no role in explaining the profitability given the sampling period.

Kaya (2002) analyzes the determinants of profitability indicators using panel data during the period 1997-2000 for 44 banks in the Turkish banking sector. She applied a multiple regression analysis with a two-step approach developed by Ho and Saunders (1981) to measure the relative importance of the micro and the macro elements to determine the profitability of banks in Turkey.[353] The scholar identifies three dependent variables to proxy for the profitability. These are net interest margin (net interest revenues/total assets), return on assets (net revenues/total assets) and return on equity (net revenues/total equity). Following Ho and Saunders (1981), two sets of independent variables are employed to predict the profitability, one is micro-level (bank-specific or endogenous) and the other one is macro-level (macro economic or exogenous). Firstly, she finds that among the micro determinants of profitability; capital, liquidity, personnel expenditures, deposits and market share have significant influences on net interest margins. Among the macro factors; inflation and budget deficits significantly influence net interest margins. Secondly, the results suggest that capital, liquidity, personnel expenditures, loans, non-performing loans and deposits are the micro determinants of return on assets (ROA), while inflation and budget deficits are the significant macro contributions to ROA. Thirdly, the most important micro determinants of return on equity (ROE) are capital, securities portfolio, liquidity, personnel expenditures, loans, deposits, FX position and market share. Inflation, budget deficits and real interest rate being the macro determinants of profitability are found to have significant impacts on ROE.

Yıldırım (2002) investigates the efficiency performance of the Turkish banking sector between 1988 and 1999. This period is characterized as the period where macroeconomic instability has increased. In the study, nonparametric data envelopment analysis is employed to measure the technical and scale efficiencies of Turkish commercial banks. The empirical results show that over the sample period both pure technical and scale efficiency measures suggest a big variation and that the sector did

[353] See for instance the studies such as Saunders and Schumacher (2000), Brock and Suarez (2000), Afanasieff *et al.* (2001) that use two step-approach in estimating bank profitability.

not achieve sustainable efficiency gains. It is reported that the sector mainly suffered from scale inefficiency which had arisen due to decreasing returns to scale. The results further suggest that there are differences in the efficiency performance of commercial banks with varying ownership status. Efficient banks are found to be more profitable, and pure technical efficiency and scale inefficiency are found to positively relate to size. On the other hand, the trend in the performance levels over the sampling period suggests that macroeconomic conditions had a profound influence on the degree of efficiency measures.

Pasiouras *et al.* (2007) employ stochastic frontier analysis and Tobit regressions to document an international evidence on the impact of regulatory, supervisory and environmental factors on bank efficiency. They use a newly constructed database of 3,086 observations from 677 publicly quoted commercial banks operating in 88 countries, to provide cross-country evidence on the determinants of banks' cost and profit efficiency during the period 2000-2004. Their results indicate a robust association of some of these measures with bank efficiency, besides revealing some similarities and differences in the determinants of cost and profit efficiency, conditioning environmental factors on bank efficiency.

Jansen and de Haan (2003) investigate the concerns that bank profitability would rise because of less competitive market conditions following the recent wave of mergers and acquisitions in the European banking sector. Using panel regressions, the scholars study to discover a relationship among concentration, competitiveness, efficiency and profitability in the European banking markets. They find that competition and efficiency in the national banking sectors relate to concentration and profitability.

Factors explaining the evolution of the interest margin in the banking sectors of the European Union is studied by Maudos and de Guevara in (2004). Using a panel of 16,185 observations, the scholars analyze the interest margin in the principal European banking sectors (Germany, France, the United Kingdom, Italy and Spain) in the time period 1993-2000. Building on the methodology developed by Ho and Saunders (1981) and later extensions, the scholars take banks' operating costs into account. Unlike the usual approach followed in the literature, a direct measure of the degree of competition (Lerner index) in the different markets is used. The study results suggest that the fall of the margins in the European banking system is compatible with the relaxation of the

competitive conditions (increase in market power and concentration), as this effect had been counteracted by a reduction of interest rate risk, loan risk, and operating costs.

Sampling seven European countries (Germany, Spain, France, the Netherlands, Italy, the United Kingdom and Sweden) for the period 1994 to 2001, Valverde and Fernandez (2007) explore the determinants of bank margins in the European banking. The reason underlying the sample selection as Europe is that Valverde and Fernandez feel that banks in Europe have more space to run their operations while the banks in the U.S. have less degree of freedom due to more stringent regulations governing them. This let the European banks to offer a broader range of services to the market. Applying the model by Ho and Saunders (1981) to a multi-output framework, the above scholars demonstrate that the link between bank margins and market power significantly differs along bank specializations. Employing new empirical industrial organization margins and accounting margins, they show that market power rises when output becomes more diversified towards non-traditional activities.[354]

Another study exploring which factors played a role in the banking sector performance in globalized financial markets for the case of Turkey is of Aysan and Ceyhan (2008). The scholars apply a panel data fixed effects regression analysis. The results report several things. First, efficiency change negatively relates to the number of branches. Second, there is a positive relationship between loan ratio, the performance indices efficiency and efficiency change. Third, bank capitalization positively relates to efficiency change. Interestingly however, the scholars document no evidence on the effect of return on equity on efficiency as return on equity is found not to be statistically significant in explaining any of the efficiency measures. Further, they could not document any robust relationship between foreign ownership and efficiency. Nonetheless, the results suggest that restructuring initiated in post-crises epoch robustly account for the improvement in efficiency scores in the recent years.

Examining the determinants of bank interest margins in the Central and Eastern European countries (CEEC), Claeys and Vennet (2008) make a regression analysis. Controlling for the macroeconomic environment and the influence of foreign and state-

[354] The scholars employ different versions of bank margins. For instance, they use loan to deposits rate spread, loan to market rate spread, gross margin, the Lerner index and the mark-up of price over marginal costs. The control variables entail the vectors of the determinants of the pure spread (i.e. risk and market power), other bank-specific factors, bank specialization factors and regulatory as well as macroeconomic indicators.

owned banks, the scholars examine to what extent the relatively high bank margins in CEEC could be attributable to low efficiency or non-competitive market conditions. They compare CEEC banks with Western European banks. They argue that banking in the CEEC was on a virtuous path, at least in the EU accession countries and that increased efficiency benefited customers while capital adequacy backed up systemic stability on the other side.

Besides completing the application part of this dissertation, this chapter makes some contribution to the literature. The upper cited investigations have examined bank profitability from different perspectives. They have researched the determinants of the banking profitability issue including almost all the financial statement components of the banks. However, they are all silent providing us with the justifications on which portion of the financials (financial statements) explain the profitability of the banks. Being an early empirical research in businesses that concentrates on the operating profit denominators of the banking firms with their cost counterparties, this study differs from all the preceeding ones. In other words, it is an early study investigating the effect of cost advantages (lower funding or sourcing costs) on the business (bank) operating profit volumes in the setting of transfer (loans or deposits) prices. Therefore, among the others, it contributes to the accounting literature. The next chapter explores the Turkish banking system.

17.3- Turkish Banking System

17.3.1. The Banking Industry

Turkish banking industry has lived bad experiences and harsh economic shocks in several periods including the one during the post-stabilization program known as January 24, 1980. In addressing to the main reasons underlying this and following problems inducing significant fluctuations in the banking industry, Toprak and Demir (2001) suggest that inadequate amount of deposits, loans and equities[355]; the dominance of publicly-owned or capitalized (state) banks over privately-owned (private) ones and their extraordinarily high duty losses; existence of less large and more small banks; money substitution; lacking control (oversight); administrative and political concerns and eventually maintaining high open positions are the key determinants explaining the structural problems in the banking industry.

[355] Inadequate (owner's) equity in this sense refers to an undercapitalization and over-financial leverage.

Toprak and Demir advocate that the roadmap lanced as the transition program of stronger Turkish economy promulgated following February 2001 crisis has proven to enhance the quality of the banking industry. In order to cover the duty losses publicly-owned banks incurred and the losses the banks handed by Savings Deposit Insurance Fund of Turkey (SDIF) realized, a fund amounting ca. 45 million USD was transferred and notable legal and institutional innovations were recorded. The scholars contend that among what is to be done for having a healthier banking system are (i) state guarantees on saving deposits should be gradually eliminated through building an insurance fund banks would commonly contribute to, (ii) bank mergers should be encouraged to achieve an optimal scale economy and to deepen the competition in the industry, (iii) state interventions hindering smooth market operation and (iv) high public financing through borrowing from the industry should be stopped, and (v) an efficient risk management and control mechanisms need to be developed –as the introductory discussion of this empirical chapter has suggested.

The above scholars make correct problem diagnosis. Two issues mentioned right above have always been hot debates in Turkey: (a) maintaining an unacceptably high open positions and (b) the role of SDIF, the latter of which will be discussed in the following chapter. In Turkey, after 80s, banking industry has started to grow very fast due to abnormally high profit opportunities. However, this huge profitability was not used to rely on healthy or viable financial structure, but rather used to have a basis on open position. Commercial or deposit banks whose ordinary or expected profit is supposed to be the result of performing main banking (pure financial intermediation) activity, used to realize super operating profits. Nonetheless, they used to get fancy interest returns in return for providing the state with the necessary fund to satisfy their endlessly lame borrowing requirements. In the last two and a half decades except for the last couple of years after 2000s; besides the hyperinflation, the level of the interest rates applicable to government papers (i.e. treasury bills and bonds) was enormously high as such to register over 150 % in the compound denominators.

What the banks in the market used to follow that time was quite naïve indeed. They used to invest in government papers through obtaining syndicated loans that are traded in international markets. Getting together with other major banks in the market, a group of banks acquires funds (borrows) from international money markets in the form of these syndicated loans. Following the fund acquisition, these banks lend to the

government in the form of government papers at the expense of running a reasonable amount of interest and foreign exchange risk exposure. As in principle, interest rates applying to syndicated loans are quite low (such as 2-3 %) relative to the interest returns Turkish government offered on its papers (ca. 150 %); banks going out to benefit from syndicated loans were quite in a safe position. This operation, known as open positioning, was the forerunning reason leading banking profits to get unbelievably high. Although banks, particularly private-owned ones, suffered from having huge operating profit losses; at the bottom line, they might have ended up with having even huge NPAT volumes.[356]

Banking Regulation And Supervision Agency of Turkey (BRSA) which is the highest authority to regulate and oversight or audit the entire banking industry reports some public information as of the period ending 2007 followingly. First; a faster growth that the middle sized banks exhibited helped to lessen assets concentration pending in the industry, along with an unchanging bank number. In terms of total assets size, although Turkish banking industry is larger than thirteen EU Member States as of the end of 2006, it looks yet smaller in the context of the EU Member States in general. The table below reveals the bank number across the bank types. Accordingly; as of August 2008, total number of banks in the industry appears to amount 43, among which deposit banks total 25.[357]

Table 17.1: Bank Numbers as of August 2008

Bank Type	Number	Banka Type	Number
State Development & Investment Banks	4	State Deposit Banks	3
Bank Under The Custody of SDIF	1	Private Deposit Banks	11
Private Investment Banks	5	Foreign Deposit Banks	11
Foreign Investment Banks	4	Participation Banks	4

Source: Banking Regulation And Supervision Agency of Turkey (BRSA)

As the data and methodology section will followingly examine, thirteen (13) deposit banks are quoted in ISE. This suggests that 52 % of all the deposit banks is public, all of which is sampled in the analysis including all the state, private or foreign-oriented ones

[356] Examining the income statement, one may see that it is the item of 'non-operating incomes' ending up with such profits. Non-operating incomes point to bank's revenues accruing from performing activities other than main or ordinary course of business among the others.
[357] BRSA

within. As of March 2008, these banks under review amounting thirteen have 5.672 branches and a staff number of 117.641, which makes them to own 72 % of all the staff and branches in the entire banking industry. Specifically, their shares of branch and staff numbers in the deposit banking group respectively amount to 73 % and 74 %. Further, as of December 2007; of the banks under review, the total assets, loans and deposits portions in the entire banking industry amounts % 74, % 82 and % 67 respectively.[358]

Second, the banking industry whose assets size has registered 581,6 billion YTL as of the year ending 2007 has achieved a loan volume of 285,6 billion YTL which corresponds to a % 30,4 increase during the period back in the end of 2006. Along the loan expansion; in response to the fact that the banking industry has performed its financial intermediation function more effectively, the share of the loans in the assets that increased as much as 5,3 points relative to the preceeding year reads % 49,1 as of December 2007. BRSA further indicates that the ratio of loans/deposit has increased as much as 6,3 points. In this, it is observed that the individual loans whose share in total loans relatively increased in the period following 2007 have a proportion of 33,3 % in the overall industry.[359] Third, the report disclosed by BRSA indicates that the aggregate amount of total deposits that increased as much as % 16 in comparison to the end of the preceeding period has reached to 356,9 billion YTL as of the year ending 2007. The share of deposits obtained in foreign currencies within the overall deposits has reduced to % 35,4 at the end of 2007.[360]

Fourth, BRSA states that profitability in the banking industry is of importance in terms of financial stabilization. The ratios such as ROA or ROE are two of the ones that are commonly used to measure the profitability. Specifically, 75,6 % of the aggregate profit the entire banking industry earned goes to the banks with large scale. The portion of the small and middle sized banks that is close to each other is ca. % 12. From a functional group perspective, deposit banks appear to have almost 91 % of the periodic net profit or income. Interestingly; unlike middle sized banks whose ROA being % 2 fell below the industry average, small sized banks together with the participation banks and the development and investment banks enjoyed an ROA exceeding the average. On the other hand, ROE is at the highest level for the large sized banks as % 22,5. From the

[358] The Banks Association of Turkey (BAT)
[359] BRSA
[360] BRSA

functional standpoint, not the large sized ones but the participation banks realized the highest ROE ratio which is %22,3.[361]

Fifth, BRSA also suggests that the loan-to-deposit ratio being one of the most fundamental proxies to indicate for the intermediation activities relevant to the banking industry is helpful in the assessment of the industry's concentration on the intermediation activities. Looking at the overall industry considering the loan-to-deposit ratio, it is seen that the given ratio has tended to keep increasing in the year 2007 and has reached up to % 77,5. In the concerning period, loan-to-deposit ratio has read % 76,6 and % 94,9 for the deposit and the participation banks respectively.[362]

The table below compiles some ratios that The Banks Association of Turkey (BAT) has published as of March 2008. These ratios belong to all the public deposit banks quoted in ISE, which pertain to the sample in the empirical analysis conducted in this research. They may also be interpreted as proxies for bank's capital adequacy, balance sheet structure, asset quality, liquidity and profitability.

Table 17.2: Deposit Banks Quoted in ISE: Ratios

Ratios (%)	*March 2008*
Capital Adequacy	
Total Equity / Total Assets	10,9
(Total Equity-Fixed Assets) / Total Assets	6,8
Total Equity / (Loans + Market + Value at Operational Risk)	15,3
Balance Sheet Structure	
Assets (YTL) / Total Assets	65,4
Liabilities (YTL) / Total Liabilities	61,2
Deposits (YTL) / Total Deposits	60,9
Loans (YTL) / Total Loans	68,7
Total Deposits / Total Assets	63,0
Assets Quality	
Financial Assets (net) / Total Assets	27,7
Total Loans / Total Assets	55,1
Total Loans / Total Deposits	87,5
Default Loans (gross) / Total Loans	3,2
Default Loans (net) / Total Loans	0,4

[361] BRSA
[362] BRSA

Liquidity	
Liquid Assets / Total Assets	33,3
Liquid Assets / Short-Term Liabilities	55,4
Liquid Assets (YTL) / Total Assets	18,3
Profitability	
Net Profit After Tax (Loss) / Total Assets	0,6
Net Profit After Tax (Loss) / Total Equity	5,9

Source: The Banks Association of Turkey (BAT)

17.3.2. The Legal Statute

The article 2 of Turkish Banking Act codified as 5411 stipulates that the deposit banks, participation banks, development and investment banks, the branches in Turkey of such institutions established abroad, financial holding companies, Banks Association of Turkey (BAT), Participation Banks Association of Turkey (PBAT), Banking Regulation and Supervision Agency (BRSA), Savings Deposit Insurance Fund (SDIF) and their activities shall be subject to provisions of this law.[363] As one might see from the provision, the banking act is broad in its scope and binding for all the mentioned organizations in terms of enforcement. The law also covers financial holding companies in its territory.

As already stated in this dissertation; unless authorized to do so, no natural or legal persons are allowed to take in deposits for funding purposes. The article 60 of the banking act clearly states that other than credit institutions and those authorized by special laws, no real or legal person, essentially or secondarily by assuming a profession, shall accept deposits or participation funds. Neither shall they make announcements to the public by notice or advertisement using commercial titles or other expressions nor terms that give similar impressions thereof.[364]

From the article 2, notice that banking act governs SDIF as well. As mentioned in the preceeding section, the role of SDIF has been one of the hot subject-matters from the banking strand in Turkey. SDIF is a governmental body that insures savings deposits and participation funds and optimally evaluates the banks and the assets handed over to itself.[365] The legitimate basis allowing SDIF to operate like an insurance undertaking may be found in the article 63 of the banking act. It says that the savings

[363] Turkish Banking Act (5411)
[364] Turkish Banking Act (5411)
[365] Savings Deposit Insurance Fund

deposit and participation funds belonging to real persons in credit institutions shall be insured by the Savings Deposit Insurance Fund.[366] The reason underlying the insurance mechanism is given by SDIF in its website, where we see that SDIF aims to preserve the rights and the claims of the savings holders (depositors) and to contribute to credibility and stabilization of the banking system.[367]

The legitimate basis allowing SDIF to take over the banks and assets may be found in the article 106 of the banking act which stipulates that in case the operating permission of a bank is revoked pursuant to the provisions of this Law, its management and supervision shall be transferred to the Fund.[368] In virtue of its mission definition, SDIF insures a depositor's savings up to 50.000 YTL (over 35.000 $). It is the upper limit for the safe harbour relevant for private or state banks. The article 4 of the respective by-law specifies this as the following:

(1) of the accounts (in YTL, foreign currency or valuable mineral) opened in the name of real persons in the domestic branches of a credit institution operating in Turkey;

a) the sum of the principals of the savings deposit accounts and the interest rediscounts concerning these accounts and

b) the portion of the unit account values of the participation accounts and the private current accounts,

is under the insurance coverage up to 50.000 YTL for each real person.[369]

At first sight, that the insurance coverage applies samewise to the private or the state banks operating in Turkish banking business might look as something acceptable. And in theory, as state banks have significant risk exposures like private banks, they have both the same chances to be handed over to SDIF. However, this would be a tainted or a deceptive perception as depositors may yet face a problem due to solvency risk associated with investing their savings accumulations in the private banks here in Turkey. In practice, we do not see that the state banks go bankruptcy or are handed by the governmental bodies for safe custody purposes. Put it differently; in reality, private

[366] Turkish Banking Act (5411)
[367] Savings Deposit Insurance Fund
[368] Turkish Banking Act (5411)
[369] 'The regulation governing the deposit subject to the insurance and participation funds as well as the premia to be collected by SDIF', article 4 of the Official Gazette numbered 26339 and issued as of 07.11.2006 ('Sigortaya Tabi Mevduat ve Katılım Fonları ile Tasarruf Mevduatı Sigorta Fonunca tahsil olunacak Primlere Dair Yönetmelik', 07.11.2006 tarih ve 26339 Sayılı RG, m. 4).

banks have a full solvency risk exposure while state banks are not exposed to such risks almost at all.

The right upper passage implies that a depositor who holds a savings of over 50.000 YTL for instance will be jeopardized once the private bank where she holds the deposit goes bust. On the other hand; the depositor investing in a state bank will be luckier than the one investing in a private bank, as solvency risk associated with state banks is at minimum and therefore insurance covering savings deposits is really not an effective issue for their investment considerations. Technically; state banks that know that risk-averse depositors will invest their savings in them anyhow for hedging purposes, they frequently offer low deposit interest rates outlying the market. Conversely, private banks will have to offer attractive deposit interest rates to appeal the savings demand from risk-neutral or frequently risk-lover depositors. This (funding) cost advantage-disadvantage issue creates an unfair competition problem encouraging state deposit banks while discouraging private deposit banks.

The table below shows the deposit rate differentials in (sampled) banks that are yet pending in the market today as of March 2008. Before, particularly during the harsh period that has been mentioned, the deposit interest rate differentials favoring the state banks were much worse (larger) against the private banks operating in Turkish banking industry.

Table 17.3: Average Interest Rates Applicable to Loans Granted And Deposits Collected as of March 2008 (%) : Commercial Banks Quoted in ISE

BANKS	in YTL	
	Loans Granted	Deposits Collected
Industry Total	16,38	**10,17**
Deposit (Commercial) Banks		
State-Owned or Capitalized Banks	19,84	**14,97**
Türkiye Halk Bankası A.Ş.	20,47	15,09
Türkiye Vakıflar Bankası T.A.O.	19,22	14,85
Privately-Owned or Capitalized Banks	21, 42	**15, 88**
Akbank T.A.Ş.	20,18	14,12
Alternatif Bank A.Ş.	23,21	16,98
Şekerbank T.A.Ş.	18,75	16,17
Tekstil Bankası A.Ş.	22,09	18,61
Türk Ekonomi Bankası A.Ş.	22,35	14,88
Türkiye Garanti Bankası A.Ş.	22,54	14,04

Türkiye İş Bankası A.Ş.	21,64	13,52
Yapı ve Kredi Bankası A.Ş.	21,00	16,22
Denizbank A.Ş.	19,61	16,72
Finans Bank A.Ş.	22,40	16,77
Fortis Bank A.Ş.	21,90	16,67

Source: calculated from the data available from BAT

The next section explains the data and presents the methodology followed to pursue the empirical analysis being the subject-matter of this chapter.

17.4- Empirical Analysis: Data & Methodology

As stated in the introduction; in the preceeding chapters of this dissertation, it has been both theoretically and analytically shown that, the operating profit figure of the banking firm (bank L) with cost advantage will be higher than the operating profit figure of the banking firm without cost advantage (bank F). In other words, it has been shown that under some definite circumstances, banks with cost advantage will have higher operating profits than those of banks without cost advantage or with cost disadvantages.

As highlighted early on, the objective of this empirical chapter is to obtain some evidence that this advocation is consistent with the real life (stylized) facts, through documenting if cost advantages imply higher business (bank) operating profits as they contribute to their transfer pricing establishments (patterns). Therefore, an empirical analysis is undertaken for a representative sample of banks operating in Turkish capital markets and being traded in ISE.

As stressed beforehand, banks' financial statements are quite different from the financial statements non-financial businesses have. For instance, deposits the commercial (deposit) banks collect from their customers[370] appear as a passive item in their balance sheets. It is because deposits are the liabilities for the commercial banks. Banks pay interests to their customers out of the deposits they hold. However, in a typical non-financial business, deposits fall into asset category as non-financial businesses realize interest revenues in return for the principal amounts of money they invest in (deposit to) the banks. On the other hand, loans commercial banks grant are usually recorded as an asset item in their books, unlike the loans granted to non-financial institutions such as manufacturing businesses are recorded as a liability account item in their books. Banks realize interest revenue out of the loans they grant to

[370] Customers may include natural persons (i.e. individuals) and legal persons (i.e. firms or companies).

their qualifying customers. In contrast, regular non-financial businesses pay interests for the loans they obtain from the banks.

Remember also that the spread that is the difference between the rate of interest that is charged on a loan being the main source of income or revenue for commercial (deposit) banks and the rate of interest that is offered on deposits being the main source of cost or expense for commercial (deposit) banks is called *credit margin*. As examined in the literature review part of this chapter, credit margin or spread which may also be dubbed *net bank interest margin*, is the main source of profit for commercial banks. Main source of profit arising from performing ordinary course of business refers to operating profit. Namely, the main/ordinary course of business of banks, at least of commercial (deposit) ones, is to make profit, through collecting deposits and thus granting loans. Once the interest amounts banks earn outweigh the interest expenses they are borne, they realize profit. They do realize losses if the opposite holds. Considering the financial statements of banks, the profit banks get this way is roughly known as interest income (profit), and the loss they realize this way is roughly known as interest loss as well. Therefore, it can be argued that credit spreads are unit operating margins or profits for banks.

As banks have different volumes of credit margin, a variation in the margin may imply that their operating profit figures differ, too. For instance, the banks pioneering the market in the real life could earn higher profit (credit) margins than the ones following the pioneers. One of the major reasons underlying this tie is the lower funding costs (particularly costs incurring due to time deposits) these forerunning banks have relative to their competitors that suffer from harsh funding costs. In other words, it is the cost advantage inducing such spread deviations and leading (transfer) pricing patterns of businesses to be influenced.

Irrespective of operating either cross border as a multinational group or domestically, firms do not have identical economic properties. Some firms may enjoy cost advantage over the other firms (the market competitors) without any cost advantage or with relatively cost disadvantage. This has been consulted to emanate from several particular reasons. One of them is that some firms may face lower cost of funding or sourcing opportunities relative to the some others in the market. A well recognized brand name or market reputation, size, early entry to the market may be some factors inducing funding costs to decline or keep a low level. As banks usually operate under imperfect

competition, having a cost advantage turns out to be the key to their success and even survival over the long-run. This is especially true for the banking sector which is a special type of financial services industry as highlighted already.

17.4.1. Sample Selection & Dataset

I remind that the reason why to sample (public) banks for this empirical investigation is that banks are well-known businesses that belong to oligopoly markets falling into the table of imperfect competition which this dissertation is interested in. We know that in the banking industries, the number of the banks that deliver services to customers is usually not many, while the number of the customers is tremendously high. This suggests that each bank has a reasonable amount of market share although some have much higher share portions than the others. Further, despite not very huge, there might be some differences on the products banks provide to the market. When we look at the banking market around, we see that the loan types banks offer and the terms these loans stipulate could tend to vary from each other. Differentiation does not end in loan types or terms only. We know that some banks in the market offer more attractive opportunities to their customers than the others (e.g. deposits, accessibility etc.).

We have seen that " barriers to entry " is one of the typical features to render a market as oligopoly. Entry to the banking industries, getting a banking licence, is hard as the capital requirements are quite hefty and as it is quite difficult to survive without economies of scale for the newcomers. This is also a factual case in Turkish banking industry. When we examine the local banking Statute, we see that involving banks have to fulfill tough capital requirement obligations. Financing on the leverage beyond some tolerable limits is not recognized as something acceptable in the banking industry. This is for risk management purposes among the others. For instance, the article 7(f) of Turkish Banking Act or Code (5411) stipulates that a bank to be established in Turkey has to have a paid-up capital amounting at least 30 million new turkish lira (ca. 20 million US $). This capital should be in such a nature that is isolated of any colorable (legally void) transaction.

Having a decent legal and financial structure is of significance particularly to banks, which suggests the existence of a viable governance structure and hence implies a hardship to entry. Among the others, the article 7 of Turkish Banking Code stipulates that a bank [to be established in Turkey] (i) be in the form of a joint stock corporation, (ii) whose stocks have cash equivalence and be all in registered form (in the name of

person), (iii) whose founders possess the special terms specified in this Code, (iv) whose master governing contract be in compliance with the provisions of this Code, (v) document its business plans on planned activities, projections on the financial structure including capital requirement, an activity program itemizing a budget plan for the first three years including internal control, risk management and internal audit system and so on and so forth. The articles from 22 through 42 all govern the corporate governance provisions applying to banks operating in Turkey. As those articles in Turkish Banking Code, like the ones promulgated and put forth into practice by Turkish Capital Markets Board, are in line with the international arrangements on governance, they require a complete compliance and include quite strict sanctions in case of violations.

Like the barriers in entry, there are also severe barriers disfavoring to exit the banking industry in Turkey. For instance, following a bank supervision, if it is detected that the bank under review will go bust or is high likely to financially collapse, it may be handed over to the Savings Deposit Insurance Fund of Turkey (SDIF). At that point, it would not be in the hands of its owners, but rather at the SDIF's discretion to liquidate or sell it over to the demanders. In addition to inducing unfair competition problem, this arises 'exit from the market' problem for the insiders, the ones operating in the industry.[371]

Following Kaya (2002), I am using quarterly accounting data of all the deposit banks whose stocks are publicly traded and whose financial information is available in Istanbul Stock Exchange (ISE). The sample being the entire number of public deposit banks amounts thirteen (13). Public banks covers the state-owned or -capitalized banks, the privately-owned or- capitalized banks and eventually the foreign banks, all operating in Turkish banking industry. The accounting data exclusively pertains to the data gathered from the bank's financial statements (i.e. the balance sheets and income statements) as well as independent audit reports that are all available for each public bank in ISE. The sampling period runs from the first quarter (january-march) of 2004 to the first quarter of 2008. The sample is neat such that all the required data are available without any interruptions and that there were not any bank observations being misreported.

[371] For this refer to the chapter 17.3.2 above and http://www.akademiegitim.com.tr/makale/tbs3.PDF (23. 12.2008)

In Turkey, banks and other financial institutions such as insurance undertakings or investment (brokerage) houses are subject to special arrangement stipulated by capital markets Statute in general, Capital Markets Law (CML) promulgated and coded with the number of 2499 and its respective communiqués in particular. The Communiqués drafted and disclosed by the Capital Markets Board (CMB) of Turkey regulate a detailed, proper and accurate enforcement of the Statute.[372] Particularly; before the end of the financial year 2007 back in the beginning of the financial year 2005, financial statements banks had to prepare and disclose are presented in the URL of ISE in two versions: unconsolidated (solo) financial statements and consolidated financial statements. Both the versions are administered in lieu of the Communiqué named Serial XI No:25. Unlike unconsolidated or solo financial statements that include only the accounting data relevant to banks, consolidated financial statements comprise the data of all the group firms including other affiliates, liasons, subsidiaries in the group. Therefore, for the period from the first quarter of 2005 to the last quarter of 2007, banks' data have been obtained using the financial statements prepared as unconsolidated or solo format.

As regards the year 2004, ISE provides us with two bank financial statement versions: inflation-adjusted unconsolidated financial statements and inflation-adjusted consolidated financial statements. The solo version is administered in lieu of the Communiqué named Serial XI No: 20 and the consolidated version of the Communiqué named Serial XI No:21. Starting from the year 2008 due to convergence purposes, we face again two bank financial statement versions: unconsolidated financial statements and consolidated financial statements. Both solo and unconsolidated financial statements are governed by Communiqué named Serial XI No: 29. For the same reason specified above, for the years 2004 (the entire period) and 2008 (the first quarter), banks' data employed in the empirical analysis have been gathered through the financial statements prepared as not consolidated but the solo format.[373]

17.4.2. Variable Construction & Empirical Specification

[372] See the URLs of Istanbul Stock Exchange (ISE) and Capital Markets Board of Turkey (CMB).

[373] The banks' financial statements used in this empirical examination are coherent, irrespective of whether they are drafted in inflation-adjusted or convergence-directed (to international financial reporting standards) basis. They have to be coherent due to the consistency and the comparability principles of accounting among the others. Note that any financial statement to be prepared as such to breach these generally accepted accounting wisdoms would be deemed void.

The literature review section has discussed differing definitions of bank interest spreads besides investigating the studies on the determinants of bank profitability. Among these, there are studies envisaging the spread definition as a version of return on assets. For instance, Ho and Saunders (1981) define the bank interest spread which is also known as the *banker's mark-up* as the difference between the interest revenue on bank assets and interest expense on bank liabilities as a proportion of average bank assets. To measure the bank efficiency, Kunt and Huizinga (1999) define the net interest margin as an accounting value of a bank's net interest income over total assets. Building on Bartholdy *et al.* (1997), Barth *et al.* (1997) and Kunt and Huizinga (1999), Abreu and Mendes (2001) define net interest margin as a ratio of *interest received – interest paid* over *total assets*. They employ four different dependent variables to ensure the robustness of their results. Similarly, using three different measures to control for bank profitability, Kaya (2002) defines the net interest margin as a ratio of net interest income or revenue to total assets.

There are studies that relate the bank spread to the transaction costs. For instance, in the model developed by Angbazo (1997), the bank sets a loan rate as such $R_L = (r + b)$ allowing the extension for granting new loans, and a deposit rate as such $R_D = (r - a)$ allowing further deposit collection. The interest, r, is defined as the expected market rate, and a and b as the fees, net of transaction costs for delivering deposit and loan immediacy respectively. Following Ho and Saunders (1981), Allen (1988) and Angbazo (1997) for the dealership framework, Saunders and Schumacher (2000) define the optimal degree of the bank margin as the difference between the rate set on loans and the rate set on deposits. Rate on loans sums the expected risk-free interest rate and a fee charged for the loan, while rate on deposits sums the expected risk-free interest rate and a fee charged for the deposits. Building on Ho and Saunders (1981) modeling a linear symmetric specifications for the loan and deposit arrival rates, Afanasieff *et al.* (2001) define the loan and deposit rates as: $\lambda_L = \alpha - \beta b$ *and* $\lambda_D = \alpha + \beta a$, where b and a are the fees charged on loans and deposits. The bank interest margin, s, in the equilibrium is hence obtained as: $s = a + b = (\alpha/\beta) + (1/2)\,(R)\,\sigma_I^2 Q$, where α/β refers to the risk neutral spread, R to the coefficient of absolute risk aversion, σ_I^2 to the variance of the interest rate on net credit inventories and Q to the size of the deposit/loan transaction (Q).

As does this chapter, there are studies that identify bank spreads or margins as the difference between loan interest rate and deposit interest rate. Examining the banking

spread pattern in Latin America, Brock and Suarez (2000) develop six proxies to control for bank spreads to mitigate measurement problems. They provide three narrow-based and three wide-based spread definitions. Narrow vein comprises loans and deposits while wide vein includes not only loans or deposits but all interest-bearing assets and liabilities together with commissions and fees involved. Among those definitions, the bank spread is identified as the difference between interest received on loans and interest paid on deposits. This suggests that bank spread is the rate applicable to bank loans and the rate applicable to deposits. Kaya (2001) models net interest margin (bank spread) in Turkish banking system as the difference between loan interest rate and deposit interest rate. Her *ex ante* margin definition draws on Montes and Landa's assertion (1999) that the level of the interest margin in the beginning of a financial period may be signicantly different from the level of the interest margin at the end of the period. Hence, following the margin definitions suggested in Brock and Suarez (2000) and Kaya (2001), our dependent variable is the bank interest spread as it is the difference between average loan interest rate and average deposit interest rate.

In order to achieve the stated empirical objective, choosing the dependent variable as bank interest spread makes a lot of sense in terms of fitting the analysis. Recall the research objective. It aims to show if cost advantages positively influence the operating profits of the businesses through contributing to their transfer pricing establishments. It has been several times highlighted that operating profits are the profit figures originating or resulting from corporations' conducting their main course of businesses. In this respect, bank interest spreads are regular commercial or deposit banks' operating profits, as they are the premia or the compensations banks get in return for performing pure intermediation activities.[374] In other words, bank interest spreads emanate from banks' conducting their main or ordinary course of businesses.

Besides indicating operating profits, bank interest spread is also a useful tool to control for contribution on corporate transfer pricing establishments. We do not have the direct data on intra-group (transfer) transactions' pricing of the listed banks sampled in this empirical chapter. There are several reasons. First of all, Turkish tax statute regulating transfer pricing issue (mainly corporate income tax act coded as 5520) has

[374] Although definitions tend to vary; for the papers defining the bank margin as pure spread like this study, refer for instance to Ho and Saunders (1981), McShane and Sharp (1985), Brock and Suarez (2000), Afanasieff *et al.* (2001), Saunders and Schumacher (2000), Angbazo (1997), Valverde and Fernandez (2007) and so on and so forth.

been put into force in the year 2007, which is new. Further, advanced pricing agreements (APAs) that a priori stipulate which transfer pricing methods should be followed by the taxpayers (businesses) and are therefore the contractual arrangements to be drafted between tax administration and the taxpayers will not even be effective up until the year 2009. In our tax Statute, it has been provisioned that APAs are one of the approaches corporate taxpayers may enact only for their outbound transactions (The Decision by the Council of Ministers coded 2007/12888, article 15).[375] This means that using APA which is an important instrument ensuring a proper transfer pricing exercise is not applicable for the inbound (local) transactions of the corporate taxpayers. Second of all, transfer pricing information of the businesses is confidential in Turkey. Businesses are not allowed to disclose it to the public. Third of all and most importantly, in Turkey, in line with what the OECD advocates, it is legally binding that corporate transfer prices have to be the same as the arm's length (market) prices if the market prices are available for the respective transactions.

We have already seen that distorting corporate or business earnings through manipulating transfer prices is an illegal tax practice because of the violation of (significant deviation from) the arm's length terms. When such an earnings manipulation (stripping) is detected, what needs to do would be to amend the declared or detected transfer price to an acceptable point falling into the arm's length range deemed appropriate by the tax administrations.[376] This is a wisdom that is not only what is suggested by the OECD but is a generally accepted approach across the globe.[377]

Turkish corporate income tax act is also clear about transfer pricing manipulation. Transfer pricing foundation indeed used to exist in the former corporate income tax act (coded as 5422) that applied to corporate income taxpayers, before the enactment of the new (current) corporate income tax act (coded as 5520). In the former act, transfer pricing used to appear as 'concealed earnings distribution'; in the latter (recent) act, the governing article is now expressly capitalized as "distribution of concealed earnings through transfer pricing" to refer to the intra-group transactions where transferred goods

[375] Kaymaz *et al.* (loc.cit.).
[376] See p. 17 and supra footnotes 18 and 65 for this.
[377] See for instance the Council Directive 2003/123/EC of 22 December 2003 amending the Directive 90/435/EEC on the common system of taxation applicable in the case of parent companies and subsidiaries of different Member States of the European Union. The amended Directive is known as Parents-Subsidiary Directive. According to these directives, distorting corporate earnings through manipulating transfer prices will result in the treatment of the tainted earnings as profit (dividend) distribution. Therefore, it will be subject to additional taxation. For this, refer to http://ec.europa.eu/ and http://eur-lex.europa.eu (18. 12.2008) among the others.

or services are priced quite differently from the arm's length prices that the independent (third) parties in the market strike.[378]

The article 13.1 of the current Turkish corporate income tax act stipulates that if businesses purchase from or sell to their affiliates the goods or services at such a cost or price that violates the arm's length terms, the resulting earnings will, entirely or partially, be treated as a concealed (hidden) earnings distribution through transfer pricing. The term 'earnings' refers to the tainted reduction in revenue figure for the selling affiliate and/or to the tainted inflation (increase) in the cost figure for the purchasing affiliate. The term 'affiliate' is broad in that it includes real (natural) persons or any kind of entities involved in the transaction. Affiliation refers to the direct or indirect shareholdings. In this affiliation, irrespective of whether the persons are the real (natural) or institutional ones, or of the degree of the capital or dividend ratio is of no importance at all.[379]

Having said these, let us get back to the empirical examination performed in this chapter. Two different prices are possible to observe in terms of capturing deposit banks' interest spreads (operating profits); i.e. selling price which is the price of a loan granted (e.g. interest rate applicable to loans) and a purchasing price (e.g. interest rate applicable to deposits) which is the price of a deposit collected. Market price of the loan proxies the loan price for the banks to use for their internal (intra-group) transactions, and market price of the deposit proxies the deposit price for the banks to use for their internal (intra-group) transactions. This is because, as the upper passages have comprehensively shown, not only principally (e.g. arrangements by the OECD) but in legal terms (e.g. tax codes provisioning some legal sanctions on the breach of the arm's length principle or terms), the transfer prices sampled banks use for their intra-group transactions with their affiliates have to reflect (to be the same as) the arm's length (market) prices where available. It implies that bank interest spreads closely pertain to the contribution of transfer pricing establishment for banks. This is at least the case for Turkey which is the venue for the empirical analysis here.[380]

Consideration of the bank interest spread as a proxy to capture a bank's (net) transfer price is also consistent with the theoretical and analytical examinations of this research

[378] See (i) the article 13 of the current corporate income tax act and the General Directive on Transfer Pricing, Serial No:1, p. 3.1.1; (ii) p. 17 and supra footnotes 18 and 65; and (iii) Kaymaz *et al.* (loc.cit.).
[379] Refer to p. 17 and supra footnotes 18 and 65 as well as to Kaymaz *et al.* (loc.cit.).
[380] When a bank interest spread is defined as the difference between loan and deposit prices, it will be a proxy to capture bank's net transfer price which is normally expected to yield a positive figure.

(i.e. the chapters exploring the oligopoly competition), where there was an external market for the transferred product (funds as service). Due to the existence of the external market, there was a market price as well. Recall that the competing banking firms that are also the market firms have been assumed to transact under the arm's length terms. This has entitled the use of market prices as transfer prices since there is no deviation between them. They were basically identical as they ought to be.

Therefore, employing the bank interest spread as the key dependent variable is of two-fold usage as it delivers profitability reasoning from performing main or ordinary operating activities that can be considered as a proxy to indicate for (deposit) bank's (net) transfer price. The below table presents bank interest spreads for the commercial (deposit) banks quoted in ISE transcending the period 2004-2008.[381] As these are market firms, bank interest spreads by definition reflect arm's length values.

Table 17.4: Bank Interest Spread in 2004-2008 (%) [at Arm's Length Terms]: Commercial (Deposit) Banks Quoted in ISE

BANKS	2004: I-IV	2005: I-IV	2006: I-IV	2007: I-IV	2008: I
Akbank	10,53	9,63	7,17	6,81	6,06
Alternatifbank	8,04	7,55	4,98	4,16	3,53
Denizbank	6,61	3,51	1,41	2,97	2,89
Finansbank	20,71	20,85	13,56	9,96	5,63
Fortisbank	10,52	6,61	3,74	4,77	5,23
Garanti Bank.	19,21	16,4	10,39	7,84	8,5
Halkbank	18,39	12,16	9,31	4,63	5,38
İş Bankası	17,17	13,16	6,12	6,1	8,12
Şekerbank	29,09	15,81	9,46	5,44	2,58
TEB	4,75	7,07	2,53	5,46	7,47
Tekstilbank	6,36	4,65	3,72	4,27	3,48
Vakıfbank	30,04	23,95	16,84	16,66	15,22
YKB	14,79	9,97	10,1	2,08	4,78

Source: calculated using the data available in Istanbul Stock Exchange (ISE)

[381] Bank interest spread here has been gathered netting the average loan interest rates, of the average deposit interest rates applied by each deposit bank whose stocks are traded in ISE. Accordingly, for instance, a spread of 10,53 % for Akbank in the year of 2004: I-IV, refers to the spread value averaging the values at the first quarter (I), second quarter (II), third quarter (III) and eventually the fourth quarter (IV) periods of the year 2004. All the other spread values of Akbank or other public banks should be interpreted similarly; except for the spread values observed in 2008:I, which are the rate differentials at the first quarter of the year 2008.

For the nature of the deposits, I consider Eroğlu (2001). Eroğlu builds a function characterizing the sourcing costs. Among the factors identifying the function for the sourcing costs are disponibility, reserve requirement, sources to satisfy daily cash needs (cash), premium requested for the SDIF, fund withdraw to support the source usage, tax on banking and insurance transactions, coverage for participating to the expenses of BRSA, exchange differentials, operating expenses and commissions paid out. Thus, the scholar categorizes the source types as deposits (in TL, $, DM), interbank (in TL, $, DM), loans obtained from domestic banks (in TL, $, DM), loans obtained from overseas banks (in TL, $, DM), other passives (in TL, $, DM) and repo (in TL, $, DM).[382]

Following Eroğlu (2001), loan rate that is considered in this research is the bank-specific interest rate applicable to the loans granted in YTL terms and the deposit rate that is considered in here is the bank-specific interest rate applicable to the time deposits collected in YTL. These are the rates that each bank applies to their customers at a quarterly basis. Technically speaking; a loan or deposit interest rate for a specific period will refer to the value calculated as such, that simple interest rates applied to differing maturity lines is weighted through the principal amounts corresponding to the respective maturity lines. Accordingly, a loan or deposit interest rate for a quarter period will suggest a three-month-weighted interest value while the loan or deposit interest rate applicable to an entire or annual financial period will suggest a tvelwe-month-weighted interest value. These interest rate values have been readily obtained from the independent audit reports of the sampled public banks in this study.

As different from Eroğlu (2001) and following Ho and Saunders (1981), I restrict deposits to time deposits only that are collected from customers as YTL in our case. Put it differently, I exclude any other type of deposits (e.g. sight or demand deposits etc.) or time deposits that are collected in terms of foreign currencies (e.g. foreign currency or exchange deposit accounts etc.). This is because of matching purposes. As the dependent variable to reveal the bank interest spread is calculated as the difference between the average *loan interest rate* applicable to the loans granted in YTL terms and the average *deposit interest rate* applicable to the time deposits collected in YTL, time

[382] Notice that Eroğlu made this study in the year 2001. Therefore, DM instead of € and TL (Turkish Lira) rather than YTL (New Turkish Lira) are used in her investigation. Referring to Turkish currency, YTL literally means New Turkish Lira.

deposits in this study only covers the ones collected in YTL basis. This applies to the loans as well.

17.4.2.1 Cost Advantage Hypothesis

Designed to cyristalize the effect of funding cost advantages on the degree of bank spreads or credit margins, the first hypothesis advocates that the banks with cost advantage earn higher or wider credit margins than the ones without cost advantage. Following Ho and Saunders (1981), sample is divided into two partitions in terms of asset sizes for the purpose of understanding the bank's size influence on credit margins. This is because we want to see the role funding cost advantages play in the establishment of the spread band relating to the bank transfer price and profitability arising from the fulfillment of ordinary course of bank business.

In the preceeding chapters, the theoretical and applicational examinations hitherto have shown that, transfer prices inversely relate to transfer quantities or outcomes. We have seen that particularly in the cost advantage states, corporate transfer prices go down while corporate transfer outputs or quantities go up on the opposite. This result is applicable to any business with funding cost advantages whose operating profit figures rise up relative to the one lacking such cost advantages (bank F). Tables below present the respective findings from the previous chapters in a comparative fashion.

Table 17.5: Transfer Prices, Transfer Outputs & Operating Profits Compared: Monopoly Market

Intra-Group Firms	***Financing Business***	***Purchasing Business***
TP_n^*	40 $	40 $
$AUOC_n^*$	23 $	23 $
q_n^*	31 units	31 units
TR_n^*	1240 $	1240 $
TC_n^*	716 $	716 $
OP_n^*	524 $	524 $
TP_c^*	27 $	27 $
$AUOC_c^*$	15 $	25 $
q_c^*	51 units	51 units
TR_c^*	1377 $	1377 $

TC_c^*	760 $	1280 $
OP_c^*	617 $	97 $

In table 17.5; TP_n^*, q_n^*, $AUOC_n^*$, TR_n^*, TC_n^* and OP_n^* refer to respectively the optimal values of transfer prices, corresponsing transfer quantities or outputs, average unit operating cost volumes, the resulting total (sales) revenue, total (sales) costs and operating profits of each group firm in the monopoly case, where none of the intra-group firms has any cost advantage. It is the monopoly market without cost advantage state. Similarly; TP_c^*, $AUOC_c^*$, q_c^*, TR_c^*, TC_c^* and OP_c^* refer to respectively the optimal values of transfer prices, corresponding transfer quantities or outputs, average unit operating cost volumes, the resulting total (sales) revenue, total (sales) costs and operating profits of each intra-group firm in the monopoly case, where the financing business utilizes cost advantage over the purchasing business. It is the monopoly market with cost advantage state. Transfer prices and outputs appearing in the upper table are the ones at the common equilibria that have been set considering the identical bargaining powers of the involving intra-group firms. Therefore, operating profits of the intra-group firms rely on those values. From the applicational part; remember that operating profit is the difference between total (sales) revenue being the operating income and total (sales) cost being the operating expense. Specifically, operating income is obtained as the product of transfer price and quantity, while operating expense is obtained as the product of average unit operating cost volume and quantity.

Table 17.6 underneath provides the optimal values of transfer prices, quantities and the resulting total (sales) revenue, total (sales) costs and operating profits for the banks operating in oligopoly. The letters have the same meaning and interpretations apply samewise as above.

Table 17.6: Transfer Prices, Transfer Outputs & Operating Profits Compared: Oligopoly Competition		
Intra-Group Banks	***Bank L***	***Bank F***
TP_n^*	53 $	53 $
$AUOC_n^*$	25 $	25 $
q_n^*	47 units	47 units

TR_n^*	2.491 $	2.491 $
TC_n^*	1161 $	1161 $
OP_n^*	1.330 $	1.330 $
TP_c^*	31 $	31 $
$AUOC_c^*$	8 $	22 $
q_c^*	122 units	16 units
TR_c^*	3.782 $	496 $
TC_c^*	952 $	346 $
OP_c^*	2.830 $	150 $

From the operating profit figures shown above, having a cost advantage significantly matters. We see that cost advantages enhance the profit figures of the intra-group firms with cost advantage through lowering their unit funding costs (AUOC) and enlarging their transfer outputs (q). This applies to both the monopoly and oligopoly states in this dissertation. In terms of deposit banking business, cost advantage translates then into a shrink in costs of financing with deposits and expansion in the loan (fund) volumes banks may offer to the market. Bank credit margin or interest spread has been defined as the difference between interest rate applicable to loans granted and interest rate applicable to time deposits collected which is AUOC.

For instance in table 17.6, notice that in the cost advantage state, the difference in banks' AUOCs reads 14 $ significantly favoring bank L against bank F. This implies that given that loan rates remain unchanged –as shown in the tables, banks with cost advantage will have higher or wider credit margins or interest spreads with respect to the banks that are relatively in lack of such cost advantages. Recall that loan rates have been suggested to be selling price and deposit rates to be purchasing price. Having a cost advantage then implies to have higher spreads since purchasing price (AUOC) will be lower. As both the market rates proxy transfer prices deposit banks use for their internal transactions (transactions with their affiliates), the difference between them will correspond to such a transfer price figure which is the same as bank interest spread at arm's length (market) terms.[383]

[383] Notice that AUOC figures have been derived from theoretical and analytical examinations. Plugging transfer outputs into the average unit operating cost functions of the given businesses directly reveals

That banks utilize funding cost advantages means that banks may collect deposits at cheaper or more appropriate terms than others, which is given as AUOC. This will provide banks with a basis for a new fund (source) generation as banks will then be entitled to finance and therefore collect more deposits. This funding opportunity results in offering more loans (funds) to the market. Expansion in the loan suggests an expansion in the volume of total bank assets as loans granted to the loan demanders or requesters by definition increase asset volume. Namely, funding cost advantage is the one leading the asset size to get higher.

This link can also be reasonably thought by virtue of basic accounting principle deriving from corporate balance sheets which stipulates that, total assets (active side) must be equal to total liabilities and owner's equity (passive side). An increase in the passive side of the balance sheet implies an increase in the active side or equivalently in the level of total assets volume. In our case, it has been said that cost advantages will translate into an expansion in total deposits. As deposit is a typical liability item, the passive side of the balance sheet of the banks with cost advantage will increase.

Table 17.7: Asset Size & NPAT Figures Compared: Cost Advantage State		
ASSET SIZE	**Financing Business**	**Purchasing Business**
Monopoly Market	1059 $	539 $
	Bank L (Leader)	**Bank F (Follower)**
Oligopoly Competition	6.611 $	3.931 $
NPAT	**Financing Business**	**Purchasing Business**
Monopoly Market	494 $	78 $
	Bank L (Leader)	**Bank F (Follower)**
Oligopoly Competition	2.264 $	120 $

Further, recall that it has been proposed that increase in operating profits results in increase in NPAT volume. In addition to the asset sizes, the table above compares the NPAT figures of the intra-group firms and the intra-group banking firms in cost

AUOC figures. For instance, from the oligopoly competition with cost advantage case, recall that, AUOC (C_l) for the bank L is numerically given by [(20 – (0.1*122))]. This makes 8 $ which is represented as $AUOC_c^*$ in the upper table.

advantage states that have been obtained in the applicational part of this dissertation already. As seen, like asset sizes, NPAT figures of the intra-group firm (financing business) with cost advantage or of the intra-group banking firm (bank L) are higher relative to their transacting parties (purchasing business and bank F relatively). The reason is operating profit. Remember that as all the other items are assumed to be zero, NPAT figures are given to be equal to the operating profits netted of the respective corporate income taxes calculated on the basis of % 20. As NPAT which is an income statement item and therefore needs to be converted as a *net profit for the period* item or account to the balance sheet, increase in NPAT will lead to an increase in owner's equity portion of the balance sheet. Like increases in deposits, the passive side of the balance sheet of the banks with cost advantage will increase following an increase in NPAT. Therefore, the active side of the balance sheet, the asset size, will grow as does the table above clearly show with the numbers found out already.[384]

The table 17.8 presents deposit interest rates for the deposit banks quoted in ISE transcending the period 2004-2008.[385] In the below table; Akbank, Garanti Bank., Halkbank, İş Bankası, Vakıfbank and YKB are the banks with larger asset sizes, the remaining seven banks are the ones with smaller asset sizes. Notice that on average, deposit rates fall as the asset size increases. In other words, deposit rates fall (rise) along the banks with larger (smaller) asset sizes.

Table 17.8: Deposit Interest Rates in 2004-2008 (%): Commercial (Deposit) Banks Quoted in ISE

BANKS	2004: I-IV	2005: I-IV	2006: I-IV	2007: I-IV	2008: I
Akbank	17,93	14,5	14,22	15,04	14,12
Alternatifbank	23,89	17,93	16,30	20,54	19,68
Denizbank	22,58	17,09	17,1	18,19	16,72
Finansbank	3,41	17,37	17,49	18,1	16,77

[384] See chapter 15 for this.

[385] As in the table (17.4) of bank interest spread, deposit interest rates stand for the average deposit interest rates applied by each deposit bank whose stocks are traded in ISE. Accordingly, for instance, a deposit interest rate of 17,93 % for Akbank in the year of 2004: I-IV, refers to the interest value averaging the values at the first quarter (I), second quarter (II), third quarter (III) and eventually the fourth quarter (IV) periods of the year 2004. All the other deposit interest rate values of Akbank or other public banks should be interpreted similarly; except for the interest rate values observed in 2008:I, which are the deposit interest rates alone at the first quarter of the year 2008.

Fortisbank	22,79	17,84	16,82	18,25	16,67
Garanti Bank.	19,31	15,09	14,32	15,38	14,04
Halkbank	18,22	14,09	14,06	16,53	15,09
İş Bankası	17,57	13,41	13,99	16,04	13,52
Şekerbank	23,23	18,48	17,30	16,82	16,17
TEB	23,83	17,53	17,57	18,21	14,88
Tekstilbank	23,62	20,2	19,4	19,49	18,61
Vakıfbank	17,96	15,81	14,17	15,58	14,85
YKB	18,52	13,92	14,77	19,03	16,22

Source: calculated using the data available in Istanbul Stock Exchange (ISE)

The upper passages suggest that as having a cost advantage will increase the passive side of the bank with cost advantage, total assets must increase as well. Therefore, it may be posited that banks with larger asset sizes have funding cost advantages. Accordingly, it is hypothesized that banks with cost advantage realize higher or wider credit margins than the ones without cost advantage. This may be coined as cost advantage hypothesis.

H_1: *Banks with cost advantage realize higher or wider interest spreads (credit margins) than the ones without cost advantage*

In order to test this hypothesis being an early one, I employ one-way ANOVA entitling a comparison between the two banking groups competing in Turkish banking industry. Sample is then divided into two partitions: a group with higher asset sizes and a group with lower asset sizes (e.g. Ho and Saunders (1981) etc.). This is the main empirical issue in this chapter. ANOVA is a convenient statistical method for detecting the existence of differences among several population means. In order to deploy an ANOVA test, we need to have (a) an independent random sampling from each of the given populations, (b) normally distributed populations and (c) equal variances.[386]

As we know from the theory, in one-way ANOVA, observations are classified considering one factor having A levels and therefore defining A populations. It can be identified as the following: $Y_{ab} \sim N(\mu_a , \sigma^2)$ with a = 1,…, A and b = 1,…, B. This definition can be captured or specified as the following:

[386] Recall that group means may or may not be equal, but variances must be equal to perform ANOVA.

$$Y_{ab} = \mu_a + \varepsilon_{ab} = \mu + \gamma_a + \varepsilon_{ab}$$

where Y_{ab} being the *dependent variable* stands for bank interest spread (BIS), μ for the overall effect, γ_a for the (asset) size effect being the *explanatory* or *independent* variable and ε_{ab} for error term. Error term is of importance as it is assumed to be independently identically distributed. Therefore, it is denoted as such that: $\varepsilon_{ab} \sim N(0 , \sigma^2)$ with a = 1,…, A and b = 1,…, B. The alternative hypothesis [H_A: not $\mu_{asset\ size}$ is equal] will be tested against the null hypothesis that two populations have equal mean [Ho: $\mu_{smaller} = \mu_{larger}$].

The next section defines the hypotheses on spread determinants.

17.4.2.2 Spread Hypotheses

Although it is not the main objective of the empirical documentation, this chapter is also interested in measuring or estimating the bank spread being the unit operating margin. For this purpose, borrowing the idea from the literature that has been investigated in the preceeding discussions; a set of explanatory variables that only control for accounting information is employed. Consistent with Ho and Saunders (1981), Angbazo (1997) and Barajas *et al.* (1999) etc., explanatory (independent) variables are exclusively firm-level variables as they are bank-specific factors that are intrinsic to banks. In other words, like dependent variable, independent variables include all the relevant accounting items that are related to main operating activities for typical commercial (deposit) banks.

Table 17.9: Firm-Level (Bank-Specific) Variables Used in Prior Empirical Studies

VARIABLE	Equity/Assets	Loans/Assets	Deposits/ Assets (Liabilies)
Kunt & Huizinga (1999)	*	*	
Brock & Suarez (2000)	*		
Saunders & Schumacher (2000)	*		
Abreu and Mendes (2001)	*	*	
Kaya (2002)	*	*	*
Valverde & Fernandez (2007)			*

In the literature, we see that there are some ratios that are commonly used in the empirical studies as bank-specific variables (e.g. Kunt and Huizinga (1999), Brock and Suarez (2000), Saunders and Schumacher (2000), Abreu and Mendes (2001), Kaya

(2002) and Valverde and Fernandez (2007)). These include equity-to-assets ratio, loans-to-assets ratio and deposits-to-assets (liabilities) ratio which are firm-level determinants underlying bank interest spread or margin. The table above compiles the related studies employing equity-to-assets ratio, loans-to-assets ratio and deposits-to-assets (liabilities) ratio to predict bank interest margins. As different from the above scholars, the explanatory variables depicted in the table underneath are of specific usages to be employed in the empirical model followed in this chapter. I will explain them as follows.

Table 17.10: Variable Construction: Definition of Variables

Variables	***Definition***
Dependent Variable	
Y= BIS	Bank Interest Spread (*Average Loan Interest Rate ─ Average Deposit Interest Rate*) (%)
Independent (Explanatory) Variables	
X_1 = IET	*Interest Expenses paid to the time deposits in YTL basis/Aggregate Time Deposits collected in YTL basis (%)*
X_2 = TDL	*Aggregate Time Deposits collected in YTL basis/Interest_Sensitive Total Liabilities (Assets) (%)*
X_3= PLA	*Aggregate Pecuniary Loans granted in YTL basis/Interest_Sensitive Total Assets (%)*
X_4 = TEA	*Total Equity/Interest_Sensitive Total Assets (%)*
X_5= IIP	*Interest Incomes earned from the loans granted in YTL basis/Aggregate Pecuniary Loans granted in YTL basis (%)*
X_6 = NPA	*Net Profit For The Period/Interest_Sensitive Total Assets (%)*

First; IET, computed as the ratio of *interest expenses paid to the time deposits in YTL basis to aggregate time deposits collected in YTL basis* is a regular funding cost item for depository banks. IET reveals the main operating cost ratio for deposit banks as it exhausts the interest expenses due on time deposits representing the cost figures that stem from performing ordinary course of deposit bank business. A lower level of IET hence implies a lower main operating cost amount and hence a higher degree of interest spread figure for the bank. Therefore, the coefficient of this variable is predicted as being a negative sign.

Second; TDL, computed as the ratio of *aggregate time deposits collected in YTL basis/interest_sensitive total liabilities (assets)*, is a regular interest-bearing liability item for deposit banks. By definition, TDL reveals the specific liability's position in bank balance sheet structure as it is a rate averaging time deposits by the value of total liabilities (assets). A high value of TDL suggests that bank liabilities are established as a higher proportion by time deposits collected in YTL terms. In other words, the weight of other deposits (sight deposits or time deposits collected in foreign currencies) is relatively less. It may be argued that unlike sight or demand deposit financing types whose costs are negligible, collecting time deposits is costly to banks owing to the satisfaction of the periodic interest accruals. Therefore, the predicted coefficient of this variable is negative.

Third; PLA, computed as the ratio of *aggregate pecuniary loans granted in YTL basis to interest_sensitive total assets*, is a regular interest-earning asset item for deposit banks.[387] By definition, PLA concerns asset quality as it a figure averaging pecuniary loan amount by the amount of total assets. A high value of PLA implies that pecuniary loans granted in YTL terms constitute a relatively higher asset proportion. Namely, the weight of other loans, particularly non-pecuniary loans and loans granted in foreign currencies, is relatively less in the asset establishment.[388] This suggests that banks are not selective enough in granting loans as they are directed towards obtaining riskier customers due to banks' appetite to enlarge their portfolios. The predicted coefficent of this variable is therefore negative.

Fourth; TEA, computed as the ratio of *total equity over interest_sensitive total assets*, provides us with a capital adequacy measure to estimate bank interest spread as it shows bank capitalization degree. Accordingly, a higher TEA ratio implies a higher equity financing or a lower debt financing (financial leverage). Consistent with Buser *et al.* (1981), Caprio and Summers (1993), Berger (1995), Stiglitz and Uy (1996) and Kunt and Huizinga (1999), as this relatively well-capitalization structure suggests lower

[387] See the previous chapters of this dissertation for a complete understanding of commercial or deposit banks' financial statements.

[388] Notice that pecuniary loans (PLs) are not the only sources leading to the realization of interest incomes as the entire value of interest incomes comprises the revenues stemming from non pecuniary loans (NPLs) as well. However, unlike PLs, deposit banks do not realize any interest revenue but earn commission fee in return for granting NPLs types of loans to their customers. Therefore, for the sake of ensuring relevancy in the analysis over here, NPLs are precluded in forming the composition of PLA as it does not pertain to direct (pure) lending activity being the main operating business for the banks.

expected bankruptcy costs for banks and their customers, cost of funding reduces. Therefore, I expect the coefficient of this variable to be positive.

Fifth; the explanatory variable IIP, computed as the ratio of *interest incomes earned from the loans granted in YTL basis over aggregate pecuniary loans granted in YTL basis*, is a regular revenue item for depository banks. IIP reveals the main operating return ratio for deposit banks as it originates from conducting ordinary course of deposit bank business. A higher value of IIP suggests a high main operating revenue figure and hence corresponds to a higher spread level for the bank. Therefore, I expect the coefficient of this variable to be positive. Sixth; NPA, computed as the ratio of *net profit for the period to interest_sensitive total assets*, provides us with a profitability measure as it shows return on total assets. A higher value of NPA suggests a higher value profitability. The predicted coefficient of this variable is therefore positive.

Last but not least, note that not total assets or liabilities, but interest-sensitive total assets or liabilities are used as a denominator in the calculation of all the explanatory variables. This is because it is the interest figure (rates differential) that identify the unit operating margin or banking interest spread. Assets and liabilities that operate with an isolation of changes in interests would dilute or rather not reflect the spread. Therefore, I embed interest compatible assets or liabilites into the model. Note also that since the figure of total assets must be equal to the figure of total liabilities, interest-sensitive assets amount exactly same as interest-sensitive liabilities as well.

These produce the following hypotheses (called spread hypotheses):

$\boldsymbol{H_{2a}}$*: Bank interest spread inversely relates to IET*

$\boldsymbol{H_{2b}}$*: Bank interest spread inversely relates to TDL*

$\boldsymbol{H_{2c}}$*: Bank interest spread inversely relates to PLA*

$\boldsymbol{H_{2d}}$*: Bank interest spread positively relates to TEA*

$\boldsymbol{H_{2e}}$*: Bank interest spread positively relates to IIP*

$\boldsymbol{H_{2f}}$*: Bank interest spread positively relates to NPA*

All these above hypotheses predicate various determinant-spread relationships. They are directed towards identifying the role of the constituents underlying the profitability reasoning from the ordinary course of operating business deposit banks perform on a regular basis. As for testing these hypotheses; following the literature (e.g. Kunt and Huizinga (1999), Shaffer (1989, 1993), Abreu and Mendes (2001), Brock and Suarez

(2000), Valverde and Fernandez (2007) etc.), I use a multiple linear regression model to estimate the bank spread which is specified as the following:

$$Y\ (BIS) = \beta_0 + \sum_{i=1}^{n} \beta_1 Xi + \varepsilon \qquad (1)$$

where, *Y* (BIS) refers to the *dependent variable* to represent bank interest spread (unit operating margin), $\sum_{i=1}^{n} \beta_1 Xi$ to the vector containing the *explanatory* or *independent variables* (IET, TDL, PLA, TEA, IIP, and NPA) and n to the number of independent variables and hence runs from one to six. Further, β_0 is the constant term and ε is the error term. As bank interest spread (BIS) is regressed on the independent variables as such IET, TDL, PLA, TEA, IIP, and NPA all of which are bank-specific factors, the upper statement can be expressed as:

$$\text{Y (BIS)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon \qquad (2)$$

which can also be written as:

$$\text{Y (BIS)} = \beta_0 + \beta_1 * \text{IET} + \beta_2 * \text{TDL} + \beta_3 * \text{PLA} + \beta_4 * \text{TEA} + \beta_5 * \text{IIP} + \beta_6 * \text{NPA} + \varepsilon \qquad (3)$$

where all the letters have obvious meaning. In here, the alternative hypothesis [H_A: not all the parameters β_s are zero] will be tested against the null hypothesis being that Ho: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$. The next section presents the empirical results.

17.5- Empirical Analysis: Results

17.5.1 The Role of Cost Advantage

The cost advantage hypothesis has been stated to predicate that banks with cost advantage realize or earn higher or wider credit margins than the ones without cost advantage. It can be equivalently postulated such that banks with larger asset sizes realize higher or wider credit margins than the ones with smaller asset sizes. The cost advantage hypothesis was tested against the null hypothesis being that asset size (cost advantage) does not have any effect on bank's interest spreads or credit margins.

In order to test the cost advantage hypothesis being H_1, I have followed two different one-way ANOVA analyses. In the first one, all the data pertaining to the deposit banks quoted in ISE from the first quarter of the year 2004 to to the first quarter of the year 2008 was exhausted. In the second one, following that the outliers and the extreme points were precluded, the analysis was reemployed.

For the execution of the one-way ANOVA analysis, we divide the data into two partitions: the group with larger asset size and the group with smaller asset size. In

determining the groups, for each quarter, average value of asset size of the banks was calculated. The banks whose asset size read equal or greater than the average asset size were considered as the banks with larger asset sizes, while the banks whose asset size read less than the average asset size were considered as the banks with smaller asset sizes. Once this has been done, it has been seen that, for each quarter, all the banks were appearing in the same category, meaning that; the banks with larger asset sizes had always larger asset sizes in all the quarterly periods and the banks with smaller asset sizes had always smaller asset size in all the quarterly periods. This has led the ANOVA to be quite simplified to perform. Following this, the public deposit banks were grouped. Accordingly, group 0 referred to the group of the banks with larger asset sizes and group 1 to the group of the banks with smaller asset sizes. SPSS has been run to achieve this operation. Group 0 consists of Akbank, Garanti Bank., Halkbank, İş Bankası, Vakıfbank and YKB amounting six, group 1 consists of Alternatifbank, Denizbank, Finansbank, Fortisbank, Şekerbank, TEB and Tekstilbank amounting seven. The results of the ANOVA including the outliers and extreme points suggest that the banks with larger asset sizes have higher bank interest spreads than the banks with smaller asset sizes. They are as follows.

Table 17.11.1: Descriptives

BIS								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
0	102	10,2456	4,95121	,49024	9,2731	11,2181	1,15	21,72
1	119	7,9417	7,02192	,64370	6,6670	9,2164	-5,16	41,22
Total	221	9,0050	6,24709	,42022	8,1768	9,8332	-5,16	41,22

From table 17.11.1 above, it can be clearly seen that, 221 which totals the number of observations is obtained through the product of the sample size which is 13 banks and the sampling period which is 17. Group 0 (the banks with larger asset sizes) has higher spreads or margins on average than that of group 1 (the banks with smaller asset sizes) by approximately % 2,3 point more, i.e. 10.2 % versus 7.9 %. From the standard deviations of the groups, it is also clear that the fluctuations from the mean (average interest spread or margin) as per the group 1 are higher relative to those of group 0.

Table 17.11.2 below, test of homogeneity of variances, tells us that the variances of the groups are not significantly different as the p-value being 0,29 (% 29) is greater than 0,05 (5 %) being the significance level. In other words, the null-hypothesis postulating the existence of variance homogeneity is accepted.

Table 17.11.2: Test of Homogeneity of Variances			
BIS			
Levene Statistic	df1	df2	**Sig.**
1,123	1	219	,290

As the table 17.11.3 underneath documents, banks' grouping or partitioning with respect to their asset sizes (cost advantage) is not only statistically significant but also robust, since the p-value being 0,006 (% 0.6) is very low than 0,05 (% 5) being the significance level. Therefore, the null hypothesis predicating no size (cost) effect is strongly rejected. This suggests that there is a strong evidence to support the cost advantage hypothesis stipulating that banks (businesses) with cost advantage realize higher or wider interest spreads or credit margins (operating profits) than the banks (businesses) without cost advantage. Further, both Welch and Brown-Forsythe tests show that the grouping is significant as such that p-value corresponds to 0,005 which is lower than 5 % and therefore the null-hypothesis is strongly rejected.

Table 17.11.3: ANOVA					
BIS					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	291,531	1	291,531	7,698	,006
Within Groups	8294,225	219	37,873		
Total	8585,757	220			

Table 17.11.4: Robustness Tests For Equality of Means				
BIS				
	Statistic[a]	df1	df2	**Sig.**
Welch	8,108	1	211,467	,005
Brown-Forsythe	8,108	1	211,467	,005
a. Asymptotically F distributed.				

As introduced in the upper passages, ANOVA has been for the second time reiterated through disregarding the outliers and the extreme points observed in each quarter. From the standard deviations of the groups, recall that group 1 has exhibited a higher figure of fluctuations in the former one-way ANOVA test. Thereby, three observations from group 0 and eleven observations from group 1 have been removed. The results document even stronger evidence than the former one now.

The descriptives table (17.11.5) below of the second one-way ANOVA where the outliers and the extreme points are excluded, tells that the difference of bank interest spread between the groups gets more than the first one-way ANOVA with the inclusion of the outliers and the extreme points. As in the former one above, group 0 (the banks with larger asset sizes) has higher spreads or margins on average than that of group 1 (the banks with smaller asset sizes) by approximately % 3,6 point more, i.e. 10.2 % versus 6.9 %. Notice that the standard deviations of both the groups are quite close to each other now following the removal of the outliers and the extreme points.

Table 17.11.5:Descriptives

BIS								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
0	99	10,2085	5,00743	,50327	9,2098	11,2072	1,15	21,72
1	108	6,9444	4,92830	,47423	6,0043	7,8845	-2,49	22,11
Total	207	8,5055	5,21686	,36260	7,7906	9,2204	-2,49	22,11

On interpreting test of homogeneity of variances below for second ANOVA, this time it is clear that the significance level of having different variances is stronger than the first one. Here, significance level is near to 0,05 with the value of 0,089. Table 17.11.6 underneath, test of homogeneity of variances, shows that the significance level of having different variances is stronger than the first one. Yet, the variances of the banking groups are not significantly different as the p-value being 0,089 (% 8,9) is greater than 0,05 (5 %) being the significance level. In other words, as in the case of the former ANOVA, the null-hypothesis stipulating the existence of variance homogeneity is accepted over here as well.

Table 17.11.6:Test of Homogeneity of Variances			
BIS			
Levene Statistic	df1	df2	**Sig.**
2,914	1	205	,089

Table 17.11.7 underneath documents that banks' grouping or partitioning as regards their asset sizes (cost advantage) is not only statistically significant but also robust, since the p-value being 0,000 (% 0.0) is too low than 0,05 (% 5) being the significance level. In the former one, the p-value was approximately % 0,6; now it approaches almost 0 %. This suggests that exclusion or removal of the outliers and the extreme points leads to robustly supporting the results of the former analysis. Therefore, we again get a strong evidence confirming the predicated cost advantage hypothesis. Accordingly, banks with cost advantage realize higher or wider interest spreads or credit margins than the banks without any cost advantage. Welch and Brown-Forsythe tests below also reveal that the suggested grouping is robust and significant as such that p-value approaches 0 % which is quite low than 5 %. Hence, the null-hypothesis is strongly rejected again.

Table 17.11.7: ANOVA					
BIS					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	550,300	1	550,300	22,312	,000
Within Groups	5056,116	205	24,664		
Total	5606,416	206			

Table 17.11.8: Robustness Tests For Equality of Means				
BIS				
	Statistic[a]	df1	df2	**Sig.**
Welch	22,281	1	202,833	,000
Brown-Forsythe	22,281	1	202,833	,000
a. Asymptotically F distributed.				

All the upper evidences strongly document that the banks with cost advantage realize or get higher operating profits than the banks without any cost advantage or with cost

disadvantage. Following ANOVA, OLS regression has also been run to further make sure the robustness of the results. Table 17.11.9 below shows the regression results where the bank interest spread is regressed on asset sizes. In here, as in the first one-way ANOVA where the outliers and the extreme points are included, the banks with larger asset sizes are categorized under group 0 while the banks with smaller asset sizes fall into group 1. The results that are significant and robust are in line with ANOVA, which support the cost advantage hypothesis. It is clear that the banks with larger asset sizes have higher spreads or margins on average than the banks with smaller asset sizes by approximately % 2,3 point more. In other words, it is documented that banks with cost advantage get higher operating profit over those without cost advantage.

Table 17.11.9: OLS Regression						
Dependent Var.: BIS	*SS*	*df*	*MS*	*F*	**Sig.**	
Regression	291,5311463	1	291,5311	7,697563	0,006007109	
Residual	8294,225379	219	37,87318			
Total	8585,756525	220				
					95 % Confidence Interval	
	Coefficients	*Std. Error*	*t*	*Sig.*	*Lower Bound*	*Upper Bound*
Constant	10,24558824	0,609348537	16,814	2,71E-41	9,044650431	11,44652604
X Var.1 (Asset Size)	*-2,30390756*	*0,830402081*	*-2,77445*	*0,006007*	*-3,94050992*	*-0,667305206*

17.5.2 The Spread Determinants

As for testing all the remaining hypotheses predicating the spread determinants, multiple linear regression analysis has been performed, following the literature (e.g. Kunt and Huizinga (1999), Shaffer (1989, 1993), Abreu and Mendes (2001), Brock and Suarez (2000), Valverde and Fernandez (2007) etc.). OLS, ordinary least squares method, tries to estimate or predict the regressed (dependent) variable through minimizing the sum of squared errors. It provides us with the best unbiased linear estimators of the regression variables. These estimators are both unbiased and have the lowest variance of all the possible unbiased estimators of the regression parameters. The regression results which have been obtained running SPSS are given as below.

Table 17.12.1: Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
Y (BIS)	9,0050	6,24709	221

X1 (IET)	10,5512	5,62274	221
X2 (TDL)	27,5744	10,18362	221
X3 (PLA)	34,0708	11,49624	221
X4 (TEA)	11,9167	3,90014	221
X5 (IIP)	11,2784	5,85487	221
X6 (NPA)	1,0280	1,45685	221

Table 17.12.1 above presents some descriptive statistics for the model. Notice that as in the preceeding analyses, the values are in percentages and N is the observation number that is the product of the sample size (13) and the sampling period (17). We see that the explanatory variable PLA which is the ratio of aggregate pecuniary loans granted in YTL basis to interest_sensitive total assets has the highest average (ca. 34 %) and the highest standard deviation (ca. 11,5 %). On the other hand, the explanatory variable NPA which is the ratio of net profit for the period over interest_sensitive total assets has the lowest average (ca. 1 %) and the lowest standard deviation (ca. 1,45 %).

Table 17.12.2: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,503[a]	,253	,232	5,47535	2,138

a. Predictors: (Constant), X6, X2, X5, X4, X3, X1

b. Dependent Variable: Y (BIS)

Table 17.12.2 shows that the adjusted R^2 value which is the coefficient of determination indicates that % 23 of the total variance of the dependent variable BIS is explained by the suggested independent variables. The table also shows that there is no autocorrelation problem as the Durbin-Watson statistic falls into between 1,5 and 2,5. One may argue that the R^2 value is low and therefore the explanatory power of the model is low as well. Although that would not be incorrect, there are at least three strong reasons to account for why this case is special. Firstly, we know that in many scholarly studies in the territories of the respective strands of finance, economics, accounting, taxation or of auditing, an R^2 value of around (over) % 20 is acceptable (e.g. Afanasieff *et al.* (2001), Brock and Suarez (2000), Kunt and Huizinga (1999), Saunders and Schumacher (2000), Barajas *et al.* (2001) etc.). Secondly, as the table 17.12.3 underneath shows, the suggested model that relies exclusively on operating

bank-specific factors is statistically significant in explaining the overall change in the level of the spread or margin. It tells that the p-value is quite low than 5 % being the significance level. This suggests that, the null-hypothesis predicating that Ho: $\beta_1=\beta_2=\beta_3=\beta_4=\beta_5=\beta_6$ is rejected against the alternative hypothesis predicating that H_A: not all the parameters β_s are zero.

Table 17.12.3: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	2170,149	6	361,692	12,065	,000[a]
	Residual	6415,607	214	29,979		
	Total	8585,757	220			

a. Predictors: (Constant), X6, X2, X5, X4, X3, X1

b. Dependent Variable: Y

Thirdly and more importantly, the independent or the explanatory variables regressing the bank interest spread or margin on some bank-specific factors have been intentionally chosen from among those that concern only the operating items (accounts) of the deposit banks. The reason, as explained several times, is that this dissertation is interested in exploring the influence of cost advantages on corporate operating profits through contributing to transfer prices. For the purpose of this empirical investigation, cost advantage has been meant to refer to a lesser degree of funding costs for the deposit banks which are the costs incurring due to collecting time deposits (in YTL basis). Recall that these costs are the operating costs coming out from the satisfaction of the ordinary or main course of (deposit banking) business.

Further, as spreads reveal banks' unit operating margins, they also refer to their operating profits which are nothing but the product of unit operating margin by the transaction volume. In other words, unit operating margin is operating profit per unit. Accordingly, in the model, the dependent variable which is operating profit has been tried to be accounted for only by the banks' operating items (the operative portions of total assets and total liabilities as well as the operative components of income statements). All the other balance sheet and income statement components have been ignored, so that we can clearly see the cost advantage effect emanating from conducting main course of (deposit banking) business. Further, exogenous factors such as macro-level (e.g. inflation, interest rates, GNP per capita, growth rate, budget deficit, current

deficit etc.), financial level (e.g. market capitalization, concentration etc.) or regulatory-level (e.g. tax schemes, legal structures, legal enforcement, efficiency in the legal system, ownership rights, bank supervision, deposit insurance schemes, level of corruption etc.) indicators apart from endogenous ones, have also not been considered. Therefore, it should be ex ante expected to get an R^2 value like this, which should not be surprising to us.

We have seen that the model significantly explains the changes in the level of bank interest spread. It implies that the model can be used in estimating the spread. Yet, we also need to see which variables or regressors significantly contribute to the the spread determination as a low level of p-value in ANOVA table does not imply any idea on the goodness of the fit. Table 17.12.4 below presents the coefficients of the variables as well as their significances for estimating BIS.

Table 17.12.4: Coefficients

Dependent Var.: BIS		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	***(Constant)***	18,163	2,556		7,107	,000	13,125	23,201
	X1 (IET)	-,549	,152	-,494	-3,615	**,000**	-,848	-,250
	X2 (TDL)	-,029	,038	-,047	-,751	,454	-,104	,047
	X3 (PLA)	-,239	,034	-,439	-6,925	**,000**	-,307	-,171
	X4 (TEA)	-,055	,099	-,034	-,557	,578	-,250	,140
	X5 (IIP)	,511	,144	,479	3,554	**,000**	,228	,794
	X6 (NPA)	,444	,269	,104	1,654	,100	-,085	,974

The upper table reports important findings. First of all, we see that the ratios of interest expenses paid to the time deposits in YTL / aggregate time deposits collected in YTL basis (IET), aggregate time deposits collected in YTL basis / interest_sensitive total liabilities (assets) (TDL), aggregate pecuniary loans granted in YTL basis / interest_sensitive total assets (PLA) and total equity / interest_sensitive total assets (TEA) affect the banks interest spread negatively. In other words, there is a negative or an inverse relationship between BIS and IET, TDL, PLA and TEA ratios. On the other hand, the ratios of interest incomes earned from the loans granted in YTL basis / aggregate pecuniary loans granted in YTL basis as independent variable (IIP) and net

profit / interest_sensitive total assets as independent variable (NPA) affect the spread positively. That is, there is a positive relationship between BIS and IIP, NPA.

Second of all, the regressors IET, PLA and IIP are statistically significant as their p-values fall behind 5 %. A one-unit increase (decrease) in the level of IET decreases (increases) BIS as much as 0,549 unit, a one-unit increase (decrease) in the level of PLA decreases (increases) BIS as much as 0,239 unit and eventually a one-unit increase (decrease) in the level of IIP increases (decreases) BIS as much as 0,511 unit. From the standardized coefficients column, we see that IET is the variable with the highest significance value and PLA of the lowest significance value among themselves. Notice that beta for IET ranks the highest not only within this group but among all the variables. Overall, the variable with the lowest significance value is TEA. Beta for this variable is the lowest one and therefore p-value is the highest one among all the variables.

Notice also that TEA is documented to inversely relate to BIS unlike what has been expected before and unlike some important prior studies such as Buser *et al.* (1981), Caprio and Summers (1993), Berger (1995), Stiglitz and Uy (1996) and Kunt and Huizinga (1999). A rationale for this might be found in Angbazo (1997). Accordingly, a higher TEA ratio implies a lower interest rate risk exposure which is interest risk premium. Therefore, banks will need a less amount of compensation to cover their interest exposures. As a result, BIS will reduce.

17.6- Concluding Remarks

Theoretical and applicational examinations made so far have accomplished the research objective and hence confirmed the research question. The main objective of this chapter has been identified to complete the results of the preceeding chapters, through documenting some real-life evidence confirming that cost advantages generate higher corporate operating profits while contributing to corporate transfer prices. In this aspect, sampling all the thirteen (13) deposit banks that run their operations in Turkey and are quoted in ISE, this chapter has made an empirical examination. The sampling period runs from the first quarter of the year 2004 to the first quarter of the year 2008, making 17 periods and 221 observations for the examination. The quarterly accounting data has been employed using the banks' financial statements published by ISE. Therefore, they are firm-level or firm-specific accounting data, and both the dependent and all the independent variables are intrinsic to public banks.

In order to achieve the main empirical objective that has been cited above, a hypothesis was set. This hypothesis, named as cost advantage hypothesis, was to propose that banks that have cost advantage realize wider or larger credit margins than the ones that do not have any cost advantage. Bank credit margin or interest spread revealing unit operating profit represents the profitability emanating from performing main or ordinary course of business that can also be considered as a proxy to capture (deposit) bank's (net) transfer price (loan and deposit prices [i.e. interest rates] differential). Therefore, bank interest spread (BIS) has been employed as a dependent variable in the analyses.

As lower (higher) funding costs referring to cost advantages (disadvantages) point to larger (smaller) asset sizes; following Ho and Saunders (1981), sample has been partitioned into two groups as regards assets sizes and one-way ANOVA has been run to measure the effects of the partitioned samples on the degree of credit margins or interest spreads. ANOVA has been performed in two ways. In the first one, all the observations have been considered. In the second one, the outliers and the extreme points making fourteen (14) observations have been removed from the population. Empirical documentations on ANOVA confirm the cost advantage hypothesis. Accordingly, banks' grouping or partitioning as for their asset sizes (cost advantage) is not only statistically significant but also robust. In other words, there is a significant and a robust difference between the groups.

The results as per the first one-way ANOVA report that the banks with cost advantage (the ones with higher asset sizes) earn 10.2 % spread on average while the banks without cost advantage (the ones with smaller asset sizes) earn 7.9 % spread on average. The results as per the second one-way ANOVA document that the banks with cost advantage get 10.2 % spread on average while the ones without cost advantage get only 6.9 % spread on average. This suggests that cost advantage influences and indeed increases banks' operating profits. Further, when a (net) transfer price for a deposit bank is given as the market loan and market deposit prices (interest rates) differential, having a cost advantage suggests also to have higher net transfer prices as well as higher spreads (operating profits). The results have also been confirmed through an OLS regression analysis. Therefore, we can also say that cost advantages positively influence (increases) operating profits of the businesses under imperfect competition (i.e. banks) through contributing to their transfer pricing establishments. Thereby, confirming the

research question, empirical evidence completes the results of the prior parts, meaning the ones gathered under theoretical and analytical chapters.

Apart from that, a multiple regression analysis has also been performed in estimating the margin through building a multiple linear regression model. Six hypotheses have been formulated to identify the relationship between the regressed or dependent variable (BIS) and the regressors or the independent variables. Empirical results on multiple linear regression have documented that there is a negative or inverse relationship between BIS and the ratios IET (interest expenses paid to the time deposits in YTL / aggregate time deposits collected in YTL basis), TDL (aggregate time deposits collected in YTL basis / interest_sensitive total liabilities (assets)), PLA (aggregate pecuniary loans granted in YTL basis / interest_sensitive total assets) and TEA (total equity / interest_sensitive total assets). In other words, these variables affect the spread negatively. On the other hand, the results have reported that there is a positive relationship between BIS and the ratios IIP (interest incomes earned from the loans granted in YTL basis / aggregate pecuniary loans granted in YTL basis) and NPA (net profit / interest_sensitive total assets). Namely, these variables affect the spread positively.

The results have also shown that IET, PLA and IIP are the ratios that are statistically significant. Particularly, a one-unit increase (decrease) in the level of IET decreases (increases) BIS as much as 0,549 unit, a one-unit increase (decrease) in the level of PLA decreases (increases) BIS as much as 0,239 unit and eventually a one-unit increase (decrease) in the level of IIP increases (decreases) BIS as much as 0,511 unit. Among these, IET is the one with the highest significance value and PLA is the one being of the lowest significance value.

As in the case of the preceeding chapters of this dissertation, governance has been suggested to be one of the causes underlying cost advantages which might lead banks to have larger asset sizes. Although this could be true in many cases, we should also acknowledge that it might not be the only reason in so doing. For instance, we have seen that state-owned or capitalized banks in Turkey have advantages over privately-owned or capitalized banks in terms of solvency risk exposure. Different perceptions of solvency risk can induce unfair competition problem. Risk-averse depositors who know that state banks are in principle harder to go bust than private banks may prefer to invest their savings in state banks. On the other hand, risk-neutral or lover depositors may

prefer to invest in private banks in return for getting higher risk premia (interest rates). This could also be a factor benefiting some banks at the expense of (rising funding or sourcing costs for) some others in the market. The next part finalizes this dissertation.

PART V: CONCLUSION

Consisting of three chapters, this part concludes the dissertation. In line with the research design, it first presents the overall results that have been gotten from theoretical and applicational examinations. Thereafter, it presents managerial or practical implications, uncovers the limitations and make some suggestions for a future transfer pricing research that can help further corroborate this study.

CHAPTER 18– OVERALL FINDINGS

Before this research, to the best of my awareness, there has been no study explicitly investigating the effect or the role of cost advantages on transfer prices and therefore on operating profit figures of the businesses neither in monopolies nor in oligopolies. The research idea being new to the field and inspiring the guidance of editing this research was that; as cost advantages or disadvantages may be directly effective in the identification of the corporate transfer pricing patterns, the businesses with cost advantage over the ones without cost advantage or with cost disadvantage should have or realize higher operating profit figures. Therefore, the main research objective this dissertation has tried to achieve has been set to scholarly demonstrate if cost advantages positively influence or affect the operating profits of the businesses running their operations under imperfect competition through contributing to their transfer pricing establishments.

What this dissertation has studied contributes to accounting and taxation among the others, through covering the research gap on transfer pricing given above. This research has made some particular contributions to the literature by having (i) introduced the concept of cost advantage and demonstrated that it is a key determinant underlying corporate transfer pricing under imperfect competition, (ii) related transfer pricing to the funding or sourcing costs, (iii) shown the effects of transfer pricing analysis driven through different cost states on the financial statements of the businesses, (iv) shown taxational effects of transfer pricing analysis on the corporate financial statements and (v) documented some evidence from Turkish banking industry on confirming the results

obtained from the prior parts of the dissertation justifying the research question and hence achieving the research objective.

An admissable reason governing the research idea and objective was put forth to emanate from the low operating costs owing to cost advantages. It has been argued that some businesses possess certain strengths with respect to the other players in the market. A number of underlying factors may be given to explain this. The differences in the degrees of governance qualities have been suggested to be one of those. Particularly, better governance systems or structures have been contended to yield cost advantages for the businesses they govern. Put it differently, businesses with decent and better governance mechanisms realize cost advantages over the ones suffering from relatively worse governance systems. Although corporate governance is not the subject-matter of this dissertation, dissertation has made use of its properties to establish an effective hub between corporate transfer prices and cost advantages that are firm-specific. This hub is nothing but the assumption positing that better governance reduces or translates into reduced operating costs.

Showing that the above expected reasoning reflects indeed a correct and accurate logic, this dissertation has made a comprehensive transfer pricing examination. The examination is comprehensive in its setting and exhaustive in its content. It has theorized the cost advantage in the setting of transfer pricing establishments, made analytical application on the outcomes derived from the theoretical investigations and performed an empirical application exploring the role of cost advantage on the operating profits of the businesses in real life. Namely, theory part has demonstrated that cost advantages contribute to corporate transfer pricing establishments or identifications and application part has demonstrated that following the contribution on to transfer prices, cost advantages positively influence (enhance) the operating profit volumes or figures of the businesses. Therefore, this dissertation has a plenty of findings and implications. Starting from the theoretical part, I will present the overall findings in terms of the research designation as given in table 4.1 which is the research framework, as the following.

Besides presenting the nature and the results of our research question in perfect competition, monopoly and oligopoly market structures have been investigated considering two states for each structure: the state of without or no cost advantage and the state of cost advantage. Monopoly market has been studied for the affiliated intra-

group firms belonging to the identical group firm and oligopoly competition has been studied for the affiliated intra-group banking firms that belong to the identical group firm and are the only ones competing in the market. Intra-group banking firms are therefore market firms as well. The results are inferrable to both of them.

Concerning the monopoly examination; I have built on Hirshleifer (1956) and Thomas (1980) who assumed that there are two intra-firm divisions, a product supplier acting as monopoly and a product purchaser acting as monopsony in a firm. In the setting of such a bilateral monopoly, the model I built differs from Hirshleifer and Thomas mainly in two points: the corporate identification and the subject-matter of the transfer transaction. Accordingly, the transacting intra-group firms are financing business (F) and purchasing business (P) in this research. They are not firm divisions but rather firms with different legal identities. Further, the financing business being or acting as the monopoly lends or provides fund to the purchasing business being the monopsony. Being the subject-matter of the internal corporate trade, fund as the transferred unit or good is a non-physical product in this study. And the costs of the transacting businesses, the contractual parties, are average unit operating costs, boiling down to fixed and variable operating cost partitions. These costs are also the funding costs incurring from the conduct of main (ordinary) course of business.

Pertaining to the state of the monopoly market without cost advantage, none of the intra-group firms had any cost advantage over the other. Concerning the state of the monopoly market with cost advantage, the financing business has been assumed to realize cost advantage over the purchasing business. Therefore, the cost function of the financing business was the declining one while the cost function of the purchasing business kept increasing as the before state where none of the intra-group firms had any cost advantage.

It has been seen that, irrespective of the monopoly states, the purchasing business has equalized its net revenues to its marginal costs at such an output level optimal to the financing business. Likewise, the financing business has equalized its revenues to its marginal costs at the output level which is optimal to the purchasing business. As a consequence, we have obtained two different optimal transfer prices and transfer outputs for both the businesses. Reasoning from the nature of bilateral monopolies, this creates an incongruence or a duality problem. In order to solve this; using the properties of the bargaining or negotiation technique, it has been shown that the transfer price and

output at the common equilibrium are the values halving the aggregate transfer prices and outputs summing the individual transfer prices and outputs respectively. This applies to both the states: monopoly market without cost advantage and monopoly market with cost advantage.

Specifically; through the numerical cases presented in this dissertation, it has been shown that transfer prices (40 $) and outputs (31 units) obtained in the state of monopoly market without cost advantage are quite different from the transfer prices (27 $) and outputs (51 units) obtained in the state of monopoly market with cost advantage. In other words, the common equilibrium set for the monopoly market without cost advantage state is [40 $; 31 units] while for the monopoly market with cost advantage state is [27 $; 51 units]. This suggests that cost advantages contribute to corporate transfer pricing establishments in monopoly market.

Oligopoly market structure has been examined in the setting where two intra-group banking firms belonging to the same group firm are assumed to compete in the market. As with the monopoly case, the main or ordinary course of business for the intra-group banks has been defined as fund provision or supply, which is the subject-matter. Costs are operating costs and revenues are operating revenues. Operating costs for the banks are therefore funding costs again. To control for the state of oligopoly competition without cost advantage where none of the inta-group banks has any cost advantage over the other, the properties of the Cournot game have been benefited from. To control for the state of oligopoly competition with cost advantage, the properties of the Stackelberg model with sequential game have been exploited. Accordingly, one of the intra-group banks that leads the market has been assumed to have first mover's advantage and utilize cost benefit over the following bank that lacks of any cost advantage. In this case, market participants that are the intra-group banking firms had to consider the reactions of each other given each move they make –due to conjectural variation between the bank operations. I show that, in the oligopoly competition, unlike the bilateral monopoly market where we got two different transfer prices, there is one single transfer price for the banks which is the market price per se. The intuition underlying this consequence is that transfer price should be identical to the market price as market price is available and intra-group transaction happens at arm's length terms. Market price becomes available as the competing banking firms are the market firms.

It has been seen there that because of cost advantage, not only transfer prices but also transfer outputs of the banking firms significantly differ from those in Cournot. Specifically; through the numerical cases presented in this dissertation, it has been shown that transfer prices and outputs obtained in the state of oligopoly competition without cost advantage are 53 $ and 47 units for bank L and bank F respectively. On the other hand, transfer price gathered in the state of oligopoly competition with cost advantage is 31 $ for both the banks, and transfer outputs are 122 units for the leading bank (bank L) and 16 units for the following bank (bank F). In other words, the Nash equilibrium set built for Cournot competition is [53 $; (47 units, 47 units)] while for Stackelberg competition is [31 $; (122 units, 16 units)]. This suggests that cost advantages contribute to corporate transfer pricing establishments in oligopoly competition.

Having followed the findings obtained from the theoretical foundation, the application part of this dissertation has further satisfactorily accomplished the research goal. The impact or the influence of the transfer pricing analysis on the financial statements of the given businesses has been clearly shown. Table 18.1 shows the comparative operating profit, NPAT and asset size figures of the intra-group firms living in monopoly. Regarding the cost advantage state, it has been shown that the intra-group firm with cost advantage (financing business) realizes higher operating profit (617 $), NPAT (494 $) and asset size (1.059 $) figures than the operating profit (97 $), NPAT (78 $) and asset size (539 $) volumes of the intra-group firm without any cost advantage (purchasing business). Comparing both the monopoly states, it has also been seen that having a cost advantage does not only benefit the one with cost advantage per se but also at the expense of the other one that suffers from the lack of cost advantage.

Table 18.1: Operating Profit, NPAT & Asset Size Figures Compared: Monopoly Market

Financial Items ($)	***Monopoly Market Without Cost Advantage***		***Monopoly Market With Cost Advantage***	
	Financing Business	**Purchasing Business**	**Financing Business**	**Purchasing Business**

Sales Revenue	1.240	1.240	1.377	1.377
Total Costs (-)	716	716	760	1280
Operating Profit	*524*	*524*	*617*	*97*
Income (Earnings) Before Taxes (EBT)	524	524	617	97
(Corporate) Income Taxes (-) (% 20)	105	105	123	19
Net Income (Profit) After Taxes (NPAT)	*419*	*419*	*494*	*78*
Asset Size	*966*	*966*	*1.059*	*539*

From the table above we see that when the state changes from 'without cost advantage' to 'with cost advantage'; operating profit, NPAT and asset size figures of the financing business increase from 524 $, 419 $ and 966 $ to 617 $, 494 $ and 1.059 $ respectively. On the other hand, for the purchasing business, operating profit decreases from 524 $ to 97 $, NPAT from 419 $ to 78 $ and asset size from 966 $ to 539 $. These have led to the following propositions suggesting that cost advantages positively influence corporate profits in monopoly market.

Table 18.2: Propositions: Monopoly Market	
Proposition 1a	Given that businesses transact with each other under bilateral monopoly market; ceteris paribus, the operating profit figure of the business with cost advantage will be higher than the operating profit figure of the business without cost advantage.
Proposition 1b	Given that businesses transact with each other under bilateral monopoly market; ceteris paribus, asset size, earnings before taxes (EBT) and hence net income/profit after tax (NPAT) figures of the business with cost advantage will be higher than asset size, EBT and therefore NPAT figures of the business without cost advantage.

Table 18.3 below shows the comparative operating profit and NPAT figures of the banks operating in oligopoly. As for the cost advantage state, it has been demonstrated that bank L gets higher operating profit (2.830 $), NPAT (2.264 $) and asset size (6.611

$) figures than the operating profit (150 $), NPAT (120 $) and asset size (3.931 $) volumes of bank F without any cost advantage. Comparing both the oligopoly states, it has also been seen that having a cost advantage does not only benefit the one with cost advantage per se but also at the expense of the other one suffering from cost disadvantage.

Table 18.3: Operating Profit, NPAT & Asset Size Figures Compared: Oligopoly Competition

Financial Items ($)	***Oligopoly Competition Without Cost Advantage: Cournot***		***Oligopoly Competition With Cost Advantage: Stackelberg***	
	Bank L	**Bank F**	**Bank L: The Leader**	**Bank F: The Follower**
Interest and Similar Income (Sales Revenue)	2.491	2.491	3.782	496
Interest Expense (Total Costs) (-)	1.161	1.161	952	346
Net Interest Income (Operating Profit)	*1.330*	*1.330*	*2.830*	*150*
Income before income tax expense (EBT)	1.330	1.330	2.830	150
(Corporate) Income Taxes (-) (% 20)	266	266	566	30
Net Income (Profit) After Taxes (NPAT)	*1.064*	*1.064*	*2.264*	*120*
Asset Size	*5.111*	*5.111*	*6.611*	*3.931*

From the upper table; we see that when the state changes from 'without cost advantage' to 'with cost advantage', operating profit, NPAT and asset size figures of the bank L increase from 1.330 $, 1.064 $ and 5.111 $ to 2.830 $, 2.264 $ and 6.611 $ respectively. On the other hand, in the identical state change, for the bank F, operating profit decreases from 1.330 $ to 150 $ and NPAT from 1.064 $ to 120 $ and asset size

from 5.111 $ to 3.931 $. These have led to the following propositions suggesting that cost advantages positively influence corporate profits in oligopoly competition, as shown in table 18.4 underneath.

Table 18.4: Propositions: Oligopoly Competition	
Proposition 2a	Given that businesses transact or compete with each other at arm's length terms under oligopoly competition with a Stackelberg game; ceteris paribus, the operating profit figure of the business with cost advantage will be higher than the operating profit figure of the business without cost advantage.
Proposition 2b	Given that businesses transact or compete with each other at arm's length terms under oligopoly competition with a Stackelberg game; ceteris paribus, asset size, earnings before taxes (EBT) and hence net income/profit after tax (NPAT) figures of the business with cost advantage will be higher than asset size, EBT and therefore NPAT figures of the business without cost advantage.

Constituting a second destination on the application, the taxational effects of transfer pricing analysis on the corporate financial statements have been shown in two venues. The first venue has been stated to be the case of dealing at arm's length. It has been there shown that when the transactions (dealings) of the involving parties occasion in compliance with the arm's length principle, there will be no need to reconstruct the corporate financials as the value of the transfer price is not to be amended. In this case, non-adjustment of transfer prices has implied non-adjustment of the operating profits and therefore non-adjustment of the taxable incomes of the businesses which are corporate tax bases or equivalently the EBT volumes.

Unlike the first venue; relaxing the assumption of dealing-at-arm's length, the second venue has examined the case of breach or violation of the arm's length principle. It pertains to dealing-outside-the arm's length. In this taxational state, transactions of the involving businesses (contractual parties), the banking firms, have not been at arm's length. Put it differently, corporate transactions have there fallen outside the nature of the arm's length terms and conditions in the markets those businesses run. It has been shown that as the transfer price is to be amended to its new value satisfying the given

arm's length range; operating profit, EBT and therefore NPAT figures need all to be adjusted out there. Reconstruction of the operating profit figure has suggested that (i) income statements be reshaped, (ii) the amended income statement items be translated into the balance sheet accounts and (iii) a new balance sheet be established. These have been shown to be the required procedures for the repreparation of the corporate financial statements or financials in short.

Theoretical and applicational examinations whose findings have been presented in the upper passages have accomplished the research objective and therefore confirmed the research question. Being the third venue on the application, the main objective of the empirical investigation was to complete the results of those preceeding examinations, through documenting some real-life evidences confirming that under imperfect competition, businesses with cost advantage realize higher operating profits than the ones without cost advantage. For the empirical investigation, I have sampled all the thirteen (13) listed deposit banks whose stocks are publicly traded in ISE. ISE is the exclusive security trading market in Turkey. The sampling time covers the period from the first quarter of 2004 to the first quarter of 2008, making 17 periods and 221 observations. The quarterly data has been employed through the banks' financial statements obtained from ISE. Therefore, they are firm-level or firm-specific accounting data making the empirical variables intrinsic to those listed public banks.

As the research question of this dissertation has been set to study the influence of cost advantages on the level of corporate operating profits, the first (main) hypothesis has been formulated to predicate that banks with cost advantage realize higher or wider interest spreads (credit margins) than the ones without cost advantage. This hypothesis has been called cost advantage hypothesis. Since the banks with larger asset sizes are also the ones utilizing funding cost advantages over their market competitors, for the purpose of testing this hypothesis, the sample has been divided into two groups as for banks' asset sizes and one-way ANOVA has been performed to measure the effects of the partitioned sample on the level of banks' spreads. Among the others, credit margin or interest spread is operating profit for deposit or commercial banks as it reveals the net income figure arising from conducting main or ordinary course of business [pure intermediation activity], i.e. granting loans through collecting deposits.

ANOVA has been performed in two ways. In the first one, all the observations have been taken into account. In the second one, the outliers and the extreme points making

fourteen (14) observations have been excluded from the population. Empirical documentations on ANOVA strongly confirm the cost advantage hypothesis. Accordingly, banks' grouping or partitioning as regards their asset sizes (cost advantage) is not only statistically significant but also robust. In other words, there is a significant and a robust difference between the groups.

Particularly, the results as for the first one-way ANOVA report that the banks with cost advantage (the ones with higher asset sizes) earn 10.2 % spread on average while the banks without cost advantage (the ones with smaller asset sizes) earn 7.9 % spread on average. The results as per the second one-way ANOVA document that the banks with cost advantage get 10.2 % spread on average while the ones without cost advantage (with cost disadvantage) get only 6.9 % spread on average. These results that have also been confirmed through an OLS regression analysis thus suggest that cost advantage influences and indeed increases banks' operating profits. Therefore, confirming the research question, empirical investigation completes the results of the prior parts, meaning the ones gathered under theoretical and analytical examinations. Accordingly, empirical documentation evidences that cost advantages positively influence (enhance) the operating profits of the businesses running their operations under imperfect competition.

CHAPTER 19─ MANAGERIAL IMPLICATIONS

Transfer pricing has always been an attractive topic for the practitioners and an appealing research strand for the scholars. The results of this research provide a number of practical implications across businesses, regulators and other stakeholders. It has been seen that cost advantages play a very important role on the operating profits and NPAT volumes of businesses as such to closely interact with corporate transfer pricing identifications. For the businesses, this has at least two dimensions: managerial control and tax optimization. Managerial control in the setting of transfer prices rather implies performance evaluation and internal monitoring or control which is closely related to corporate decision-making (e.g. Cook (1955), Hirshleifer (1956), Vaysman (1996, 1998), Baldenius *et al.* (2004), Rome (1992), Göx (2000), Solomons (1965, 1977), Henderson and Dearden (1966), Cools *et al.* (2007) etc). Looking at the cost advantage and individual transfer pricing structure, company executives and board (including independent auditors) will know which operating segment (e.g. firm division, group

firm) of the business should do better than the other. At the end of a financial period or even a specifically defined point of time, businesses could be able to make healthy financial appraisals on the performance of the managers and their teams. As the findings have shown, it will be expected that the head (of firm division) or the director of the business (of group firm or holding company) with cost advantage will realize higher operating profits and hence report higher EBT figures with respect to the others with non-cost advantage. Businesses then may develop such performance assessment (scoring) systems that might be designated incorporating this consideration.

Managerial control brings in effectiveness and efficiency in internal monitoring systems as well. This issue closely concerns earnings management and outright fraud practices by insiders. For instance, it might be that the division head or the firm director without cost advantage overreports the level of earnings their operating bodies or strategic business units (i.e. division or firm under responsibility) realize. In other words, it could be that she may want to give an impression to her superiors that her performance has been good for the given period of time. A number of reasons may qualify for this manipulation happening. She might be willing for a rapid promotion or to get a huge premium apart from her wage or to exploit any other numerious company benefits.

Agreeing with Blair *et al.* (2003), this may get even worse when the managers with such bad intentions as earnings manipulations are provided with high-powered incentives that are the stock option compensation packages tied to the performance of the company's stock price. In this case, incentives for manipulating over the earnings numbers will be much higher as the managers with stock option plans will not lose but only win once the stock overperforms in the market. Acknowledging this, businesses may build such internal control systems that may entitle the awareness of cost advantage consideration on the axis of transfer pricing establishment. In this way, there will be no any private information or information asymmetry left. This will also be applicable to corporate internal audit structures that provide information to the corporate executives on if the corporate internal control systems have achieved their objectives or not. Thus, they get executives to make the right decisions and contribute to the betterment of the designated internal control systems (Aksoy, 2002).

As already mentioned, tax optimization suggests tax minimization in the setting of the legal boundaries. As long as company policies are compatible with legitimate

concerns, tax optimization will be deemed a convenient technique. Tax optimization is a salient issue in the territory of transfer pricing (e.g. Rome (1992), Overesch (2006) etc.). This dissertation has shown that when operating costs emanating from the conduct of main or ordinary course of business are controlled in a reasonable level, corporate operating profits and therefore NPAT which are the bottom line figures may exhibit some attractive results for the businesses. The reason could be the structure or pattern of corporate transfer price that directly involves cost-induced constituents. A tax optimization that is performed to mitigate the tax burden will then be achieved through lessening the operating costs among the others. In order to do that, businesses should possess good governance structures and exploit decent governance skills that may create a cost advantage favoring them in the market (e.g. through scale economies, viable monitoring systems, less transaction and agency costs, better stakeholder rights, better legal enforcement, higher managerial skills, better know-how etc.). In other words, businesses with decent governance systems will be more likely to accomplish to optimize their tax burdens relative to the ones without such systems. This is an issue which is rather doable over the mid- and long-runs.

This research infers some tax audit hints for transfer pricing regulators as well. Modern tax systems across the globe rely on declaration principle. Declaration principle stipulates that personal or corporate income taxpayers, individuals or businesses, report or declare their earnings to the respective tax bodies (administrations) that are authorized to collect taxes (e.g. local tax offices). These earnings constitute the tax bases (EBT) out of which a certain amount of tax is levied. Unless otherwise detected later on, the declared earnings figures will be the legally binding ones along both taxpayers and tax administrations.

Accordingly, tax authorities will know that the businesses under review that have operating cost advantages should declare higher profits relative to the similar businesses burdened by higher operating costs. All the other things being the same, in the event of a less earnings declaration, authorities may think that tax evasion to erode corporate tax base may be the case. In other words, a tax audit to be performed on a corporate transfer pricing structure with cost basis will save time to the auditors in the phase of company selection for a review in first place. Second, during the audit process, auditors will immediately know where to look at and how to figure out the total manipulated earnings volume. In addition to having accuracy, this will also save time to auditors as they will

not need to make an exhaustive investigation of the company book records, contractual arrangements, invoices or other official documents that might be legally binding for businesses on their operations. Therefore, such tax audit will make sure to downsize the unregistered economy as the tax loss of the State will be kept at minimum besides minimizing the audit costs for the regulators or the regulating agencies.

Although governments or regulators are one of the major company stakeholders, they are not the only ones. Creditors and shareholders, albeit not all, are the other two important parties that businesses should heavily consider in maintaining their activities. Banking businesses are the most important financial institutions that lend to the ones demanding for fund. It is a well-known fact that banks have tough procedures when to grant a loan. For this purpose, many banks around the world have credit committees whose purpose is to grant or ration credits and therefore whose operation is to make due diligence and approve the loans requested.

Loan provision or supply needs to be carefully performed as they directly affect the bank financial statements. If a loan is not repaid on time, banks will have to record the loan transaction, the receivables, as loss in their income statements. Therefore, banks need decent monitoring mechanisms which will let them *ex ante* know which customers should be granted loan and which ones should not be. Back in our case, as cost advantages may suggest financial viability, banking businesses may be more willing to grant loan to the companies with less operating costs. In other words, transfer pricing analysis in this research may be used by banks to have a more effective monitoring system which will a priori prevent banks from realizing huge business losses.

Shareholders are other major stakeholder groups on businesses. When businesses are public, meaning that when their stocks are traded in capital markets, consideration of shareholders even gets much higher to them. Once it is known which businesses have such operating cost advantages, demand for the stocks of those businesses will increase, therefore prices of their stocks will rise up. This has two fold merits at least. First, stock traders, individual investors or the institutional investors being the other businesses in the market, will earn profit which is a capital gain to be due (realized) on the sale of securities. Second, as share price will increase, shareholder values will increase as well. Enhancement in shareholder value will also result in (i) enhancement of the owner's equity and therefore asset size for the company utilizing cost advantages and (ii)

increases in future or potential benefits for the company shareholders such as dividends. This may increase corporate or firm value.

As discussed in the preceeding passages of this chapter, since an internal control structure relying on the awareness of cost advantage consideration along the corporate transfer pricing establishment will prevent earnings manipulation through controlling for earnings management or fraud by insiders, stock price of the company will be credible to the outsiders. Because it will reveal the price that is set embedding the accurate performance of the company. In other words, shareholders on the verge of investing in a company will not have a false imagination about its performance. The next chapter presents the limitations, caveats and some directions corroborating future research.

CHAPTER 20─ LIMITATIONS & FUTURE DIRECTIONS

As with any other work, this dissertation is not without its limitations and caveats. First, the functions suggested on the theorization part of this research are specified in terms of operating revenues (price) or costs that arise from the performance of main or ordinary course of business only. This has been done to justify if cost advantages or disadvantages directly pertain to the corporate operating profit figures through structuring transfer pricing. It has been assumed that the given businesses earn one piece of operating revenue or income which is the sales revenue and bear one piece of operating expense which is the cost of sales. Sales revenue is the revenue companies realize on performing their primary (main or ordinary) course of businesses. Similarly, cost of sales such as COGS or cost of services delivered is the expense companies incur due to again performing their primary course of businesses.

A commercial company for instance will accrue a sales revenue when it sells a product it purchases. In parallel to that, it will incur a sales cost once it buys or purchases a product for sale. The difference between them will provide the main operating profit per unit if the sales price exceeds the purchasing price. If the opposite holds, it will rather realize an operating loss per unit. The same intuition applies to deposit or commercial banks as well. A deposit bank will realize a positive credit margin or interest spread when the loan rate outweighs the deposit rate, but will realize a margin loss if the opposite holds. We have seen that bank interest margin or spread is the main operating profit item for deposit banks.

However, operating figures are not the only figures that businesses face. There is a plenty of other items or accounts that explain the corporate financial performance. These are in particular non-operating figures. A non-operating income figure, unlike operating income, refers to income or revenue accruing from conducting not primary but secondary (a second-order) firm operating activities, which is netted of expense incurring from conducting secondary firm operating activities. Collected commission fees, gain on the disposal of a current asset, gain on the disposal of a fixed asset, gain on the sale of a foreign currency or a security etc. fall all into the table of non-operating revenues. Nonetheless, the specification up there has made sure to simplify and empower the robustness of the theoretical examinations as the calculations became more concrete and tractable that way.

Second, findings from theoretical models have relied on the assumption positing the absence of capacity contraints (e.g. Hirshleifer (1956), Thomas (1980) etc.). In reality, there is no firm enjoying the privilege of unlimited or unrestricted capacity. Resources are limited. Not only restricted with financial concerns, firm resources comprise human factor as well. Besides, apart from firm-specific or endogenous factors, there may also be exogenous constituents that could be effective in the utilization of firm capacities such as demand for the firm product. Insufficient or lacking customer demand will induce that firm capacity does not run in an efficient way. Nonetheless, this does not reduce the applicability of our findings.

Third, another assumption underlying the results is the equality or identicality of the bargaining powers of the transacting parties. This particularly concerns transfer pricing examination under bilateral monopoly market. It has been presupposed that intra-group firms have equal bargaining or negotiation powers. This presupposition has proven to be quite useful in setting the common equilibria for the involving businesses. Accordingly, a common equilibria set has been identified as such to halve the individual transfer prices and outcomes. As these findings have been imported to the applicational chapters, it concerns the degree of our findings as well. Nonetheless; although the magnitude of the cost advantage effect could differ in case the bargaining power positions of the transacting parties might change, it will not materially influence the results nor the main message or the idea of this dissertation. Cost advantage will yet significantly matter.

Fourth, no taxes have been assumed. We know that businesses pay (collect) value-added-taxes (VAT) when buying (selling) a good or service. In both the cases, selling or purchasing, as they will equally apply to all the sides of a transferring transaction the foundation setting will not fundamentally change at all. Lastly, functions have been specified on a linear basis for the purposes of simplifications. Without making empirical investigations, it is hard to know that costs or revenues exhibit linear functional patterns. Yet, this should not impede or disturb the applicability of our results. For these reasons, neither the internal validity nor the generalizability or the external validity of the main idea this dissertation delivers will be hindered at all in any of the cases given up until here.

As this research is a multidimensional work in its content, there is a plenty of rooms and spaces for the transfer pricing scholars or academics to study in the future. A first venue to depart from can be found in the relaxation of some of the assumptions supposed in this research, as implied right above. For instance, it is possible to make the transfer pricing examination by having the presupposition stipulating that firm or divisional capacities are limited (e.g. Baldenius and Reichelstein (2006) etc.). Through affecting the transfer volume, this will generate a change in corporate transfer pricing numbers.

Particularly, bilateral monopoly examination may be replicated through iterating the balances in the degree of the bargaining powers of the transacting businesses. As mentioned, in our case, both the intra-group firms have been assumed to have equal bargaining terms. For instance, it might be assumed that monopoly business utilizes a full bargaining power (pressure) over the monopsony business. In that case, the common equilibrium set will exclusively consist of the optimal transfer price and output balances of the monopoly business. Involving cost advantage will further increase the monopoly's operating profit and therefore NPAT figure while further reducing the operating profit and NPAT figure of the monopsony. In other words, the profit differentials arising from the cost advantage will be sharpened.

This study has examined the role cost advantages play on the degree of the corporate operating profits through framing transfer prices. Scholars may for instance explore the effect of information asymmetry on corporate transfer pricing establishments and operating profits. They could also perform a comparative research that compares the relative strengths of information asymmetry advantage versus cost advantage on

corporate financial statements. I am sure that it can yield some interesting insights and implications to a wide transfer pricing community.

Stackelberg model with a sequential game structure has been abstracted to control for oligopoly competition with cost advantage state. Irrespective of legal considerations, a dominant firm model where the dominant firm with the highest market share competes against all the other small market firms may be exploited to replicate the analysis drawing on Stackelberg model. It has been stated that due to market power, dominant firm can affect the market price while on the other hand, small firms, as in the perfect competition case, will remain as price takers. As noted already, although results will not be subject to significant changes, it will yet be a different and original transfer pricing examination which has not been done so far to the best awareness of mine.

Another research venue may be found in application, particularly in the empirical investigation. The main objective of the empirical chapter of this research was to show cost advantage effect through documenting some evidence that cost advantages influence (increase) corporate operating profits under imperfect competition. This was done using ANOVA. ANOVA approach has suggested that operating (funding) cost inversely, significantly, and robustly relates to bank's interest spread or credit margin which is operating profit for a deposit bank. In other words, it has been documented that, under imperfect competition, businesses with cost advantage realize higher operating profits than the ones without cost advantage. In deposit banking terms, this implies that cost advantages increase bank's operating profits as they widen the spread band along declining deposit interest rates. In terms of the research question, this implies that cost advantages rise the operating profits of the businesses running their operations under imperfect competition.

The above empirical analysis has been performed splitting the sample across the bank's asset sizes. The reason was that the less the funding (operating) costs, the larger the asset sizes. This analysis might be conducted using ANOVA again, but with a different split base. For instance, if the same analysis is to be replicated for Turkish capital markets, sample can be partitioned according to the ratio of *Interest Expenses Paid to The Time Deposits in YTL basis* to *Aggregate Time Deposits Collected in YTL basis* (i.e. interest cost per time deposit in YTL). The analysis can be easily replicated for another judicial territory or venue as long as currency base is adapted accordingly. This ratio might be useful since it reveals unit operating cost for the deposit banks as

interest expenses incurring due to time deposits are the bank's highest funding costs. My expectation is that, as in the case of higher asset sizes, a lower interest cost per time deposit would lead the spread to be larger or wider and therefore be interpreted as a cost advantage for banks.

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APPENDICES

Appendix I: A Comprehensive Balance Sheet Format In Accordance With Local GAAP (in millions of YTL)

ASSETS

I. CURRENT ASSETS

A. Liquid Assets

1. Cash in hand
2. Cheques received
3. Banks
4. Cheques given and payment orders (-)
5. Other liquid assets

B. Marketable Securities

1. Common stocks
2. Private sector bonds, notes and shares
3. Public sector bonds, notes and shares
4. Other marketable securities
5. Provisions for diminution in value of marketable securities (-)

C. Trade Receivables

1. Customers
2. Notes receivable
3. Discount on notes receivable (-)
4. Deposits and guarantees given
5. Doubtful trade receivables
6. Provisions for doubtful trade receivables (-)

D. Other Receivables

1. Receivables from shareholders
2. Receivables from subsidiaries
3. Receivables from affiliated companies
4. Receivables from personnel

5. Other receivables
6. Discount on other notes receivable (-)
7. Other doubtful receivables (-)
8. Provision for other doubtful receivables (-)

E. Stocks

1. Raw materials and supplies
2. Work-in-process
3. Finished goods
4. Commercial goods
5. Other stocks
6. Provision for diminution in value of stocks (-)
7. Stock advances given

F. Contract progress cost

G. Prepaid Expenses and Income Accruals for the Following Months

1. Prepaid expenses for the following months
2. Income accruals

H. Other Current Assets

1. Deferred VAT
2. Deductable VAT
3. Other VAT
4. Prepaid taxes and funds
5. Work advances
6. Advances given to personnel
7. Stockcount and delivery shortages
8. Other current assets
9. Provision for other current assets (-)

TOTAL CURRENT ASSETS.....**XXX**

II. NON-CURRENT ASSETS (FIXED ASSETS)

A. Trade Receivables

1. Customers
2. Notes receivable

3. Discount on notes receivable (-)
4. Deposits and guarantees given
5. Provision for doubtful receivables (-)

B. Other Receivables

1. Receivables from shareholders
2. Receivables from subsidiaries
3. Receivables from affiliated companies
4. Receivables from personnel
5. Other receivables
6. Discount on other notes receivable (-)
7. Provision for other doubtful receivables (-)

C. Financial Non-current Assets

1. Long-term marketable securities
2. Provision for diminution in value of long-term securities (-)
3. Subsidiaries
4. Capital commitment for subsidiaries (-)
5. Provision for diminution in value of subsidiaries (-)
6. Affiliated companies
7. Capital commitment for affiliated companies (-)
8. Provision for diminution in value of affiliated companies (-)

D. Tangible Non-Current Assets

1. Land
2. Underground installations
3. Buildings
4. Machinery, equipment and installations
5. Motor vehicles
6. Furniture and fixtures
7. Other tangible assets
8. Accumulated depreciation (-)
9. Construction in progress
10. Fixed asset advances given

E. Intangible Assets

1. Rights

2. Goodwill
3. Pre-operating expenses
4. Research and development expenses
5. Leasehold improvements
6. Other intangible assets
7. Accumulated depreciation (-)
8. Advances given

F. Assets Subject to Depletion

1. Research expenses
2. Preparation and development expenses
3. Other depletable assets
4. Accumulated depletion (-)
5. Advances given

G. Prepaid Expenses and Income Accruals for the Following Years

1. Prepaid expenses for the following years
2. Income accruals

H. Other Non-current Assets

1. VAT deductable in the following years
2. Other VAT
3. Long-term stocks

TOTAL NON-CURRENT ASSETS (FIXED ASSETS).....XXX

TOTAL ASSETS……...XXX

LIABILITIES

I. SHORT-TERM LIABILITIES

A. Financial Liabilities

1. Bank loans
2. Principal and interest payments of long-term loans
3. Principal, installment and interest payments of bonds
4. Bonds and shares issued
5. Other marketable securities issued

6. Premium reserves of marketable securities (-)
7. Other financial liabilities

B. Trade Payables

1. Suppliers
2. Notes payable
3. Discount on notes payable (-)
4. Deposits and guarantees taken
5. Other trade payables

C. Other Payables

1. Payables to shareholders
2. Payables to subsidiaries
3. Payables to affiliated companies
4. Payables to personnel
5. Discount on other notes payable (-)
6. Other miscellaneous payables

D. Advances Taken

E. Advances received for contracts in progress

F. Taxes Payable and Other Liabilities

1. Taxes and funds payable
2. Social security premiums payable
3. Overdue, deferred payables or payables
   On instalments to the state
4. Other liabilities

G. Provisions for Liabilities and Expenses

1. Provisions for tax and other liabilities
   relating to the profit of the period
2. Prepaid tax and other liabilities for the
   Current year profit (-)
3. Provision for severance payments
4. Provision for other liabilities and expenses

H. Deferred Income and Expense Accruals for the Following Months

1. Deferred income for the following months
2. Expense accruals

I. Other Short-Term Liabilities

1. VAT calculated
2. Other VAT
3. Stockcount and delivery surpluses
4. Other miscellaneous short-term liabilities

TOTAL SHORT-TERM LIABILITIES……XXX

II. LONG-TERM LIABILITIES

A. Financial Liabilities

1. Bank loans
2. Bonds issued
3. Other marketable securities issued
4. Premium reserves of marketable securities (-)
5. Other financial liabilities

B. Trade Payables

1. Suppliers
2. Notes payable
3. Discount on notes payable (-)
4. Deposits and guarantees taken
5. Other trade payables

C. Other Payables

1. Payables to shareholders
2. Payables to subsidiaries
3. Payables to related affiliated
4. Discount on other notes payable (-)
5. Liabilities to the state (deferred or payable in instalments)
6. Other miscellaneous payables

D. Advances Taken

E. Provisions for Liabilities and Expenses

1. Provisions for severance payments
2. Provisions for other liabilities and expenses

F. Deferred Income and Expense Accruals for the Following Years

1. Deferred income for the following years
2. Expense accruals

G. Other Long-Term Liabilities

1. VAT deferred or postponed to the following years
2. Other miscellaneous long-term liabilities

TOTAL NON-CURRENT (LONG-TERM) LIABILITIES.....**XXX**

III. SHAREHOLDERS' EQUITY

A. Paid-in Share Capital

1. Capital
2. Unpaid capital (-)

B. Capital Reserves

1. Premium reserves
2. Profit from invalidation of shares
3. Fixed asset revaluation fund
4. Subsidiaries revaluation fund
5. Other capital reserves

C. Retained Earning Reserves

1. Legal reserves
2. Statutory reserves
3. General reserves
4. Other retained profits
5. Special reserves

D. Previous Year's Profits

E. Previous Year's Losses

F. Profit (Loss) for the Period

TOTAL SHAREHOLDER'S EQUITY……**XXX**

Appendix II: A Comprehensive Income Statement Format In Accordance With Local GAAP (in millions of YTL)

A. GROSS SALES

1. Domestic sales
2. Export sales
3. Other sales

B. SALES DISCOUNTS(-)

1. Returns from sales (-)
2. Sales discounts(-)
3. Other discounts (-)

C. NET SALES

D. COST OF SALES (-)

1. Cost of goods sold (-)
2. Cost of commercial goods sold (-)
3. Cost of services sold (-)
4. Cost of other sales (-)

GROSS PROFIT/ (LOSS)

E. OPERATING EXPENSES (-)

1. Research and development expenses (-)
2. Marketing, sales and distribution expenses (-)
3. General and administrative expenses (-)

OPERATING PROFIT/(LOSS)

F. INCOME AND PROFIT FROM OTHER OPERATIONS

1. Dividend income from subsidiaries
2. Dividend income from affiliated companies

3. Interest income
4. Commission income
5. Provisions no longer required
6. Gains on marketible securities' sales
7. Foreign exchange gains
8. Discount interest gains
9. Other income and profit from operations

G. EXPENSE AND LOSS FROM OTHER OPERATIONS (-)

1. Interest expenses on discounted notes (-)
2. Commission expenses (-)
3. Provisions (-)
4. Losses on marketible securities' sales (-)
5. Foreign exchange losses (-)
6. Discount interest losses (-)
7. Other expense and losses (-)

H. FINANCIAL EXPENSES (-)

1. Short-term borrowing expenses (-)
2. Long-term borrowing expenses (-)

PROFIT / (LOSS)

İ. EXTRAORDINARY INCOME AND PROFIT

1. Income and profit relating to previous periods
2. Other extraordinary income and profit

J. EXTRAORDINARY EXPENSE AND LOSS (-)

1. Non-operating department expense and loss (-)
2. Expense and loss relating to previous periods (-)
3. Other extraordinary expense and loss (-)

PROFIT /(LOSS) FOR THE PERIOD

K. PROVISIONS FOR TAXATION AND OTHER LEGAL LIABILITIES (-)

NET PROFIT / (LOSS) FOR THE PERIOD

Appendix III: A Comprehensive Balance Sheet Format For Banks In Accordance With Local GAAP (in millions of YTL)

ASSETS

I.	**CASH AND BALANCES WITH THE CENTRAL BANK OF TURKEY**
II.	**FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT AND LOSS (Net)**
2.1	Financial Assets Held for Trading
2.1.1	Government Debt Securities
2.1.2	Share Certificates
2.1.3	Other Marketable Securities
2.2	Financial Assets at Fair Value Through Profit and Loss
2.2.1	Government Debt Securities
2.2.2	Share Certificates
2.2.3	Other Marketable Securities
2.3	Derivative Financial Assets Held for Trading
III.	**BANKS**
IV.	**MONEY MARKET PLACEMENTS**
4.1	Interbank Money Market Placements
4.2	Istanbul Stock Exchange Money Market Placements
4.3	Receivables from Reverse Repurchase Agreements
V.	**FINANCIAL ASSETS AVAILABLE-FOR-SALE (Net)**
5.1	Share Certificates
5.2	Government Debt Securities
5.3	Other Marketable Securities
VI.	**LOANS**
6.1	Loans
6.1.1	Loans to the Bank's Risk Group
6.1.2	Other
6.2	Non-Performing Loans
6.3	Specific Provisions (-)

VII. FACTORING RECEIVABLES

VIII. INVESTMENTS HELD TO MATURITY (Net)

8.1 Government Debt Securities

8.2 Other Marketable Securities

IX. INVESTMENTS IN ASSOCIATES (Net)

9.1 Associates Accounted for Using the Equity Method

9.2 Unconsolidated Associates

9.2.1 Financial Investments

9.2.2 Non-Financial Investments

X. INVESTMENTS IN SUBSIDIARIES (Net)

10.1 Unconsolidated Financial Subsidiaries

10.2 Unconsolidated Non-Financial Subsidiaries

XI. JOINTLY CONTROLLED ENTITIES (JOINT VENTURES) (Net)

11.1 Jointly Controlled Entities Accounted for Using the Equity Method

11.2 Unconsolidated Jointly Controlled Entities

11.2.1 Jointly Controlled Financial Entities

11.2.2 Jointly Controlled Non-Financial Entities

XII. LEASE RECEIVABLES

12.1 Finance Lease Receivables

12.2 Operating Lease Receivables

12.3 Other

12.4 Unearned Income (-)

XIII. DERIVATIVE FINANCIAL ASSETS FOR HEDGING PURPOSES

13.1 Fair Value Hedging

13.2 Cash Flow Hedging

13.3 Net Foreign Investment Hedging

XIV. TANGIBLE ASSETS (Net)

XV. INTANGIBLE ASSETS [Net]

15.1 Goodwill

15.2 Other

XVI. INVESTMENT PROPERTY (Net)

XVII. TAX ASSETS

17.1 Current Tax Asset

17.2 Deferred Tax Asset

XVIII. ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS (Net)

18.1 Held For Sale

18.2 Discontinued Operations

XIX. OTHER ASSETS

TOTAL ASSETS

LIABILITIES

I. DEPOSITS

1.1 Deposits from the Bank's Risk Group

1.2 Other

II. DERIVATIVE FINANCIAL LIABILITIES HELD FOR TRADING

III. FUNDS BORROWED

IV. MONEY MARKET FUNDS

4.1 Interbank Money Market Funds

4.2 Istanbul Stock Exchange Money Market Funds

4.3 Funds Provided Under Repurchase Agreements

V. MARKETABLE SECURITIES ISSUED (Net)

5.1 Bills

5.2 Asset-backed Securities

5.3 Bonds

VI. FUNDS

6.1 Funds Borrowed

6.2 Other

VII. SUNDRY CREDITORS

VIII. OTHER LIABILITIES

IX. FACTORING PAYABLES

X. LEASE PAYABLES (Net)

10.1 Finance Lease Payables

10.2 Operating Lease Payables

10.3 Other

10.4 Deferred Financial Lease Expenses (-)

XI. DERIVATIVE FINANCIAL LIABILITIES FOR HEDGING PURPOSES

11.1 Fair Value Hedging

11.2 Cash Flow Hedging

11.3 Net Foreign Investment Hedging

XII. PROVISIONS

12.1 General Loan Loss Provisions

12.2 Provision for Restructuring

12.3 Reserves for Employee Benefits

12.4 Insurance Technical Reserves (Net)

12.5 Other Provisions

XIII. TAX LIABILITY

13.1 Current Tax Liability

13.2 Deferred Tax Liability

XIV PAYABLES RELATED TO ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

14.1 Held For Sale

14.2 Discontinued Operations

XV. SUBORDINATED LOANS

XVI. SHAREHOLDERS' EQUITY

16.1 Paid-in Capital

16.2 Capital Reserves

16.2.1 Share premium

16.2.2 Share Cancellation Profits

16.2.3 Marketable Securities Revaluation Reserve

16.2.4 Tangible Assets Revaluation Reserve

16.2.5 Intangible Assets Revaluation Reserve

16.2.6 Investment Property Revaluation Reserve

16.2.7 Bonus Shares Obtained from Associates, Subsidiaries and Jointly Controlled Entities (Joint Ventures)

16.2.8 Hedging Funds (Effective Portion)

16.2.9 Accumulated Revaluation Reserves on Assets Held for Sale and Discontinued Operations

16.2.10 Other Capital Reserves

16.3 Profit Reserves

16.3.1 Legal Reserves

16.3.2 Statutory Reserves

16.3.3 Extraordinary Reserves

16.3.4 Other Profit Reserves

16.4 Profit or Loss

16.4.1 Prior Years' Profit/Loss

16.4.2 Current Year Profit/Loss

Appendix IV: A Comprehensive Income Statement Format For Banks In Accordance With Local GAAP (in millions of YTL)

I.	**INTEREST INCOME**
1.1	Interest Income on Loans
1.2	Interest Received from Reserve Deposits
1.3	Interest Received from Banks
1.4	Interest Received from Money Market Placements
1.5	Interest Received from Marketable Securities Portfolio
1.5.1	Financial Assets Held for Trading
1.5.2	Financial Assets at Fair Value Through Profit and Loss
1.5.3	Financial Assets Available for sale
1.5.4	Investments Held to Maturity
1.6	Finance Lease Income
1.7	Other Interest Income
II.	**INTEREST EXPENSE**
2.1	Interest on Deposits
2.2	Interest on Funds Borrowed
2.3	Interest on Money Market Funds
2.4	Interest on Securities Issued
2.5	Other Interest Expense
III.	**NET INTEREST INCOME / EXPENSE (I - II)**
IV.	**NET FEES AND COMMISSIONS INCOME / EXPENSE**
4.1	Fees and Commissions Received
4.1.1	Non-cash Loans
4.1.2	Other
4.2	Fees and Commissions Paid
4.2.1	Non-cash Loans
4.2.2	Other
V.	**DIVIDEND INCOME**
VI.	**TRADING INCOME (NET)**

6.1 Gains/Losses on Securities Trading

6.2 Foreign Exchange Gains/Losses

VII. OTHER OPERATING INCOME

VIII. TOTAL OPERATING INCOME / EXPENSE (III+IV+V+VI+VII)

IX. PROVISION FOR LOAN LOSSES OR OTHER RECEIVABLES (-)

X. OTHER OPERATING EXPENSES (-)

XI. NET OPERATING INCOME (VIII-IX-X)

XII. AMOUNT IN EXCESS RECORDED AS GAIN AFTER MERGER

XIII. PROFIT/LOSS FROM ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD

XIV. NET MONETARY POSITION GAIN/LOSS

XV. PROFIT/LOSS ON CONTINUING OPERATIONS BEFORE TAX (XI+…+XIV)

XVI. TAX PROVISION FOR CONTINUING OPERATIONS (±)

16.1 Current Tax Provision

16.2 Deferred Tax Provision

XVII. NET PERIOD PROFIT/LOSS FRom CONTUNUING OPERATIONS (XV±XVI)

XVIII. INCOME ON DISCONTINUED OPERATIONS

18.1 Income on Assets Held For Sale

18.2 Gain on Sale of Associates, Subsidiaries and Jointly Controlled Entities (Joint Ventures)

18.3 Other Income on Discontinued Income

XIX. EXPENSE ON DISCONTINUED OPERATIONS(-)

19.1 Expense on Assets Held For Sale

19.2 Loss on Sale of Associates, Subsidiaries and Jointly Controlled Entities (Joint Ventures)

19.3 Other Expense on Discontinued Operations

XX. PROFIT/LOSS ON DISCONTINUED OPERATIONS BEFORE TAX (XVII-XIX)

XXI. TAX PROVISION FOR DISCONTINUED OPERATIONS (±)

21.1 Current Tax Provision

21.2 Deferred Tax Provision

XXII. NET PERIOD PROFIT/LOSS FROM DISCONTINUED OPERATIONS (XX±XXI)

XXIII. NET PERIOD PROFIT/LOSS (XVII+XXII)