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| CHANGE, INNOVATION AND THE REFLEXIVE DYNAMICS OF FINANCIAL REGULATION: TOWARDS A |

| MITIGATION OF THE VICIOUS CIRCLE |

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**CHANGE, INNOVATION AND THE REFLEXIVE DYNAMICS OF FINANCIAL REGULATION:
TOWARDS A MITIGATION OF THE VICIOUS CIRCLE**

PH.D. THESIS OF: LEONARDO BONFANTI

THESIS SUPERVISOR: PROF. YANE SVETIEV

ABSTRACT – THE PROJECT IN A NUTSHELL

The project aims at analysing the interaction between law and change/innovation in the field of finance.

In order to do that, the financial system is observed through the role of one of its main players: banks.

A simplified tool is developed in order to understand the interaction between law, change/innovation and the structure of the financial system.

The tool is then used to analyse 3 main financial shocks. Through such analysis, the tools gains some validation and is then used to understand and predict future change, with particular reference to the Capital Market Union project.

Given the inherent limits of the current regulatory framework in dealing with the reflexive dynamic of law and change and with innovation in general, I explore viable solutions and claim for wider application in order to provide the system with enough flexibility to account for change.

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I. INTRODUCTION

A. Why this project

The cyclical nature of certain events in history gives rise to recurrent theme in academia, so that an intense concentration of certain kinds of scholarship can be observed shortly after a particular event and for several years following, until a substitution of theme occurs or there is no more timeliness in making reference to such event.

As such, scholarship becomes cyclical too, to the same extent – or probably as a consequence of it – the political debate inflames on certain topics in the aftermath of catastrophic events¹.

¹ Evidence can be drawn by the proliferation of financial law and regulation journals following the crisis. Suffice to say that the first issue of the Oxford Journal of Financial law dates March 2015. Numerous scholars addressed the crisis and the consequent and subsequent regulatory reforms. I will provide a list of the most relevant scholarly work of such kind that I have encountered during this project: Niamh Moloney, *EU Financial Market Regulation after the Global Financial Crisis: More Europe or More Risk?* (2010) 47, *Common Market Law Review*, 1317, 1318; Niamh Moloney, *Financial Market Governance and the European Supervisory Authorities: Lessons since January 2011 - Evolution and Revolution?* Draft paper for Amsterdam Centre for European Law and Governance Conference on ‘A New Role for the EU in Economic Governance. Lessons from Emerging and Existing Models’ (2012); Niamh Moloney, *Supervision in the Wake of the Financial Crisis - Achieving Effective ‘Law in Action’ - A Challenge for the EU* in Eddy Wymeersch, Klaus J. Hopt and Guido Ferrarini (eds), *Financial Regulation and Supervision: A Post-crisis Analysis* (Oxford University Press 2012); Mads Andenas, *Financial stability and legal integration in financial regulation*, *European Law Review*, Vol. 38, No. 3 (2013) pp. 335-359; Michelle Everson, *A Technology of Expertise: EU Financial Service Agencies*, LEXS Paper No. 49/2012; Frank Partnoy, *Financial Systems, Crises, and Regulation*, in *The Oxford Handbook of Financial Regulation* Edited by Niamh Moloney, Eilís Ferran, and Jennifer Payne, OUP 2015, Emiliós Avgouleas, *Governance of Global Financial Markets – The Law, the Economics, the Politics*, CUP 2012; Jonathan Macey, *Reducing Systemic Risk: The Role of Money Market Mutual Funds as Substitutes for Federally Insured Bank Deposits*, *Stanford Journal of Law, Business & Finance*, Vol. 17, No. 1, 2011, pp. 131-174; Adam Levitin, *In Defense of Bailouts*, *Georgetown Law Journal*, Vol. 99 (2011), pp. 435-514; James Crotty, “*Structural Causes of the Global Financial Crisis: A Critical Assessment of the New Financial Architecture*”, Working paper Series of the Political Economy Research Institute at University of Massachusetts Amherst (2008); Tamara Lothian and Roberto Mangabeira Unger, “*Crisis, Slump, Superstition and Recovery – Thinking and acting beyond vulgar Keynesianism*” (2011); Roman Tomasic and Folarin Akinbami, *The role of trust in maintaining the resilience of financial markets*, *Journal of corporate law studies*, Vol.11, No.2 (2011), pp. 369-394.

The above is certainly true with respect to the great financial crisis ignited by the failure of the investment bank Lehman Brothers in September 2008. Since then, the political debate on financial regulation has obviously been on the rise and, with it, the related scholarship both in the field of economics and law.

No doubts great opportunities come with catastrophic events, at least in terms of thrust to bring about change and systemic overhaul, so that there is great value in the nurturing and cherishing of dedicated scholarship to support and inform legislative reforms.

Having said that, it is probably worth questioning whether more attention and credit should be given to countercyclical scholarship and its ability to predict events (ex ante analysis) or analyse them with cool-headedness (ex post analysis).

Always with reference to the great financial crisis, it is no secret that some voices have gone completely unheard, notwithstanding their ability to foresee the events that followed.² Though this kind of scholarship necessitates of time and confirmation for its full validation, its ability to offer a diverse perspective and unorthodox skew should be praised and probably valued more than the bulk of articles and books that followed the crisis.

It is with this distinction in mind that I have endeavoured in this project that, on one side, has its inception and was conceived in the immediate aftermath of the great financial crisis of 2008-2009 and, on the other side, comes to light ten years after.

² See, *inter alia*, Raghuram Rajan, *Has Financial Development made the world riskier?*, National Bureau of Economic research, Working paper 11728, November 2005. Rajan analysis is particularly inspired and it should represent, still today, a starting point for a proper assessment of our financial system.

Thus, this project is neither timely nor predictive. Considering that it finds its motive in the crisis, it is not even a cool-headed analysis. I approached financial regulation precisely because of the crisis and I do not and cannot guarantee that my drivers are no bias.

Nonetheless, this peculiar position is likely the weakness and the strength of the project at the same time, and certainly what I benefited the most from. Indeed, as a thorough legal and economic study of the crisis has already been completed and the majority of the connected legal reforms are already in place (and both the former and the latter partially forgotten), this project largely became an analysis of the analysis of the crisis, as well as an analysis and appraisal of the reforms, with the ultimate aim of unveiling the “goods” and the “bads” or, perhaps, simply providing a method of assessment of what we have obtained so far in the understanding and rethinking of financial regulation.

In fact, the project has a very limited prescriptive take and/or claim and it is very much procedural in nature. As I was developing my own tool of analysis, I came to realize that that was probably my highest achievement, certainly the best I could hope for as a young scholar in the field. The fear of inappropriateness and lack of experience prevailed over the hubris of finding a proper solution.

That is why, in the observation and understanding of both the problem and the potential solution, the project offers no more than an approach: an approach in studying the phenomenon of the financial crisis and a connected approach in delivering sound financial regulation. And, as in each and every work adopting similar methods and having similar goals, the key – as well as the potential flaw – lies with the connection between

the former and the latter approach, so that, in the absence of inconsistencies, the success of the solution depends on the quality of the analysis carried out on the problem.

B. Object of analysis and the perspective through which it is observed

Even though almost ten years have now passed by, no concrete work in the field of financial regulation can avoid being inspired by, or at least touching upon, the great financial crisis of 2008-2009. Probably, we are now experiencing the tale of what I have referred to as being “cyclical scholarship” and, in any event, when we think about the great financial crisis we are still far away from a “water under the bridge” scenario.

There might be a practical reason for that: to the extent scholars try to tackle problems, a crisis is a problem in and of itself. Even more than that, crises are usually caused by a variety of reasons, each of them constituting a problem. In other words, a crisis makes it relatively easier for a scholar to identify a problem and to develop on it in order to propose a possible solution.

That is why, once the great financial crisis was deconstructed in single components, each of them became the focus of a dedicated analysis, bringing about prescriptive claims for correction. Many of such claims eventually turned into legislation.³

Therefore, current projects on financial regulations can go down different paths. Without the arrogance of being exhaustive, it is worth mentioning a few.

³ That is the case, for example, with derivative OTC, specifically tackled by the Dodd-Frank Act in the United States, or the Volcker Rule (always contained in the Dodd-Frank Act) that prohibits banks from carrying out certain investments with their own accounts.

i) Moral hazard⁴;

Moral hazard is the hazard created or incentivized by the absence of limitation of liability to a particular course of action. When an individual is insured against the risk that may derive from his/her course of action, it is likely that he would take less care of acting diligently. A term developed in the insurance industry, it became quite popular in the aftermath of the financial crisis in order to describe what led financial institutional managers to take on substantive risk, even more risk than their financial institution could bear.

There are a number of explanations to moral hazard and each of them has something to do with the financial market we have created through legislation and regulation: there are 1) corporate governance reasons, 2) dimensional reasons and 3) systemic reasons that incentivize managers to act hazardously and they are far more embedded in corporate law and regulation than one might think.

- 1) From a corporate law perspective, it is not just short-termism or the remuneration structure that drives managers to take on more risk: managers tend to behave in such a way as to maximize their shareholders' returns and, when the firm is insolvent, it makes no difference to shareholders whether creditors can be paid back or not, as shareholders' claims are residual. Thus, in a scenario of crisis of the firm, a risky project with high returns capable of bringing the firm back in

⁴ A comprehensive study of moral hazard is contained in Geoffrey Miller, *“Trust, Risk and Moral Hazard in the Financial Markets”*, il Mulino, 2011; see also Frank Partnoy, *Financial Systems, Crises, and Regulation*, in *The Oxford Handbook of Financial Regulation* Edited by Niamh Moloney, Eilís Ferran, and Jennifer Payne, OUP 2015.

business is a much more appreciated solution to shareholders than a prudent management to safeguard creditors' claims.

- 2) From a dimensional point of view, the concept – or better, belief – of “*too big to fail*” institution has certainly played a role in steering managers' behaviours towards a less prudent management. Once more, the hypertrophy of financial institution is a result of regulatory choice and design rather than a “natural tendency of market actors”, assuming such tendencies really exist. In the United States, for example, the repeal of the Glass-Steagall Act has led to the creation of financial behemoth that exacerbated the “*too big to fail*” belief⁵.
- 3) Connected to the dimensional aspect⁶, yet deserving a self-standing role in the quest for the root of moral hazard is the systemic tool of “bail-out”, the only instrument (arguably this too embedded in the financial market that we have designed)⁷ capable of keeping the system alive in a time of crises. The awareness of an eventual bail-out offers managers yet another reassurance that consequences of excessive risk will be dealt with in one way or the other.

⁵ It must be pointed out that a market dominated by a few big financial institutions has never been the plan of the banking system in the USA. Indeed, despite competition motives that led to a scrupulous monitoring of the quantity of banks, a scattered and localized population of institutions (deeply rooted in the local area of its depositors) was thought to be a desired outcome. See Richard Carnell, Jonathan Macey, Geoffrey Miller, “*The Law of Banking and Financial Institutions*”, Aspen Publishers, 2009

⁶ Arguably, the larger the firm the more likely its eventual bail-out.

⁷ See Pistor K., “*A Legal Theory of finance*”, Columbia Law School, Public Law & Legal Theory Working Paper Group, May 2013.

ii) Systemic risk and contagion⁸;

Systemic risk deals with the interconnectedness of firms. If moral hazard explains why firms take on substantive risks, systemic risk measures (or better, monitor) how the effects of such risk affects other firms. We have created world-wide interconnected financial markets and, as a result, a shock to a single firm or to a single market is capable of reverberating through the world and transmitting the shock to a multitude of other firms.

Arguably, each of the above represented a weakness in the pre-crisis regulatory framework and, as such, contributed to the unravelling of the crisis itself.

There is yet another perspective through which the great financial crisis can be observed and that is through financial innovation. Despite innovation is an issue belonging to a higher level of analysis, capable of explaining a wider set of problems in the financial field, it played a significant role in the great financial crisis too. Thus, the benefit of analysing financial innovation as a phenomenon is twofold: the contingent benefit stays with the capability of explaining certain aspects of the great financial crisis, shedding lights on further hidden flaws of the regulatory system; the general benefit, instead, is represented by its wider application to financial shocks, so that – though we cannot predict with precision the reasons behind the next financial crisis – we can make a safe bet on the presence of financial innovation in the next crisis's list of suspects.

⁸ See Hal Scott, *Interconnectedness and Contagion*, November 20, 2012; see also, Rosa Lastra, *Systemic risk and Macro-prudential supervision*, in *The Oxford Handbook of Financial Regulation* Edited by Niamh Moloney, Eilís Ferran, and Jennifer Payne, OUP 2015.

To be clear, this is not to say that the analysis of financial innovation is more important than any other issue listed above, nor that it can rise to explanation of all evils. It is no panacea.

Yet, its inherent features turn financial innovation into a core topic of financial regulation, even regardless of any particular crisis, shock, or catastrophic event.

There is something about innovation that makes a fool out of the law and, as I claim in this work, in the financial field that is particularly clear.

Now that I have spoiled the main character of the story, it is worth mentioning that the story will not be a biography of financial innovation, a chronological history of its adventures to prevail over law, to be caught by it or to make truce with it. Nor it will span through the wide spectrum of financial actors, touching upon each and every of them. Indeed, there has been quite a lot of innovation involving the type and number of players in the financial field: private equity funds, hedge funds, pension funds, all methods to pull money together and transform it in investments⁹.

However, this work will not deal so much with these modern financial entities, despite them being a clear sign of innovation. To the contrary, the spotlight will be placed on the most ancient kind of financial institution, i.e. banks. There has been a great deal of

⁹ We can call it institutional innovation. Institutional innovation is certainly one the main aspects of the great financial crisis, most commonly known under the name of shadow banking – i.e. bank like institutions that perform bank-like activities shunning banking regulation. According to several reports and scholars, financial transactions run by shadow banking institutions is one of the recognized causes of the great financial crisis. See, *inter alia*, *Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, January 2011.

innovation that affected what banks do and how they do it, so that there is enough material to work on.

C. Why banks: a simplification of the structure of financial markets

Banks' role has always been central in a market economy. Once society has organized itself around the market, the generation of surplus becomes almost inevitable and banks represent the main means to channel such surplus into more wealth.

Thus, the fundamental role played by banks in the redistribution of money ought to be acknowledged: a proper banking system is capable of transferring capital (and its potential in terms of empowerment) from risk averse entities to risk taking entities, while at the same time “multiplying” (so to speak) the amount of money available in the market through leverage ratios.

This being the main function we have entrusted banks with, we also ought to recognize how banks are different from other types of financial institutions in performing such particular task.

This exercise may well reveal the peculiarities of banks with respect to other institutions: for example, society's investment in production is “subjectively” mediated in the case of banks, while is often “objectively” mediated (if at all) in the case of shadow banking or capital markets. In other words, banks act as a screen between the original lender (the depositor) and the final borrower (the firm), and as a consequence they (i.e. banks) bear the risk, remunerated by interest rates; in the case of capital markets and shadow banking, instead, society invests in production by directly bearing the risk, whose extent depends on the actual object of the investment (debt obligation as opposed to equity, for example).

This means that the financial intermediary role is simply to provide a service, and its remuneration may or may not be linked to risk¹⁰.

Though the above represents a simplification of the system, it is sufficient to highlight the significant intermediation role of banks. And precisely because of this role, banks have always been the key subject of financial regulation, both in terms of restrictions and benefits. Indeed, though they are probably one of the most heavily regulated entity of a free market, they have also benefited over time from special treatments, last but not least the bail-out system by way of which banks' risk is eventually reverted to society in order to avoid bank-runs.

¹⁰ Others, such as Lawrence White distinguish between financial intermediaries and financial facilitators: *“At the beginning, an important distinction among firms in the financial services sector is worthwhile: between financial intermediaries and financial facilitators. Financial intermediaries are firms that hold financial assets (e.g., loans, mortgages, bonds, equity securities) and issue liabilities (such as deposits, insurance policies, pension obligations, mutual fund shares, etc.) on themselves, thereby intermediating between their liability holders and the ultimate investments to which their liability holders' funds have been devoted. Familiar types of financial intermediaries include banks and other depository institutions (such as savings banks, savings and loan associations, and credit unions); insurance companies; pension funds; mutual funds; mortgage conduits; finance companies; leasing companies; and venture capital firms. The liabilities of these financial intermediaries constitute important assets for the nonfinancial business and household sectors of the U.S. economy. In addition, firms that are not usually considered to be part of the financial sector are increasingly acting as financial intermediaries. Every company that extends trade credit to its customers (e.g., allowing payment to be due 30 or 60 days after the delivery of goods or services) is acting as a lender; in some cases, these trade credit arrangements have subsequently led to formal finance company arrangements, such as General Motors' GMAC affiliate or General Electric's GE Capital. And some companies, such as AT&T, have explicitly plunged into financial services through the issuance of credit cards. The second category of firms -- financial facilitators -- facilitate the financial transactions between the primary issuers of financial liabilities -- e.g., governments, enterprises, and household borrowers -- and the investors who purchase these instruments (and in whose hands they are financial assets). In this category are stock brokers, securities underwriters, market makers, dealers, investment bankers, mortgage bankers, mortgage brokers, financial advisers, rating agencies, accountants, financial analysts, and the financial press. Though firms in some of these categories may hold some financial assets, their holdings are largely incidental to their facilitating roles.”* See Lawrence J. White *“Technological Change, Financial Innovation, and Financial Regulation in the U.S.: The Challenges for Public Policy”* (August 1996). WPS S-96-45. Available on SSRN at <https://ssrn.com/abstract=8072>.

D. Disclaimer - system overhaul and two basic questions

Having identified the main character of the play as well as the main spotlight through which its role in the story is presented, it is fairly honest to specify upfront what are the main intended limits of this work (without making reference to the numerous unintended limits). One of them is the scope of what this project tries to achieve in bringing about a hypothetical proposal for a systemic overhaul. Indeed, when we think about regulation, or more accurately, about the exercise of regulating a particular phenomenon, there are at least two main questions we ought to ask ourselves: what do we want to achieve with regulation and how are we going to achieve it. In other words, (x) the end and (y) the means of the regulation exercise. Though prima facie the distinction might seem trivial, the borderlines between the two are often blurry and, based on the level of the analysis, they can also be interchangeable, so that what on one level is characterised as the end, on another level of analysis can be seen as the means. It is hard to define what exactly falls within the realm of the end and what instead pertains to the means of that particular end. I will make the effort to clarify this point for the sake of setting, once and for all, the expectations of the reader.

(I) What do we want to achieve? Excluded from the scope of work

There are many purposes that a financial system can pursue; sometimes, we do not even question what the regulatory framework ought to achieve, as we take it for granted. But if we were to ask ourselves right now, we would probably not be able to answer with enough accuracy.

We would probably guess that the regulatory framework should both facilitate the circulation of capital and its supply where is needed; in other words, it should keep the “*financial market ball rolling*”, according the most basic rules of supply and demand. To facilitate the market entails also to provide enough means of investments, so that both supply and demand can choose the best instrument to fulfil their respective expectations (e.g. investors that do not want to risk too much and entrepreneurs that do not want to lose control over their business can both be satisfied by a debt obligation instrument whereby the investor would be subject only to credit risk and the entrepreneur would not have to renounce its decision power).

Certainly, that is one of the possible answers to the question “*what is the financial regulatory system to achieve*”; yet, there are many others: (i) there is investors’ protection to balance information asymmetries, or (ii) financial stability to make sure that the ball will keep rolling no matter what. And, if there is more than one objective that the financial regulatory framework is to achieve, how do we balance them with each other, what is the hierarchy? Once more, a further question that we are not capable of answering straightforwardly.

Precisely because the answer to the above can vary (i) from time to time, (ii) from country to country, (iii) from ideology to ideology, this work is not going to deal with it. Thus, the reader will not find a solution to a particular problem, nor the most adequate mean to achieve a particular goal. This work is about an approach to regulation, regardless of the ends that are to be achieved.

(II) How are we going to achieve it? Included in the scope of work

As anticipated above, this work is procedural in nature. It analyses the relationship between regulation and its effects, without paying too much attention to such effects (except for the core of the analysis regarding financial shocks) nor to the intended goals that the regulation aimed at achieving.

In this respect, the analysis is, at the same time, both similar and different to the impact assessment studies run by the EU Commission¹¹. Similar in that it studies the effects of regulation on the targeted subject matter; different to the extent that (i) it is not specific to a certain piece of legislation and (ii) it is not interested in a micro-assessment of the effects but to systemic effects.

It is very much about 1 cause (financial regulation) → 1 effect (financial shock) and about how such cause-effect relationship can be mitigated.

¹¹ Or by the Office of information and regulatory affairs (OIRA) in the United States. For a simple explanation of the activities carried out, respectively, by the former and the latter, see https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/impactassessments_en and <https://www.whitehouse.gov/omb/information-regulatory-affairs/>.

II. CHAPTER 1 – THE THEORETICAL UNDERSTANDING BEHIND THE ANALYSIS

Explaining the theoretical understanding behind any work may often result to be the most challenging part of the work itself. It is about teaching the reader how to look at a particular issue with our own eyes. That can include a thorough explanation of where you are coming from in order to share your background and therefore your baggage, so that commonality of knowledge may result in common views about the issue at hand.

This is a relatively easy exercise when we are observing the problem through the lenses of one single theory or theoretical framework, while it gets trickier when the observer is influenced by multiple theories, intertwined to the point that it becomes almost impossible to separate them and describe them one by one.

Thus, you are left with no choice but to describe them as a whole. The problem with that is that you eventually produce a theory of theories, in the effort to attribute some sort of logical sense to the medley of theoretical understanding that you have used or are using to analyse the problem and to find a suitable solution.

I have no intention, nor pretention to come up with a theory of theories, as I do not mean to produce a theoretical work that would be way out of my depth. Instead, I will be briefly mentioning the theoretical approaches that did influence my analysis; though there will be no full map to the path I have followed, the cardinal points will be made clear to the reader so that each passage may sound grounded rather than coming out of a clear blue sky. Let's call, for sake of simplicity, these cardinal points the meta-theory of the work.

What will certainly be explicated is the by-product of the theoretical framework, i.e. the tool or system that I have used to carry out the analysis. It is the result of the primary observation of the phenomenon, hence a secondary level of theory. Precisely because of it, it cannot be considered of general application, but rather a bespoke tool that have capabilities limited to the field of analysis which is devoted to. That does not exclude the capacity of larger uses, but it warns the reader of the inherent limitations of what he/she is about to know about.

A. Building a bespoke tool of analysis

The purpose of the following chapters is to take the reader through the construction of my own tool of analysis. To be clear, it is in and of itself an analysis of the phenomenon of innovation, so therefore it is part of the research result. However, given the structure I have adopted, the tool of analysis does not derive from an inductive process. To the contrary, it is mainly an abstract analysis of innovation, carried out with the help of that observation process that I have described before and that I have dubbed meta-theory. The empirical validation of the tool comes as a consequence of its application to selected negative events that have historically characterised financial markets.

The meta-theory that led to the following analysis can be described under many different layers. The basic and simplest one is no doubt represented by the understanding of the economic and financial model as a purely human construction, with no inevitable or natural element. There is no given component in the way humans economically interact and even the basic components of the economic system as we know it today (i.e. property

and contracts) are legal constructs created for the functioning of the economic system we decide to adopt¹².

B. The innovation/change dynamics and its relationship with the law

Innovation is a constant in humanity. As a constant, it must be inherent in the human being, maybe the expression of his/her curiosity or of his/her need to thrive or simply to survive (surely that was the case at the beginning of human society).

The pace of innovation, however, has not been constant. One may assume that, the more innovation we have now, the less we should have later, since more innovation might entail less room for truly innovative things. Yet, such assumption has been proven wrong, as innovation is indefinite and there are no limits to it over time. Innovation is self-reinforcing, a self-sustained virtuous circle: the world wide web was a breakthrough, but soon after it evolved to web 2.0, and everything changed again, immensely¹³.

In this respect then, innovation is a pain in the regulation's neck: in order to properly regulate, you have to know the existence of a phenomenon, to understand it, to identify its potential harmful aspects and to find suitable instruments to limit such aspects, without inhibiting, at the same time, its beneficial one. These being only some yet necessary steps of the regulation process, it is clear that innovation escapes the boundaries of the latter

¹² Such understanding is one of great achievements of the Law and Development field of study. Reference to relevant scholarship can be numerous and all worth reading. For a short selection, see Karl Polanyi, *The Great Transformation*, Beacon Press, 2001, J. S. Furnival, *Progress and Welfare in Southeast Asia: A Comparison of Colonial Policy and Practice*, Secretariat, Institute of Pacific relations (1941).

¹³ See, *How Web 2.0 is changing the way we work: An interview with MIT's Andrew McAfee*, McKinsey Quarterly, 2009.

by its very nature; indeed, you can hardly regulate *ex ante* something you barely know the existence of, and innovation continuously and increasingly brings about new things.

In other words, regulation continuously run after innovation, trying to catch it; unfortunately, more often than not, by the time regulation has caught a phenomenon, the latter evolves so that the chase starts again with (x) one always leading (innovation) and (y) the other always following (regulation).

To get the idea, one may think of Wile E. Coyote and the Road Runner: the Coyote will never get Road Runner, no matter how hard he tries, no matter what tools he uses. The Road Runner will always be at least one step ahead, and the poor coyote will only get more and more frustrated each time.

In the financial field, the situation is further exacerbated and one may wonder how that could even be possible. Truth is that in the financial field, regulation itself is one of the main drivers of innovation. Even more than that, law is sometimes the means through which financial innovation materialized¹⁴.

Examples of both cases are numerous and may go way back in time. An historical (re)collection is indeed a fascinating exercise but falls outside the scope of this work so

¹⁴ I personally consider law as a whole, regardless of the numerous fields that compose it: indeed, those fields span from the basic distinction between private and public law (i.e. law regulating relationship between private actors and law regulating relationship between private and public actors) to a set of subfields divided by (i) the subject matter of the law, (ii) whether it sets general principle or it is specific, (iii) whether it is issued by the political power (e.g. Parliament) or by groups of experts or agencies entrusted with particular duties and powers. Truth is that new frontiers and new methods of studying the law have unveiled the blurry boundaries amongst such categories and fields: see, *inter alia*, Hans-W Micklitz, *The Visible Hand of European Regulatory Private Law—The Transformation of European Private Law from Autonomy to Functionalism in Competition and Regulation*, Yearbook of European Law, Volume 28, Issue 1, 1 January 2009, Pages 3–59.

that I will pick just a couple of instances for the purpose of explaining myself, without proving that the interwoven relationship between law/regulation and financial innovation is a constant in history. I will save that for a future piece of work.

C. Law as a driver of financial innovation

Without skirting the risk of sounding obvious, one of the most blatant and renown drivers of financial innovation is tax regulation.

The effects of tax regulation over business actors is well known, international corporate structure and transfer pricing being only two clear examples that we can observe daily. But I would like to be more precise than that and cite the analysis of Merton Miller.

Among the most exciting financial periods of the past century we can no doubt include the 1980s and the 1990s. During those decades¹⁵, Merton Miller dedicated a piece to financial innovation¹⁶, with the purpose of distinguishing between simple innovation and truly significant one.

¹⁵ The mere fact that Miller's paper dates back 30 years from now highlights that the issue is not new. To be honest, issues are hardly new in history, but rather cyclical: they came and go, they become popular at a certain moment in time and then get relegated to the background of the picture until a specific event - let's say a financial crisis, perhaps - dusts it off and brings it back to popularity. Scholars should be savvier in this respect: it is impressive the quality and quantity of papers in the banking regulation field, during and following the US savings and loans crisis of the 1980s and 1990s. In such period, scholars tackled many of the issues that became popular, once again, after the 2008 great financial crisis. See, *inter alia*, Jonathan Macey and Geoffrey Miller, *Bank Failures, Risk Monitoring and the Market for Bank Control*, Columbia Law Review, Vol. 88, No. 6, 1988, pp. 1153-1226; Helen Garten, *Banking on the Market: Relying on Depositors to Control Banks Risks*, Yale Journal on Regulation, Vol. 4, 1986, pp. 129-172; Jonathan Macey and Elizabeth Garrett, *Market Discipline by Depositors: A summary of the Theoretical and Empirical Arguments*, Yale Journal on Regulation, Vol. 5, 1988, pp. 215-239; Krishna Mantripragada, *Depositors as a source of market discipline*, Yale Journal on Regulation, Vol. 9, 1992, pp. 543-574.

¹⁶ See Merton H. Miller, *The Last Twenty Years and the Next*, the Journal of Financial and Quantitative Analysis, Vol. 21, No. 4 (Dec., 1986), pp. 459- 471; *Financial Innovation:*

According to Miller, tax changes are a major impulse of financial innovation, an “*initiating force*” as he dubbed it. The purpose of such kind of innovation is usually to exploit the rate differentials between one source of income and the others. As investors shift to a different rate using financial instruments, most governments are likely to alter the structure of the rate differentials, thus creating new opportunities for financial innovation¹⁷.

But it is not all about tax. Miller itself recognizes that other types of regulation are a significant source of innovation: it could be regulation affecting the structure of a particular institution, or simply the structure of a particular market. For example, restrictions over interest rates on bank deposit have been a significant driver for new interest bearing yet safe form of investments¹⁸.

Through the concept of *regulatory dialect*, in the late 1970s Edward Kane explained the interaction between regulators’ activities and “*regulatees’ response in order to short-circuit regulator intention both by finding and exploiting loopholes*”¹⁹. According to

Achievements and Prospects, Journal of Applied Corporate Finance, Vol.4, No.4, (1992) pp. 4-11.

¹⁷ “For a variety of reasons - including especially the desire to blunt the force of previous successful innovations by taxpayers - most governments (or, more properly, the shifting coalitions of interest groups using that vehicle for protection and advantage) prefer to keep changing the structure, thereby altering the internal rate differentials and creating new opportunities for financial innovation. This endless sequence of action and reaction has been aptly dubbed the “regulatory dialectic” by Edward Kane of Ohio State University. Note that changing the tax structure both motivates and defines a “successful” innovation. Each innovation that does its job successfully earns an immediate reward for its adopters in the form of tax money saved. The government is virtually subsidizing the process of financial innovation just as it subsidizes the development of new seeds and fertilizers, but with the important difference that in financial innovation the government’s contribution is typically inadvertent.” Miller, *supra*, p. 461.

¹⁸ See Lawrence J. White “*Technological Change, Financial Innovation, and Financial Regulation in the U.S.: The Challenges for Public Policy*” (August 1996). WPS S-96-45. Available at SSRN: <https://ssrn.com/abstract=8072>.

¹⁹ See Edward Kane, *Impact of Regulation on Economic Behavior - accelerating inflation, technological innovation and the decreasing effectiveness of banking regulation*, The Journal of Finance, Vol 36, No.2, 1981, pp. 355-267 “*Our explanation proceeds within the framework of the*

Kane, this dialect describes how economic actors are incentivized by the regulatory system to do “things differently” – in other words, to innovate²⁰.

This was the case 30 years ago and it is still the case today: it is no secret that many improvements in the securitization process and in securitized instruments are a consequence of banks extensive use of securitization to bypass capital ratios imposed on them²¹ (s.c. prudential regulation).

All the above examples are a drop in the ocean. Yet, they convey the idea of what I have in mind when I claim that the relationship between regulation and innovation is particularly complicated in the financial field. However, to get the full picture, another layer of complexity ought to be taken into account.

regulatory dialectic (Kane [1977]). This concept embodies an interpretive vision of cyclical interaction between political and economic pressures in regulated markets. It treats political processes of regulation and economic processes of regulatee avoidance as opposing forces that, like riders on a seesaw, adapt continually to each other. This alternating adaptation evolves as a series of lagged responses, with regulators and regulatees seeking to maximize their own objectives, conditional on how they perceive the opposing party to behave. Market institutions and politically imposed restraints reshape themselves in a Hegelian manner, simultaneously resolving and renewing an endless series of conflicts between economic and political power. The approach envisions repeating stages of regulatory avoidance (or "loophole mining") and re-regulation, with stationary equilibrium virtually impossible." p.355. See also, by the same author, Good Intentions and Unintended Evil: The Case Against Selective Credit Allocation, Journal of Money, Credit and Banking, Vol. 9, No. 1, Part 1 (1977), pp. 55-69.

²⁰ “Into their conceptions of how policy instruments work, authorities need to incorporate the dialectical economic and political responses of regulatees and their less-regulated competitors. Until the concept of regulation-induced innovation begins to play a major role in the policymakers’ analysis of the effects of alternative forms of innovation induced re-regulation, the possibility of financial instability remains a serious threat.” Edward Kane, *Policy implications of structural changes in financial markets*, American Economic Association Papers and Proceedings, Vol- 73, No. 2 (1983), p. 100.

²¹ See, for example, Dan Awrey, *Complexity, Innovation, and the Regulation of modern financial markets*, in 2 Harvard Business Law Review, 236 (2012), at 271 and note 182.

D. Law as an instrument for financial innovation

When we think about financial innovation, we usually have in mind technological developments and mathematical application²² in the field, or better a combination of the two such as high frequency trading by software using algorithms that calculate risks and rewards of particular instruments.

But that is just part of the story, probably not the most significant one, although the spot is usually on such kind of issues and on their mysterious functioning. Thus, it might sound surprising that, apparently, one of the first most significant financial innovation was the limited liability company²³- a legal construct. Even more surprisingly, many inventors of new financial products were not employed by investment banks but by law firms, and they were lawyers²⁴.

If we stop for a moment to think about it, there should be no surprise. Law, private law in particular, has always been about allocating risk and financial markets are about allocating resources and risk. Contracts are about allocating risk, and financial instruments are contracts²⁵.

²² Eg. stock trading by using algorithms, known in the financial jargon as “*algo trading*” or “*algo trader*”.

²³ See, lectures of noble laureate Robert Shiller in the context of the Financial Market course held at Yale University, 2011, available on iTunes University.

Equity and debt are legal constructs resulting from the subordination of a companies’ creditors (another legal construct): shareholders are subordinated creditors of the corporation they hold shares in with respect to bond holders or commercial creditors of that same corporation.

²⁴ Creation of financial products has long been a factor central to competition among law firms: “*one of the four ways to make partner at Sullivan & Cromwell is to [i]nvent a new securities instrument*”, Henry Hu, *New Financial Products, the Modern Process of Financial Innovation, and the Puzzle of Shareholder Welfare*, 69 Tex. L. Rev. 1273, 1990-1991 at note 7, p. 1275.

²⁵ Insert debate over certain type of instrument and their nature as mere contract or as property.

We should always beware this legal short-circuit: governments use law to control and limit certain types of innovation, but as soon as they do that, they incentivize private actors to use law to overcome those very same control and limits²⁶.

Of course, that is no excuse to avoid addressing the issue of how to regulate innovation in the financial sector. To the contrary, it provides a better understanding of the innovation phenomenon that can be insightful in any attempt to study a theory of financial regulation dedicated to the topic of innovation.

E. Law as an instrument of stabilization

Law is also, at the same time, the instrument utilized to bring stabilization to the system. Through law, we mould the market (or at least we try to do so) in order for it to deliver positive results, avoiding –to the maximum extent possible– bad results.

A few examples should suffice to make this point clear: (i) through prudential regulation, we try to make sure that banks remain solvent and capable of dealing with certain shocks²⁷; (ii) through macro-prudential monitoring, we supervise systemic risk and develop legal tools to intervene when deemed necessary²⁸; (iii) through corporate

²⁶ In order not to sound neo-liberal, stating the existence of a legal short circuit does not amount to a praise for de-regulation. Deregulation is an act that spurs innovation in a similar way to regulation, as Merton Miller himself pointed out. Thus, there is no avoidance of the short circuit by acting through deregulation.

²⁷ As it is the case with capital requirements standard set by the Basel committee on Banking Supervision. For an overview, see Basel committee on Banking Supervision, *Core Principles for Effective Banking Supervision*, 2012 or visit <https://www.bis.org/bcbs/index.htm>. In the EU, the field is regulated by the Capital Requirements Directive (Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC).

²⁸ As it is the case with the European Systemic Risk Board, established by Eu Regulation 1092/2010 following the de Larosière report of February 2009.

governance, we try to ensure good governance of financial institutions²⁹, (iv) while through financial regulation (in the narrower sense) we try to make sure that investors are protected as market participants³⁰.

In a nutshell, by means of the law we try to structure the system firstly to ensure its survival and orderly functioning and secondly to deliver certain pre-selected results.

F. The paradoxical role of the law in innovation and change

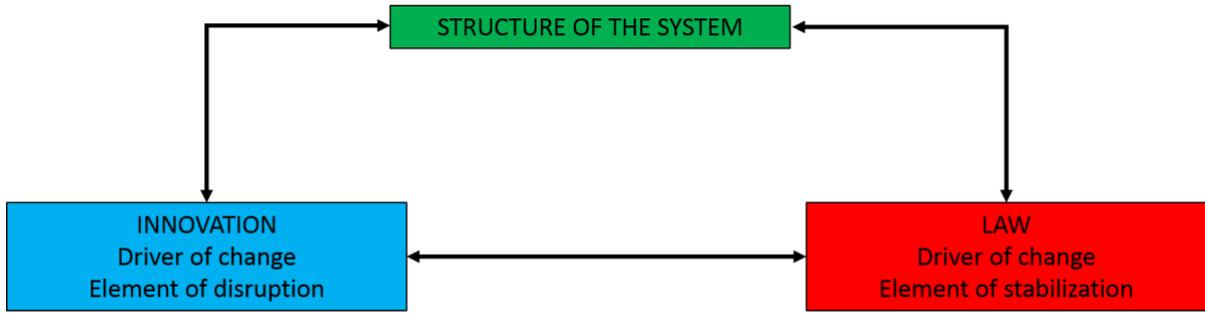
By summarizing all the above roles played by the law, we find out that legal norms are – at the same time – the virus and the cure, the element that bring about change and innovation (i.e. an element of disruption) and the way in which such disruption is cured, stabilized, or even neutralized for future purposes.

The diagram below shows the constant reflexivity³¹ of the dynamics in which each element influences the other as in a circle.

²⁹ Corporate governance is regulated by numerous sources of law, starting from regular corporate law rules that are further specified, in the case of financial institution, by national banking regulation and by national banking supervisors (i.e. Central Banks). In the EU, the structure of regulation and standards is even more complex: the ECB, the Single Supervisory Mechanism and the European Banking Authority all play a role in defining and establishing better standard for governance of banks. See also Guido Ferrarini, *Understanding the Role of Corporate Governance in Financial Institutions: A Research Agenda*, ECGI Law working paper 347/2017.

³⁰ The list can be long: for the EU, we can make reference to Regulation 600/2014 (MiFIR) and Directive 65/2014 (MiFID II); for the US, Public Law 111–203—JULY 21, 2010, better known as the Dodd-Frank Wall Street Reform and Consumer Protection Act

³¹ The term reflexivity has numerous yet similar meaning depending on the field in which the term is used. For a general overview of the concept, as applied to economics and law, see J. Lenoble and M. Maesschalk, *Toward a Theory of Governance – The action of Norms*, 2003, Kluwer Law International.



III. CHAPTER 2 - PRACTICAL EXAMPLES OF HOW THIS DYNAMIC HAS PLAYED IN THE PAST

Banking/financial crisis are often followed by economic depression. Though the key role of banking crisis in the subsequent economic depression is sometimes debated, there is clearly some kind of correlation between the two: however, to establish a causal relationship between the economic crisis and the banking crisis is a rather hard task: probably each has its own triggering event and then they mutually reinforced each other as in a vicious circle. Be it as it may, 3 major regional and/or world depressions have been anticipated by a banking/financial crisis.

Therefore, I have selected 3 economic crises that have been anticipated by a banking/financial crisis, namely (i) the 1929-1933 US stock market crash, (ii) the Japanese lost decade and (iii) the Great Financial Crisis of 2008, in order to test whether the dynamic of law described in the previous chapter has played some role.

In order for the test to be run in a scientific way, I do rely on the work of others to state clearly if and to what extent law and regulation have played a role in bringing about or exacerbating each crisis described. I then merely elaborate the findings that others have made in order to fit them in the wider scenario of this work.

As in any major event having substantial and widespread effects, a crisis is not the mere result of 1 cause – effect correlation, but rather the sum of many causal correlations: more precisely, there are often triggering events whose effects are both exacerbated and spread

out by other factors that either boost the effects of the triggering event or simply impede such effects to be dealt with; domino effects often follow.

To simplify we can thus distinguish at least two macro-categories of causes: *(i)* problem-generating sources and *(ii)* problem-exacerbating sources. Many other categories can be identified on a case by case basis.

A test delivering ideal results would demonstrate that law and regulation played, in each case, a role both in *(i)* generating the crisis (i.e. in triggering the shock – for this purpose we shall define them as “**Triggering Causes**”) and subsequently in *(ii)* exacerbating and spreading out its effects (“**Exacerbating Causes**”). However, I believe that even a significant role in one of the two categories described above would be sufficient to validate the model or, to say the least, would not amount to invalidating it.

The analysis will be carried out on a crisis by crisis basis.

A. 1929-1932 US stock market crash

The 1929-1932 US stock market crash (“SMC”) is probably one of the historical financial crises we know more about; certainly, one that was followed by a serious economic depression.

Despite that, it is not easy to find scholarly work that deal with such crisis with sufficient in-depth analysis; the main sources belong to the historical field and, if on one hand, authors have only partially experienced the crisis, on the other hand they have largely benefited from hindsight.

Recent years have experienced a “revival” of the topic in the effort to make comparisons with the Great Financial Crisis of 2008. As I have anticipated at the *incipit* of this work, fashion brings quantity in scholarly work, but one should be wary of quality. Nonetheless, quantity offers a diversification of perspectives on the topic.

From a factual point of view, the SMC was characterized by a series of black days in the US stock market: on Thursday, 24 October, the US stock market crashed by 11%, on Monday, 28 October there was another 13% fall and a further tumble of 12% occurred on Tuesday, 29 October. An anxiety outbreak followed, and bank runs began: in 1929, 650 banks failed and yet more failures were to come in the following years. The banking panic was locally situated initially and spread subsequently to the entire USA and the world at large³².

Given the correlation between bank run and bank failures, the orthodox debate on the causes of 1930s banking crisis revolves around the issue of (i) illiquidity and (ii) insolvency of bank businesses as a result of economic contraction³³. While a lot can be said about each being one size of the same coin, that contributes only partially to the purpose of this work: certainly, it is difficult to find any law-related element in either of two main identified causes – hence, most likely law and regulation did not play a role in the triggering of the crisis; yet, starting from a given problem (whether illiquidity or

³² There are numerous sources that offer an historical description of the 1929 stock market crash and the banking crisis that followed: from the general and simple narrative of history.com, to the more accurate and specialized narration of the federal reserve history operated by the Federal Reserve Bank of Richmond on behalf of the Federal Reserve Banks and the Board of Governors of the Federal Reserve System, at www.federalreservehistory.org.

³³ See G. Richardson, *Categories and causes of bank distress during the great depression, 1929-1933: the illiquidity versus insolvency debate revisited*, in *Explorations in Economic History*, 44, 2007, 588-607.

insolvency), it is possible to find in regulation a propagating element of such problem. In other words, it is still possible that the legal system contributed in fueling the crisis and in spreading it over the country.

Given that illiquidity was and still is the most supported theory of the 1930s banking crisis³⁴, we can start from there to see whether there are legal reasons that led illiquidity

³⁴ A recent analysis going through the entire debate between illiquidity and insolvency is contained in Michael Bordo John Landon-Lane, *The Banking Panics in the United States in the 1930s: Some Lessons for Today*, in Nicholas Crafts and Peter Fearon, *The Great Depression of the 1930s: Lessons for Today*, Oxford University Press, 2013. The analysis starts from the original theory attributed to Friedman and Schwartz and reviews all the available literature, concluding that econometrics evidence largely support the illiquidity conclusion: “Friedman and Schwartz viewed the banking panics as largely the consequence of illiquidity, especially in 1930–31. Their key evidence was a decline in the deposit–currency ratio, which lowered the money multiplier, money supply, and nominal spending. They describe the panic in the autumn of 1930 as leading to ‘a contagion of fear’ especially after the failure of the Bank of United States in New York City in December. They also discussed the effects of the initial banking panic leading to contagion by banks dumping their earning assets in a ‘fire sale’ in order to build up their reserves. This, in turn, led to the failure of otherwise solvent banks. Wicker (1996) disputes whether the 1930 panic and the spring 1931 Friedman and Schwartz panics were national in scope, but agrees with them that all four banking panics were liquidity shocks. By contrast both Temin (1976) and White (1984), the latter using disaggregated data on a sample of national banks, argued that the original 1930 banking panic was not a liquidity event but a solvency event occurring in banks in agricultural regions in the south and the mid-west which had been weakened by the recession. These small unit banks came out of the 1920s in a fragile state, reflecting declining agricultural prices and oversupply after the First World War. As in Wicker (1980), they identify the locus of the crisis as the collapse, on 7 November 1930, of the Caldwell investment bank holding company of Nashville, Tennessee, a chain bank (in which one holding company had a controlling interest in a chain of banks), and its correspondent network across a half dozen states. Calomiris and Mason (2003), following the approach taken in Calomiris and Mason (1997) to analyse a local banking panic in Chicago in June 1932, use disaggregated data on all of the individual member banks of the Federal Reserve System to directly address the question of whether the clusters of banking failures of 1930–33 reflected illiquidity or insolvency. Based on a survival-duration model on 8,700 individual banks, they relate the timing of bank failures to various characteristics of the banks as well as to local, regional, and national shocks. They find that a list of fundamentals (including bank size, the presence of branch banking, net worth relative to assets as a measure of leverage, reliance on demand debt, market power, the value of the portfolio, loan quality, and the share of agriculture), as well as several macro variables, largely explains the timing of the bank failures. When they add into the regression as regressors the Friedman and Schwartz panic windows (or Wicker’s amendments to them), they turn out to be of minimal significance. Thus they conclude that, with the exception of the 1933 banking panic, which, as Wicker (1996) argued, reflected a cumulative series of state bank suspensions in January and February leading to the national banking holiday on 6 March, illiquidity was inconsequential. Richardson (2007) provides a new comprehensive data source on the reasons for bank suspensions from the archives of the Federal Reserve Board of Governors including all Fed

to become such a devastating source of crisis for the US banking system of the time.

There are at least two authors claiming that the banking structure contributed to a large

member banks and non-member banks (both state and local) from August 1929 to just before the bank holiday in March 1933. He also distinguished between temporary and permanent suspensions. Based on answers to a questionnaire used by bank examiners after each bank suspension, Richardson put together a complete list of the causes of each suspension. The categories include: depositor runs, declining asset prices, the failure of correspondents, mergers, mismanagement, and defalcations. Richardson then classified each bank suspension into categories reflecting illiquidity, insolvency, or both. With these data he then constructed indices of illiquidity and insolvency. His data show that 60 per cent of the suspensions during the period reflected insolvency, 40 per cent illiquidity. Moreover, he shows that the ratio of illiquidity to insolvency spikes during the Friedman and Schwartz (and also Wicker) panic windows (see Figure 7.1). This evidence in some respects complements the Friedman and Schwartz and Wicker stories, and those of Temin and White. During the panics, illiquidity rises relative to insolvency; between the panics insolvency increases relative to illiquidity. Consistent with the Friedman and Schwartz stories, the panics were driven by illiquidity shocks seen in increased hoarding, but after the panics, in the face of deteriorating economic conditions, bank insolvencies continued to rise. This is consistent with the evidence of Temin and White. The failures continued through the contraction until the banking holiday of the week of 6 March 1933 (with the exception of the spring of 1932 while the Fed was temporarily engaged in open-market purchases).

Richardson (2006) backs up the illiquidity story with detailed evidence on the 1930 banking panic. As described in Wicker (1980), the failure of Caldwell and Co. in November was the signature event of this crisis. Richardson uses his new database to identify the cascade of failures through the correspondent bank networks based on the Caldwell banks. During this period, most small rural banks maintained deposits on reserve with larger city banks that, in turn, would clear their cheques through big city clearinghouses and/or the Federal Reserve (p.192) System. When Caldwell collapsed, so did the correspondent network. Moreover, Richardson and Troost (2009) clearly show that, when the tidal wave from Caldwell hit the banks of the state of Mississippi in December, the banks in the southern half of the state, under the jurisdiction of the Federal Reserve Bank of Atlanta, fared much better (had a lower failure rate) than those in the northern half, under the jurisdiction of the Federal Reserve Bank of St Louis. The Atlanta Fed followed Bagehot's Rule, discounting freely the securities of illiquid but solvent member banks. The St Louis Fed followed the real bills doctrine and was reluctant to open the discount-window to its member banks in trouble. This pattern holds up when the authors control for fundamentals using a framework like that in Calomiris and Mason (2003).

Finally, Christiano et al. (2003) build a dynamic stochastic general equilibrium (DSGE) model of the Great Contraction, incorporating monetary and financial shocks. They find that the key propagation channels explaining the slump were the decline in the deposit–currency ratio, amplified by Bernanke et al.'s (1996) financial accelerator. The liquidity shock reduced funding for firms, lowering investment and firms' net worth. At the same time, the increased currency hoarding reduced consumption expenditure. Their simulations, like those of McCallum (1990) and Bordo et al. (1995) show that expansionary open-market purchases could have offset these shocks.

In sum, the debate over illiquidity versus insolvency in the failures of US banks hinges on the use of aggregate versus disaggregate data. Aggregate data tend to favour illiquidity and the presence of and importance of banking panics in creating the Great Contraction. Disaggregate data tend to focus on insolvency driven by the recession and to downplay the role of the panics in creating the Great Contraction. However, the recent, more comprehensive, data unearthed by Richardson, as well as the Christiano et al. model, suggest that the original Friedman and Schwartz story may well prevail."

extent in spreading the effects of bank runs. More accurately, regulation constraints had caused chain banking, so that office of banks were linked one another but, at the same time, branching had been restrained, so that each bank was exposed to one regional area only and its business relatively undiversified³⁵.

In other words, the regulatory framework excessively exposed banks to the local

³⁵ *“It is also possible to view some of the banks' problems as a consequence of the regulatory constraints placed on them. Although this factor is generally overlooked in most explanations of the origins of the banking crisis, regulation reduced the efficiency of the banking industry and increased its susceptibility to any real or policy-generated shocks. The most important of these regulations were the severe state and federal restrictions placed on branch banking. These regulations had created an industry largely composed of single-office banks. The smallest and perhaps weakest banks were in rural regions where low population density and very strict anti-branching laws prevented the growth of large, diversified intermediaries. Although these unit banks had become linked in the late nineteenth and early twentieth century to national money and capital markets, many remained relatively undiversified. They were heavily dependent on their local loan business, prospering or failing with the farmers that they financed. A system of nationwide branching probably could have reduced or eliminated bank failures by establishing intermediaries with loan portfolios that were sufficiently diversified to manage 'regional risks. Testing this hypothesis for 1930 when there was very limited branching is difficult; an instructive comparison, however, can be made with Canada. The Canadian economy was closely tied to the American economy and shared many of its characteristics. One significant difference was that Canada had permitted a system of branching banks to develop. While anti-branch-banking laws gave the United States 30,291 commercial banks in 1920, there were only 18 chartered banks in Canada. These Canadian banks operated 4,676 branch offices, whereas the American banks had only 1,281 additional offices. These dissimilar configurations of the banking industry led to different responses to the problems of the 1920s. The agricultural regions of Canada felt the same postwar shock as those south of the border, making retrenchment in banking necessary in both countries. In the United States, this took place through a wave of failures and mergers. Between 1920 and 1929, there were 6,008 suspensions and voluntary liquidations and 3,963 absorptions and mergers. In Canada, only one bank failed, and the contraction of the banking industry was carried out by the remaining banks reducing the number of their offices by 13.2 percent. This is very near the 9.8 percent decline in bank offices that occurred in the United States. As the Canadian banks managed the problems of the 1920s adequately, they also weathered the Great Depression without disaster. In Canada, the downturn began with falling prices for its leading exports- wheat, wood pulp, and newsprint. The most severely affected provinces were located in the Midwest and West. In spite of the many similarities with the United States, there were no bank failures in Canada during the dark years of 1929-1933. The number of bank offices fell by another 10.4 percent, reflecting the shocked state of the economy; yet this was far fewer than the 34.5 percent of all bank offices permanently closed in the United States. Nationwide branching in Canada permitted the quick mobilization of funds to meet any localized run while allowing banks to hold negligible excess reserves. Canada suffered from other problems but there was no collapse of the banking system. Canadian banks incurred heavy losses; but, as they were larger and had diversified to handle regional loan risks, they were in a better position to survive the crisis.” See E. N. White, *A Reinterpretation of the Banking Crisis of 1930*, in *The Journal of Economic History*, Vol. 44, No. 1 (Mar., 1984), pp. 119-138.*

economy where these banks were situated and – at the same time – it impeded banks from reacting to the surrounding economic situation by diversifying their business.

Thus, the regulatory constraints made banks particularly fragile and incapable to react to shocks; in this respect, at least according to certain scholars, law certainly played a role as Exacerbating Cause in the crisis that followed the SMC.

What is even more relevant for the purposes of this work is that such regulatory constraints was the result of the “unit banking” system that characterized the US in the early 1900s, designed to have a localized and piecemeal banking service in rural areas as opposed to big city banks³⁶. This is to say that a deliberate policy (i.e. unit banking) led to a sort of institutional innovation (i.e. chain banking) to overcome the restraint of unit banking.

In turn, chain banking represented a weakness (an Exacerbating Cause, as we have defined it) that turned the SMC into a severe impairment for the US banking system.

³⁶ Macey and Miller, *The Law of Banking and Financial Institution*, *supra*, pp. 8-16.

B. 1990s Japanese lost decade

After several decades of remarkable economic growth, Japan encountered a 20 years-plus decade of stagnation still lasting nowadays. Such a long period of economic recession -which was of little benefit to Japan but for the introduction of the dedicated brand new word “Japanization” in the lexicon³⁷- started at the beginning of the 1990s together with a banking crisis. Though equally long-lasting, the banking crisis covers a time-frame of only one (real) decade, as by the first years of the new millennium banking failures were considered to be under control and the sector begun to obtain its current structure.

The purpose of this section is to analyze the causal factors of the banking crisis, which triggered, or perhaps merely announced, the “lost decade”; once more, to establish a causal relationship between the economic crisis and the banking crisis in the Japanese instance is a rather hard task: probably both were triggered by the burst of a bubble and then mutually reinforced each other as in a vicious circle. Thus, in order to create some sort of order in this vicious circle, the analysis will endeavour to unravel each chain of causes along the categories of “Triggering Cause” and “Exacerbating Cause” identified above. In the Japanese experience, along these macro-categories we can also identify sub-categories which the macro-category is divided into. Hence, we can identify: (i) Triggering Causes (what led to banks’ failures), and (ii) two kinds of Exacerbating Causes: 1) problem-concealing (what impeded a prompt acknowledgment of banks’

³⁷ Kawai Mashiro and Morgan Peter, *Banking Crises and “Japanization”: Origins and Implications*, in Rhee Changyong & Pose Adam (ed), *Responding to Financial Crisis – Lessons from Asia Then, The United States and Europe Now*, ADB and PIIE (2013).

problems, thus perpetrating them) and 2) problem-unsolving (what hindered the effectiveness of the measures adopted).

Such exercise will not take into account that in the context of a 10 years crisis, each element plays a role in a specific moment in time of a temporal continuum that is made of series of events which includes failures of banks and securities houses, banks mergers and acquisition, government intervention through monetary and regulatory measures, capital injection of public funds and the relevant coordination of public actors such as the Ministry of Finance (MOF), subsequently substituted by the Financial Services Agency (FSA), the Bank of Japan and the Deposit Insurance Corporation (DIC) ³⁸. This temporal continuum of events and interventions creates an intertwined sequence of actions and reactions that do possess a chronological order and its own causality. Yet, for the purpose of this work each element will be isolated in the categorization explained above in order to provide a sort of list of the main causes of the Japanese crisis. The only exception to this scheme in the identification of a t_0 point, namely the structure of the banking sector before the crisis occurred.

Although the original structure of the Japanese banking system can be regarded as a cause of the crisis in and of itself (precisely an horizontal category that crosses all the 3 macro-categories listed above), it must be pointed out that such system was capable of sustaining and fuelling the impressive economic growth of Japan in the period preceding the “lost decade”; therefore, the description of the pre-crisis structure will be the first issue tackled in this analysis and it will be considered t_0 , while only the mis-adaptation of the banking

³⁸ See Nakaso Hiroshi, *The financial crisis in Japan during the 1990s: how the Bank of Japan responded and lessons learnt*, BIS papers No 6, Bank for International Settlements (2001)

system to a new paradigm of financial capitalism will be computed as a cause of the crisis under the problem-unsolving category (Exacerbating Cause).

(I) *The pre-crisis banking system*³⁹

The pre-crisis banking system was yet another example of the Japanese state-market synergy: banking was a highly regulated market, to the point that it would probably be misleading to call it a market in the first place. According to the so called “convoy system” the market was supervised by the MOF and the Bank of Japan under the following implicit deal: the two authorities were to protect the market and ensure the survival of even the less efficient banks while, in consideration for this protection, banks were to channel households savings to the industrial sector in order to rebuild Japan after WWII. Profit was guaranteed by regulated interest rates on banks’ deposit, so that money supply could be evenly distributed, at a fixed price, throughout all existing banks, the offers of which could hardly be distinguished by customers. Customers’ choice was also limited in terms of alternatives: capital markets were almost non-existent and deposits constituted the only viable product for savings. Thus, the system was characterised by a low level of internal competition and by the absence of external competition from capital markets.

(II) *Triggering Causes*

The well-functioning of the closed system described above was frustrated by two partially related events: the liberalisation of capital markets and the burst of a stock and real estate

³⁹ *Ibidem.*

bubble; while the former gradually eroded the soundness of banks, the latter came as a shock whose effects constituted the opening of a Pandora Box. As a result of the two, banks experienced a margin squeezed. These three causes will be addressed in turn.

Liberalisation of the capital markets⁴⁰

In the 1970s, Japanese financial system slowly begun to change and a financial market started developing. One of the drivers of this paradigm shift was the government's need to finance the huge deficit accumulated over the previous decades: while in the past government bonds had been placed almost exclusively with financial institutions, it was now necessary to benefit from a larger market of investors. Thus, a secondary market for government bonds developed, offering households a valid alternative to deposits.

At the same time, a corporate bonds market started growing too: rules for firms willing to issue bonds were relaxed and approval from the Bond Issuance Company could be obtained with more ease. Furthermore, those firms that could not satisfy the Bond Issuance Company's standards, gained access to international financial markets.

The trend of liberalization continued over the 1980s with a partial interest-rate deregulation and with the development of a money-market. Though the changes led to both more investment opportunities for households and more financing sources to firms, the former shifted away from deposits only to a limited extent, while the latter, and in

⁴⁰ Fukao Mitsuhiro, *Financial Deregulations, Weakness of Market Discipline, and Market Development: Japan's Experience and Lessons for Developing Countries*, CEI Working Paper Series, No. 2001-17, Hitotsubashi University Institute of Economic Research (2001).

particular large firms, sought the opportunity and substantially decreased their reliance on banks' loans.

As a consequence, liabilities of banks *vis-à-vis* households remained stable and actually increased due to the liberalization of interest rates on deposits while, due a drastic reduction of the customer base, banks' assets experienced a shift from loans to big enterprises to i) real-estate investments ii) securities and iii) smaller enterprises.

*Asset bubble – inflation and burst*⁴¹

The shift in banks' assets described in the paragraph above flooded the security and real estate market with further money. In addition, money supply was also boosted by a lax monetary policy, too much focused on stabilizing the appreciating yen rather than on stabilizing inflation. These two factors together led to skyrocketing prices both in stocks and real estate assets. In the latter sector, the bubble was further exacerbated by a tax system incentivizing debt financed real-estate investment in order to avoid an excessive inheritance tax.

When between 1989 and 1991 the monetary policy was tightened, the bubble burst and prices started to decline rapidly. If the loss in value of stock was problematic for banks, the plummeting value of real estate was even more so, leaving them with weak collateral for the upcoming defaults on loans⁴².

⁴¹ See Fukao Mitsuhiro, *Financial Crisis and the Lost Decade*, Asian Economic Policy Review 2, 273-293 (2007) and Grimaldi Marianna, Nicolitsas Daphne and Roma Moreno, *The Swedish and Japanese Banking Crises*, Housing Finance International (2009).

⁴² Feldman Robert, *Comment on "Financial Crisis and the Lost Decade"*, Asian Economic Policy Review 2, 298-300 (2007).

*Margin squeeze*⁴³

The burst of the bubble marked the beginning of the crisis: during the 1990s non performing loans (NPLs) highly populated banks balance sheets as the economic recession unravelled.

The sectors in which banks had channelled their investment in light of the liberalization of financial market, namely real estate and securities, were affected by the bubble burst, while small and medium enterprises were struggling to pay back their loans due to the recession. Banks' assets turned loss-generating. To the contrary, on the liability side, households continued to use deposits in order to invest their savings, so that banks were to pay (increasing) interest rates as prescribed by law. The business turned unprofitable.

(III) Exacerbating Causes -Problem-concealing elements

That banks were incurring heavy losses is a fact; whether they or the authorities were aware of it and of the size of the problem is completely another matter. In fact, two peculiarities of the Japanese system played a major role in preventing a serious acknowledgment of the magnitude of losses by both banks management and by the authorities respectively: keiretsu and amakudari. The effects of these phenomena, in the context of the banking system, will be analysed below.

*Keiretsu*⁴⁴

⁴³ See Hoshi Takeo and Kashyap Anil, *The Japanese Banking Crisis: Where Did It Come From and How Will It End?*, in Bernanke Ben and Rotemberg Julio (ed.), *NBER Macroeconomics Annual 1999*, Volume 14 (2000).

⁴⁴ See Hanazaki Masaharu and Horiuchi Akiyoshi, *A review of Japan's bank crisis from the governance perspective*, *Pacific-Basin Finance Journal* 11, 305–325 (2003). See also Fraser

Keiretsu are holdings whose group of companies usually includes cross-shareholding between a bank and industry firms. This cross-shareholding, together with relationship banking (i.e. the practice of lending to companies of the same group) highly hampered the effectiveness of corporate governance both at the bank and at the industry level. Often the same managers sit in the board of both the borrower and the lender, with the latter been deeply involved in the management of the former's default. In this sense, banks were unwilling to acknowledge the distress of their customers and to reflect it in their own balance sheets. Such unwillingness, which from time to time amounted to actual window-dressing, impeded a clear representation of the situation, so that neither shareholders nor the market could gain the relevant information and put pressure on banks. As a result, supervision was left exclusively in the hands of the authorities (MOF and Bank of Japan), whose task was precisely that of monitoring banks soundness and assessing their management. Yet, this supervision, in turn, suffered of another flaw.

*Amakudari*⁴⁵

Amakudari is the employment practice whereby bureaucrats join private firms after their resignation from public office. During the 1980s, hundreds of officials from both the MOF and the Bank of Japan were hired by banks; as a result, a close relationship tantamount to collusion was established between controllers and controlled entities. This

Donald, Rhee S. Ghon and Shin G. Hwan, *The impact of capital market competition on relationship banking: Evidence from the Japanese experience*, Journal of Empirical Finance 19, 411–426 (2012) and Rajan Raghuram and Zingales Luigi, *Financial Systems, Industrial Structure, and Growth*, Oxford Review of Economic Policy, Vol 17, No. 4 (2001).

⁴⁵ See Horiuchi Akiyoshi and Shimizu Katsutoshi, *Did amakudari undermine the effectiveness of regulator monitoring in Japan?*, Journal of Banking & Finance 25, 573-596 (2001).

relationship was grounded on the exchange of job opportunities versus the indulgence of the regulator over banks' behaviour.

Knowing they could benefit from such indulgence, banks paid little attention to their NPLs; to the contrary they engaged in even riskier behaviours by exceeding the leverage ratio set by the regulators, thus perpetrating the crisis instead of acknowledging it.

(IV) Exacerbating Causes - Problem-unsolving elements

The mere delay created by the problem-concealing causes described above was *per se* sufficient to hinder the effectiveness of the measures put in place by the MOF/FSA, the DIC and the Bank of Japan in order to tackle the crisis. Nonetheless, further factors negatively affected the response of the authorities and impeded a prompt and quick solution notwithstanding the huge amount of public money injected in the system. Among these factors we can identify the “wait and see policy” and, most of all, the slow adaptation of banks to a new paradigm of financial capitalism.

The “wait and see policy”⁴⁶

Although immediately after the burst of the bubble Japan begun experiencing occasional failures of banks, such failures were initially considered sporadic events, with no, or limited, systemic implications.

This underestimation of the situation was mainly driven by a general optimism that, as soon as the burst of the bubble would have been dealt with, the economy would have

⁴⁶ See OECD, *Financial stability: overcoming the crisis and improving the efficiency of the banking sector*, in OECD Economic Surveys: Japan (2009).

been back on its feet, driving prices and value of the assets up and thus reinstating banks' collateral. In this belief, both banks and authorities, though realizing that the sector was suffering, adopted a wait and see policy (this good faith attitude and the awareness that some sort of problem existed distinguish the "wait and see policy" from the problem-concealing causes).

*The slow adaptation of banks to a new paradigm*⁴⁷

The analysis of the factor-generating causes explained that banks business had turned unprofitable as a result of the burst of the bubble and of the process of liberalization. This element is key in order to understand why, notwithstanding the measures put in place by the Japanese authorities, the crisis was able to last for about 10 years.

Indeed, though banks were able to survive in light of safety nets and public money injection, they remained unable to run a profitable business. Several elements played a role in this respect: first, now that their margin was considerably reduced, banks suffered strong competition from government back financial institution and from the public postal saving system; secondly, the development of capital markets forced banks to shift their business model from interest-earning to fee-earning. Yet, fee generating lines of businesses remained prohibited to banks throughout most of the 1990s: until 1998, for example, fee collection for loan commitments was still prohibited.

In other words, banks did not, or could not, adapt to new market principles and to a new paradigm of financial capitalism until the completion of the comprehensive overhaul of

⁴⁷ See Hoshi Takeo and Kashyap Anil, *supra*.

the banking sector run under Koizumi: only then were banks able to coexist with financial markets in channelling households savings to finance production.

(V) *The dynamic of law and change in the Japanese lost decade*

How law can be both (i) cause of the shock and the (ii) means through which the effects of the shock are exacerbated becomes pretty clear in the analysis of the Japanese lost decade, where innovation and global opening (through law) enabled the diversification of the financial market, while at the same time harming the banking system, strictly regulated and bridled in a net of norms that made reaction to innovation practically impossible. Corporate governance failures and a particular kind of “regulatory capture”⁴⁸ delayed a thorough acknowledgment and understanding of the problems, thus worsening the scenario.

Eventually, in line with the paradoxical nature of the relationship between law and change, legal overhaul made adaptation possible and stabilized the system again; yet, in the meantime, casualties were high.

⁴⁸ See Jon Hanson and David Yosifon D, *The Situation: An Introduction to the Situational Character, Critical Realism, Power Economics, and Deep Capture*, University of Pennsylvania Law Review, Vol. 152 (2003), pp. 129-346.

C. 2008 Global Financial crisis

By now, we know a lot about the Global Financial Crisis, both from a factual⁴⁹ and causality perspective⁵⁰.

In that respect, it is probably not worth the while of readers to list (probably once more) the events that led to crisis and the economic depression that followed.

That the crisis was a regulatory failure is well established by the Financial Crisis Inquiry Report⁵¹ (“**Report**”), but that is a catch all statement that says very little about those

⁴⁹ A very detailed description of the events that led to the hit of crisis is contained in the book by Andrew Ross Sorkin, *Too Big to Fail. The Inside Story of How Wall Street and Washington Fought to Save the Financial System – And Themselves*,

⁵⁰ Although it is dubbed “financial” crisis as it hit the wider financial system, in Europe it mainly turned in a banking crisis. In any event, even in the USA, investment banks were the most affected financial institutions.

⁵¹ *“We conclude widespread failures in financial regulation and supervision proved devastating to the stability of the nation’s financial markets. The sentries were not at their posts, in no small part due to the widely accepted faith in the self-correcting nature of the markets and the ability of financial institutions to effectively police themselves. (...)*

Changes in the regulatory system occurred in many instances as financial markets evolved. But as the report will show, the financial industry itself played a key role in weakening regulatory constraints on institutions, markets, and products. It did not surprise the Commission that an industry of such wealth and power would exert pressure on policy makers and regulators. From 1999 to 2008, the financial sector expended \$2.7 billion in reported federal lobbying expenses; individuals and political action committees in the sector made more than \$1 billion in campaign contributions. What troubled us was the extent to which the nation was deprived of the necessary strength and independence of the oversight necessary to safeguard financial stability. (...)

*We conclude a combination of excessive borrowing, risky investments, and **lack of transparency** put the financial system on a collision course with crisis. Clearly, **this vulnerability was related to failures of corporate governance and regulation**, but it is significant enough by itself to warrant our attention here. In the years leading up to the crisis, too many financial institutions, as well as too many households, borrowed to the hilt, leaving them vulnerable to financial distress or ruin if the value of their investments declined even modestly. For example, as of 2007, the five major investment banks—Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley—were operating with extraordinarily thin capital. By one measure, their leverage ratios were as high as 40 to 1, meaning for every \$ 40 in assets, there was only \$1 in capital to cover losses. Less than a drop in asset values could wipe out a firm. To make matters worse, much of their borrowing was short-term, in the overnight market—meaning the borrowing had to be renewed each and every day. For example, at the end of 2007, Bear Stearns had \$11.8 billion in equity and \$383.6 billion in liabilities and was borrowing as much as \$70 billion in the overnight market. It was the equivalent of a small business with \$50,000 in equity borrowing \$1.6 million, with \$296,750 of that due each and every day. One can’t really ask “What were they thinking?” when it seems that too many of them were thinking alike.” See Final Report of the*

aspects that are relevant for our purpose, namely understanding if and to what extent the innovation and law dynamic played a role in the GFC.

The Report is indeed the most comprehensive piece of work on the GFC (limited to USA) still nowadays⁵². Yet, due to its mostly descriptive nature, it is necessary to read between line to come to the conclusion that the sum of prudential regulation together with the legal innovation of securitization significantly contributed to the burst of the crisis and its spreading all over the world⁵³. In other words, such sum was clearly a Triggering Cause for our purposes.

National Commission on the Causes of the Financial and Economic Crisis in the United States, January 2011, conclusion section.

⁵² For another piece on the GFC, with particular reference to the issue of contagion, see Hal Scott, *Interconnectedness and Contagion*, November 20, 2012.

⁵³ ***And the leverage was often hidden—in derivatives positions, in off-balance-sheet entities, and through “window dressing” of financial reports available to the investing public.***

The kings of leverage were Fannie Mae and Freddie Mac, the two behemoth government-sponsored enterprises (GSEs). For example, by the end of 2007, Fannie’s and Freddie’s combined leverage ratio, including loans they owned and guaranteed, stood at 75 to 1.

But financial firms were not alone in the borrowing spree: from 2001 to 2007, national mortgage debt almost doubled, and the amount of mortgage debt per household rose more than 63% from \$91,500 to \$149,500, even while wages were essentially stagnant. When the housing downturn hit, heavily indebted financial firms and families alike were walloped.

*The heavy debt taken on by some financial institutions was exacerbated by the risky assets they were acquiring with that debt. As the mortgage and real estate markets churned out riskier and riskier loans and securities, many financial institutions loaded up on them. By the end of 2007, Lehman had amassed \$111 billion in commercial and residential real estate holdings and securities, which was almost twice what it held just two years before, and more than four times its total equity. And again, the risk wasn’t being taken on just by the big financial firms, but by families, too. Nearly one in 10 mortgage borrowers in 2005 and 2006 took out “option ARM” loans, which meant they could choose to make payments so low that their mortgage balances rose every month” *ibidem*.*

A similar analysis is contained in James Crotty, “*Structural Causes of the Global Financial Crisis: A Critical Assessment of the New Financial Architecture*”, Working paper Series of the Political Economy Research Institute at University of Massachusetts Amherst. Crotty criticizes what he dubs *New Financial Order*, a system where the originate and distribute model of banks is the new banking business: “*In the Golden Age, banks made the lion’s share of household and commercial loans and kept them on their balance sheets. In the NFA, it is argued, banks still originate loans, but the marvels of modern financial innovation allow them to bundle large numbers of loans into asset backed securities and sell them via capital markets to institutional and individual investors around the world – the new “originate and distribute” model. Securitization shifts loans from bank balance sheets to capital markets, where they are priced correctly and distributed optimally*” pag. 7-8.

Prudential regulation, the same kind of regulation that was meant to safeguard the banking system, led banks to keep off balance sheet certain assets that could freeze their liquidity and attract the scrutiny of prudential authorities. By means of securitization (a legal innovation), they were able to do that and spread their risk.

The above is, from a qualitative point of view, the key driver and the key means that led to the crisis (i.e. the initial problem). Yet, from a quantitative point of view (i.e. the size of the problem), corporate governance failures played a major role in perpetrating a reckless attitude of dealing with risk⁵⁴.

⁵⁴ *We conclude dramatic failures of corporate governance and risk management at many systemically important financial institutions were a key cause of this crisis. There was a view that instincts for self-preservation inside major financial arms would shield them from fatal risk-taking without the need for a steady regulatory hand, which, the firms argued, would stifle innovation. Too many of these institutions acted recklessly, taking on too much risk, with too little capital, and with too much dependence on short-term funding. In many respects, this re ected a fundamental change in these institutions, particularly the large investment banks and bank holding companies, which focused their activities increasingly on risky trading activities that produced hefty profits. They took on enormous exposures in acquiring and supporting subprime lenders and creating, packaging, repackaging, and selling trillions of dollars in mortgage-related securities, including synthetic financial products. Like Icarus, they never feared flying ever closer to the sun. Many of these institutions grew aggressively through poorly executed acquisition and integration strategies that made effective management more challenging. The CEO of Citigroup told the Commission that a \$40 billion position in highly rated mortgage securities would “not in any way have excited my attention,” and the co- head of Citigroup’s investment bank said he spent “a small fraction of 1%” of his time on those securities. In this instance, too big to fail meant too big to manage. Financial institutions and credit rating agencies embraced mathematical models as reliable predictors of risks, replacing judgment in too many instances. Too often, risk management became risk justification. Compensation systems—designed in an environment of cheap money, intense competition, and light regulation—too often rewarded the quick deal, the short-term gain—without proper consideration of long-term consequences. Often, those systems encouraged the big bet—where the payoff on the upside could be huge and the down- side limited. This was the case up and down the line—from the corporate boardroom to the mortgage broker on the street. Our examination revealed stunning instances of governance breakdowns and irresponsibility. You will read, among other things, about AIG senior management’s ignorance of the terms and risks of the company’s billion derivatives exposure to mortgage-related securities; Fannie Mae’s quest for bigger market share, profits, and bonuses, which led it to ramp up its exposure to risky loans and securities as the housing market was peaking; and the costly surprise when Merrill Lynch’s top management realized that the company held billion in “super-senior” and supposedly “super-safe” mortgage-related securities that resulted in billions of dollars in losses. (...)*

In other words, at the core (and inception) of the crisis there are legal reason both as driver and as instrument. In the absence of other legal corrections, this mixture was lethal.

Then, of course, there were also Exacerbating Causes, such as the inadequateness of agencies and supervisors whose knowledge lagged way behind the new reality of the financial system ⁵⁵.

The behavioral issue was even more embedded than that and – clearly – resulted from a wrong incentive system: *“We conclude there was a systemic breakdown in accountability and ethics. The integrity of our financial markets and the public’s trust in those markets are essential to the economic well-being of our nation. The soundness and the sustained prosperity of the financial system and our economy rely on the notions of fair dealing, responsibility, and transparency. In our economy, we expect businesses and individuals to pursue profits, at the same time that they produce products and services of quality and conduct themselves well.*

Unfortunately—as has been the case in past speculative booms and busts—we witnessed an erosion of standards of responsibility and ethics that exacerbated the - financial crisis. This was not universal, but these breaches stretched from the ground level to the corporate suites. They resulted not only in significant financial consequences but also in damage to the trust of investors, businesses, and the public in the financial system” See Report, conclusion session.

⁵⁵ *To conclude the government was ill prepared for the crisis, and its inconsistent response added to the uncertainty and panic in the financial markets. As part of our charge, it was appropriate to review government actions taken in response to the developing crisis, not just those policies or actions that preceded it, **to determine if any of those responses contributed to or exacerbated the crisis.***

*As our report shows, key policy makers—the Treasury Department, the Federal Reserve Board, and the Federal Reserve Bank of New York—who were best positioned to watch over our markets were ill prepared for the events of 2007 and 2008. Other agencies were also behind the curve. They were hampered because **they did not have a clear grasp of the financial system they were charged with overseeing**, particularly as it had evolved in the years leading up to the crisis. **This was in no small measure due to the lack of transparency in key markets.** They thought risk had been diversified when, in fact, it had been concentrated. Time and again, from the spring of 2007 on, **policy makers and regulators were caught off guard as the contagion spread, responding on an ad hoc basis with specific programs to put fingers in the dike. There was no comprehensive and strategic plan for containment, because they lacked a full understanding of the risks and interconnections in the financial markets.** Some regulators have conceded this error. We had allowed the system to race ahead of our ability to protect it.*

While there was some awareness of, or at least a debate about, the housing bubble, the record reflects that senior public officials did not recognize that a bursting of the bubble could threaten the entire financial system. Throughout the summer of 2007, both Federal Reserve Chairman Ben Bernanke and Treasury Secretary Henry Paulson offered public assurances that the turmoil in the subprime mortgage markets would be contained. When Bear Stearns’s hedge funds, which were heavily invested in mortgage-related securities, imploded in June 2007, the Federal Reserve discussed the implications of the collapse. Despite the fact that so many other funds were exposed to the same risks as those hedge funds, the Bear Stearns funds were thought to be “relatively unique.” Days before the collapse of Bear Stearns in March 2008, SEC Chairman Christopher Cox expressed “comfort about the capital cushions” at the big investment banks. It was not until August 2008, just weeks before the government takeover of Fannie Mae and Freddie Mac, that

Obviously, in the aftermath of the crisis, instead of acknowledging that the regulatory failure went far beyond the norms that were missing, and it was much about the kind of norms that were existing, corrections were made in the sense of additional norms, but those are likely to feed the vicious circle of the dynamics of law and change described above.

the Treasury Department understood the full measure of the dire financial conditions of those two institutions. And just a month before Lehman's collapse, the Federal Reserve Bank of New York was still seeking information on the exposures created by Lehman's more than 900,000 derivatives contracts.

In addition, the government's inconsistent handling of major financial institutions during the crisis—the decision to rescue Bear Stearns and then to place Fannie Mae and Freddie Mac into conservatorship, followed by its decision not to save Lehman Brothers and then to save AIG—increased uncertainty and panic in the market.

In making these observations, we deeply respect and appreciate the efforts made by Secretary Paulson, Chairman Bernanke, and Timothy Geithner, formerly president of the Federal Reserve Bank of New York and now treasury secretary, and so many others who labored to stabilize our financial system and our economy in the most chaotic and challenging of circumstances” Ibidem.

IV. CHAPTER 3 – APPLYING THE DYNAMICS TO UNDERGOING CHANGE

A. The EU capital market union

The GFC compelled governments and parliaments around the world to re-think their banking regulation. Such exercise has been often carried out in the absence of a thorough understanding of the causes of the crisis itself. Yet, there was widespread awareness that banks' transactions were too risky, to the point that their safeness and soundness were seriously threatened.

As it often happens when the economy is run through the model of the enabling state⁵⁶, the issue, perceived as a market failure, has been and is still being addressed by resorting to command and control methods, so that regulation on capital requirements and on risk taking is being enacted and supervision by competent agencies and central banks is being tightened.

In the meanwhile, feeling under the public spotlight, banks refrained from their active role in the economy. A credit crunch emerged as a result of that, weakening even further the existing link between finance and production⁵⁷. Once more, the response both in the US and the EU was centralised and institutional in nature: quantitative easing through

⁵⁶ See Eberhard Bohne, *Conflicts between national regulatory cultures and EU energy regulations*, 19 Utilities Policy 255 (2011). Bohne's model of the enabling state and the creation of a market through command and control does not apply only to the energy sector, but to many other sectors and more generally to the economic model of the liberal market economy as opposed to a more social market economy.

⁵⁷ See Tamara Lothian and Roberto Mangabeira Unger, *Crisis, Slump, Superstition and Recovery Thinking and acting beyond vulgar Keynesianism* (2011). If it can be said that the link between finance and production is weak, the link between banking and production is even weaker: as an indicator of that, one may look, even before the beginning of the crisis, at the proliferation of shadow banking.

central banks, in order to flood the economy with liquidity. It appears though that the greatest amount of that liquidity remained stuck in the pipeline, i.e. it was retained by banks to tide up their balance sheets: extension of credit facilities, especially to small and medium enterprises, remains a major concern and the object of strict and continuous scrutiny⁵⁸.

The new solution announced by the Commission to overcome the shortage of credit is the Capital Market Union (“CMU”), whose objective can be summarized as follows: i) decreasing enterprises’ reliance on banks for the obtainment of capital; ii) deepening capital markets based on the US model; iii) incentivizing the issue of instruments by SMEs; iv) incentivizing securitisation⁵⁹.

B. Applying the dynamics in the capital market union project

As clearly expressed by the Commission, key objective of the CMU is to shrink the role of banks in the financing of the economy, thus enabling enterprises to become less bank-reliant for the obtainment of capital.

⁵⁸ By way of example, since 2009 the European Central Bank runs semesterly surveys to assess access to finance for SMEs.

⁵⁹ The project of CMU is well described in a series of EU Commission documents, starting from (i) *Green Paper - Building a Capital Markets Union* {SWD(2015) 63}; (ii) *Commission Staff Working Document – Initial reflections on the obstacles to the development of deep and integrated EU capital markets Accompanying the document Green Paper Building a Capital Markets Union* {COM(2015) 63 final}; and (iii) *Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions - Action Plan on Building a Capital Markets Union* {SWD(2015) 183 final} {SWD(2015) 184 final}.

Obviously, we cannot expect that banks will decrease their influence in the intermediation of capital; simply, they will compensate for the falling revenues in one type of business with the enhancement of another type of business. Indeed, it is likely that the implementation of the CMU will nonetheless require the intermediation of banks either as mere distributors of securities (as with the placement of shares and debt obligations) or also as structurer of new investment products. This is already the case, yet this kind of role is likely to become predominant in the effort to directly connect supply of capital with its demand; needless to say, this shift should occur hand in hand with the implementation of regulation suitable for the task.

Capital market regulation as applicable to banks (considered as intermediaries and not as issuers) and product governance regulation seem to be two fields that can address the concerns arising in the new scenario.

(I) *The changing role of banks*

Although – allegedly – banks have an important role to play in the capital market union, there is no doubt that, should the program be successful, banks would see their financing business shrinking, so that they will increasingly focus on growing their underwriting, and the placing and structuring of securities.

In other words, as in the Japanese crisis, banks will further shift from capital returns, to fee earnings; indeed, the very purpose of the CMU is to approximate the European market to the US market; yet, offering further and a different sources of capital to enterprises entails a shift from banks to market and the necessity – for banks – to find other product line to offer. True, there will be more capital available and banks will be more willing to

lend; however, the Commission here is assuming a constantly increasing demand, which would not be necessarily the case. Hence, we must beware that banks may gradually increase their offering in fee earning activities, thus slowly abandoning the capital return business.

(II) *The inadequateness of the regulatory framework*

Assuming that the above would be the trend, we must assess the current regulatory framework in order to test its (in)adequateness to the market structure that ought to be.

In order to do that, we must first understand if, and to what extent, the current business of banks differ from the business that is going to be, i.e. whether there are substantial differences in their present and future way of operating and, if so, whether the regulatory regime is to be adapted as a consequence thereof.

At T_0 we have the traditional bank business of lending, a perfect blending of risk assessment and risk taking: before extending a loan, a bank assess the risk of lending to a particular borrower; that very same risk that it has assessed is then borne by the bank itself.

At T_1 , with securitization we observe a partial disentanglement of risk assessment and risk taking: the bank assesses the risk of lending to certain borrowers, it pools together such risks, slices them into securities with diverse risk and yields and then transfer a great amount of that risk, keeping just a fraction of it (because the law so prescribes in order for the “originate and distribute system” to function properly).

At T_2 , in the case of underwriting, placing and/or structuring of financial instruments the bank distributes risk only, though it is the best place actor in assessing that particular risk that it distributes. In the fee earning market (as opposed to the capital earning market) we observe a total disentanglement of risk assessment and risk taking.

Thus, it is simple to foresee the potential short term effects of the above shift in the banking business: at first, decreasing returns from capital earnings activities (as well as concern over the securitized assets held by the bank) are mostly likely going to keep the spot light where it is now, i.e. on prudential regulation; further tightening thereof can then be envisaged.

However, on the medium/long term, the scenario is going to change deeply as the fee earning activities gradually take over: there will certainly be less concerns over prudential regulation, and more concerns over conduct of business regulation and product regulation.

The question is, then, are we prepared for this further change?

V. CHAPTER 4 – HOW DO WE ADDRESS FOR CHANGE

A. A Further problem

So far we have examined how law plays a role in innovation and change: we have observed that law is one of the causes of change, so that is also one of the causes of the shocks brought about by change. Law is also the cure of those shocks, so that – as in vicious circle – this dynamic continues.

However, this work does not intend to praise for deregulation. The fact that law can be, at the same time, the cure and the disease, is not sufficient reason to surrender to deregulation temptations – on the contrary, in the absence of a cure, we would already be dead.

What then? How do shape a legal system that can both avoid to bring about shocks and be capable of providing a legal framework for change and innovation.

First of all we need to take into account a further weakness of the system: innovation brings two elements that are antithetic to law in general: ignorance and uncertainty⁶⁰,

⁶⁰ In financial markets, ignorance includes the issue of complexity, a prerogative of financial innovation. Ignorance, of course, is a wider category encompassing things we do not know and we could not predict the existence of; complexity pertains to situations we do know the existence of, but that we cannot fully grasp, in light of their complexity. Thus, complexity is a source of ignorance. On complexity and its drivers in the process of financial innovation see Dan Awrey, *Complexity, Innovation, and the Regulation of modern financial markets*, in 2 Harvard Business Law Review 235 (2012). According to Awrey, by “*taking a broad look across the financial system, it is possible to identify at least six—in many respects intertwined and over-lapping—sources of complexity: technology, opacity, interconnectedness, fragmentation, regulation and reflexivity. As we shall see, these drivers of complexity can be broken down into three categories: those influencing our capacity to process information, those impacting the availability or intelligibility of the information itself and, finally, those accelerating the velocity of informational change.*” at 245-246.

ignorance about a certain phenomenon that had not or could not be envisaged and uncertainty about its effects, whether they are positive or negative and for whom, respectively.

Without delving too much into the field of legal theory, it is fairly easy to understand the antithesis. Both common and civil law tradition build upon some kind of knowledge: in the common law, precedent is one of them; similarly, codes are a comprehensive collection of many different scenarios that have been envisaged *ex ante* on the basis of a general rule of thumb of what the interests and risks of parties are in specific type of situations. We may call this type of knowledge empirical knowledge.

The legal process is also informed by theoretical knowledge, meaning by prediction of certain effects linked to certain phenomena.

The above does not mean that the law does not contemplate new situations at all. There are instruments, such as analogy⁶¹, that are used to adapt rules to unpredicted scenarios. One problem with analogy is that it implies the use of rules originally conceptualized for other situations, so that the result is “good enough” at the very best. Another problem is that, by the time analogy is applied, the phenomenon is generally in place already and so are its effects⁶².

There are other ways employed by the legal system in order to keep up with new situations: agents. Regulatory agencies are institutions entrusted with powers to discipline

⁶¹ In common law, it is analogy to a precedent case, in civil law analogy of an unregulated case to a regulated case (i.e. application of a specific rule to similar but not identical cases).

⁶² Analogy is an instrument mainly in the hands of the judiciary, hence used *ex post*.

specific sectors on the basis of their observation of relevant phenomena occurring in their respective sectors⁶³. Yet again, despite their capacity to adapt quickly to new situations, the competitive advantage of regulatory agencies lies in their sector specific knowledge i.e. their technical capacity.

That is to say that ignorance and uncertainty remain a problem in the current legal scenario. Truth is that we cannot regulate something we know nothing about or simply we do not understand, this being a general rule for innovation. However, as we have seen above, there is a caveat for financial innovation, which may or may not apply to other fields too: there are certain effects / results springing from financial innovation that we would generally like to achieve and others that we would generally like to avoid; most of all, we know that *ex ante*.

That is of great advantage in the effort to regulate financial innovation, as it provides some points of reference in the maze of uncertainty: after all, the end result – in terms of values to be achieved – has always informed the legal system⁶⁴.

B. Wanted and unwanted results of financial innovation: a few examples

We cannot use empiricism nor theory to predict what financial innovation would bring, but we can use them to choose what type of effects or results we would like to achieve from innovation and, by the same token, select those that we would rather avoid.

⁶³ On the relevance of regulatory networks, see Nina Boeger And Joseph Corkin, *How Regulatory Networks Shaped Institutional Reform under the EU Telecoms Framework*, Cambridge Yearbook of European Legal Studies, Vo. 14 (2012) pp. 49-73.

⁶⁴ See G. Zagrebeky, *La legge e la sua giustizia*, Il Mulino (2008).

Among the welcome effects of financial innovation, one may include those that improve the effectiveness of financial markets and of their very same purposes: channelling of liquidity on the basis of needs (short-long term), allocation of risks and rewards according to deliberate and informed choices, hedging of risk and all those “services” that facilitate the functioning of the real economy while fairly distributing its risks. In other words, all the improvements that preserve, directly or indirectly, the ancillary nature of financial markets vis-à-vis the real economy can be deemed positive and most wanted to the extent that they do not come along with a randomized distribution of risk.

At the same time, and as a partially corollary to the above, there are certain problems that one may want to avoid *tout court* or certain effects or situations that are worth limiting: it might be an aspect inherent in the innovation itself or, more often, a specific use or practice related to the innovation that makes it particularly dangerous and unfit for all or certain investors and/or the financial system as a whole.

From the GFC we came to learn a few buzz words denominating things that regulation should definitely prevent: high systemic risk, moral hazard, socialization of risk are some of them⁶⁵. We also understood that a complete disentanglement of the risk taker from the risk holder is too much of an incentive to assume more risk than the system itself is capable of bearing⁶⁶.

Apart from the above lesson, which is crisis-specific, there are other situations characterising financial markets that are generally seen as negative such as information

⁶⁵ See, *supra*, Introduction. See, also, Miller, *Trust, Risk and Moral Hazard*, *supra*.

⁶⁶ See, *supra*, under Chapter 2 and Chapter 3.

asymmetries and conflict of interests. Furthermore, it is generally accepted that a certain kind of protection should be granted to investors, especially when they invest as consumers and their knowledge is limited; thus, over-complexity is a feature that should be avoided⁶⁷, whenever possible.

All the above are only some examples of the kind of goals we may expect financial innovation to achieve; certainly a few of the problems that have repeatedly emerged in the past and that innovation should stop producing or perpetuating. The list can be shorter or longer and it is likely to change over time. Yet, the point is not so much what is in the list, but that a list can exist and it is a starting point, or better the light that innovation should follow. It is something about financial innovation that we do know, something that limits, to a certain extent, the uncertainty that innovation brings about. As such, we should use it as a driver to innovation and structure the regulation process around it.

Even if, at first, this might appear a not so drastic initiative, truth is that it would change the current economy of financial innovation dramatically: we have seen that financial innovation is often driven by law; there are, obviously, other reasons such as competition among financial players. Rarely, though, financial innovation is driven by the goals that society as a whole might have set. This is so because in financial markets, more than in other markets, innovation is supply driven or, more precisely, driven by financial

⁶⁷ See Hilary Allen, *The Road to Precautionary Review of Financial Products*, draft of July 30th, 2015.

intermediaries⁶⁸; hence, it reflects neither the interest of issuers (enterprises acting in the real economy) nor the interest of investors.

This is to say that, by channelling and informing innovation with the setting of specific objectives, and to the extent that such objectives are tailored on the needs of issuers, on the one hand, and of investors, on the other hand, financial innovation shifts from being supply driven to being demand driven.

C. Regulating the process of innovation instead of its results – some theoretical proposals

As stated above, we have very limited information about financial innovation. However, by selecting its results, we do obtain some sort of guidelines for constructing an appropriate regulatory framework, based on concrete goals. Thus, one main feature of such framework should be to direct innovation towards the fulfilment of pre-set goals: this preordination inevitably leads to a regulation of the process of innovation rather than of its effects (being most of these effects predetermined ex ante).

In the relevant literature, there are several theoretical proposals that point in this direction and that can be used to explain the methodological shifts. Some of them are apparently based on different justifications from those that I advance. Thus, their rapid analysis should demonstrate not only a trend in the legal literature that is consistent with the

⁶⁸ See Dan Awrey, *Complexity, Innovation, and the Regulation of modern financial markets*, in 2 Harvard Business Law Review, 236 (2012). Similarly, the same point is raised in a more articulated manner by Zachary Gubler, *The Financial Innovation Process: Theory and Application*, 36 Del. J. Corp. L. 55 2011.

methodology I propose, but also whether their logical premise is similar or different from mine. It might well be that these proposals all share a common foundation.

D. Principles based regulation

The most well argued and convincing theoretical example is offered by Dan Awrey and his application of principle based regulation to financial innovation⁶⁹.

Principle based regulation⁷⁰ stands in stark contrast to norm based regulation (i.e. the kind of regulation we think of when we talk about regulation itself), the two being profoundly different under many respects:

- a) Principles and norms are construed differently: a norm describes a certain circumstance and prescribe the legal effect of the occurrence of such circumstance; a principle set a standard that should inform the actor in any kind of circumstance⁷¹.

⁶⁹ Dan Awrey, *Regulating Financial Innovation: A more Principles-Based Proposal?*, in 5 Brook. J. Corp. Fin. & Com. L. 273 2010-2011. See also, by the same author, *Complexity, Innovation and the Regulation of Modern Financial Markets*, Harvard Business Law Review, Vol. 2 (2010) pp. 235-294.

⁷⁰ See also Cristie Ford, *Frexible regulation scholarship blossoms and diversifies: 1980-2012*, in *Innovation and the State: Finance, Regulation, and Justice*, CUP 2017; by the same author, *Innovation Framing Regulation*, The Annals of the American Academy of Political and Social Science, Vol. 649 (2013), pp. 76-97.

⁷¹ “*The debate respecting the optimality of rules versus principles (or standards) as mechanisms for delivering the content of legal norms represents one of the most enduring dialectics in all of legal thought. This dialectic incorporates both descriptive and normative elements. As a descriptive matter, both rules and principles are often viewed as being comprised of two basic components: triggers and responses. Where rules and principles diverge, according to this view, is in their respective approaches toward the design of each of these components. The archetypal rule prescribes both the empirical substance of the trigger and the precise response thereby elicited, leaving only factual issues to be determined by the decision-maker (whether it be a prosecutor, judge, or regulatory authority). The archetypal principle, in contrast, leaves both the trigger and response to be determined by the decision-maker on the basis of an underlying evaluative framework.*” Awrey, *supra*, at 274-275.

- b) Norms are designed to draw a sharp line between permissible and forbidden conduct, while principles leave a certain leeway and discretion to the actor⁷².
- c) Norms are static and reflect the status of limited knowledge at a certain point in time; principles are flexible, dynamic and therefore durable⁷³.

The above differences⁷⁴ are themselves sufficient to understand why principles based regulation is particularly fit for financial innovation: it does not suffer from the cognitive bias that inform norms based regulation and, most of all, it disincentives the type of financial innovation that is driven by regulatory reforms: indeed, principles do not set clear boundaries to be overcome, *“thereby frustrating opportunities for both creative compliance and regulatory arbitrage”*⁷⁵.

⁷² *“The benefits of rules derive from their precision. By drawing a sharp line between prohibited and permissible conduct, precision promotes greater predictability: lowering the transaction costs of decision-making for those subject to rules, thus encouraging planning and, ultimately, a more efficient allocation of resources. At the same time, by constraining the discretion of those who must apply them, the relative precision of rules also promotes greater formal equality and minimizes the potential for bias, arbitrariness, abuses of power, and rent seeking behavior on the part of decision-makers.”* *Supra* at 276-277.

⁷³ *Rules, however, are not without their drawbacks. The drafters of rules are invariably afflicted by cognitive and temporal constraints (i.e. bounded rationality) which undermine their ability both to draft rules which encompass all future contingencies and to foresee the unintended consequences of their drafting choices. The utilization of rules thus manifests the risk that they will be rendered anachronistic by subsequent developments. Furthermore, rules are by their very nature either over- inclusive (capturing behaviors which should be excluded) or under- inclusive (failing to capture behaviors which should be included). To the extent of this over- and/or under-inclusiveness, rules generate incentives which are incongruent with their underlying purposes. More specifically, this emphasis of form over substance incentivizes those subject to rules to engage in: (1) activities up to the boundary of permissible conduct; and (2) welfare-reducing creative compliance and regulatory arbitrage. As explained by Lawrence Cunningham: “rules can be blueprints for evading their underlying purposes. Bright lines and exceptions to exceptions facilitate strategic evasion, allowing artful dodging of a rule's spirit by literal compliance with its technical letter.”* Finally, as Cass Sunstein has suggested, rather than minimizing the potential for bias, abuses of power, and rent seeking behavior, rules may simply serve to drive such phenomena underground.” *supra* at 277.

⁷⁴ That can be summarized as *“certainty versus flexibility, uniformity versus individualization, stability and security versus dynamism”*, see *supra* at 281.

⁷⁵ *“(…) the primary benefits of principles derive from their flexibility and resulting durability in the face of changing factual circumstances and evolving customs and understandings. This contextual sensitivity is often viewed as enabling principles to retain a greater degree of congruence with*

Yet, the more drastic shift does not reside in the rule drafting process, but in its implementation one: with the introduction of principles/standards that set the desired results rather than a clear cut boundary of allowed and forbidden situations, the relationship between supervisor and supervisee, or more precisely between regulators and regulated actors is destined to evolve: from a top-down, command and control paradigm to a dialogic relationship with a constant exchange of information, possibly the development of mutual trust between two players that were originally seen as antithetic⁷⁶.

Such evolution does not imply a forfeiture by the regulator of its supervisory powers; to the contrary, it is meant to improve its supervisory capacity by increasing its expertise, enabling it to dialogue with market actors on an information asymmetry-free basis and leaving punitive enforcement to a residual yet powerful remedy.

Needless to say, the shift of perspective and attitude that is envisaged here is no easy to achieve: it implies a profound transformation of the way both regulators and regulated actors perceive themselves and the counterparty, of their internal decision-making

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their underlying purposes as compared with relatively static prescriptive rules. The dual traits of flexibility and durability also render principles more difficult to manipulate than rules—thereby frustrating opportunities for both creative compliance and regulatory arbitrage.” *supra* at 278.

“Taking the archetypal rules-based regime as a point of departure, the successful implementation of MPBR requires the fulfillment of at least four preconditions: (1) the identification and articulation by regulators of outcome-oriented principles; (2) a fundamental change in the philosophy of both regulators and regulated actors toward their respective roles in achieving desired regulatory outcomes; (3) the fostering of a new relationship between regulators and regulated actors premised on real trust, a more sophisticated dialogue, and shared understandings; and (4) a credible commitment by regulators to pursue a policy of intensive supervision combined with targeted and proportional (yet vigorous) enforcement. These preconditions together make up the essential elements of MPBR.” *Supra* at 285-286.

procedures⁷⁷, of the way they pursue their respective objectives and of the role that their reciprocal relationship plays in the pursuit of such objectives.

To conclude on principles based regulation, it is worth using Awrey's own words: *"Modem financial markets are characterized by complexity, seemingly perpetual innovation, chronic asymmetries of information and expertise, and pervasive agency costs. Perhaps nowhere are these characteristics -or their attendant regulatory challenges- more pronounced than within OTC derivatives markets⁷⁸. Mounting effective responses to these challenges must be considered amongst the most difficult and important tasks confronting financial regulators. Prescriptive, rules-based approaches toward financial regulation have thus far proven inadequate to this task. Through the utilization of outcome-oriented principles, enhanced dialogic relationships, intensive supervision, and targeted and proportional (yet vigorous) enforcement, MPBR manifests the potential to overcome these challenges and, in the process, generate more nuanced, responsive, durable, and effective regulation."*⁷⁹

⁷⁷ With implications on the internal organization of business actors and possibly on the corporate governance, i.e. the role of board of directors and management. As Awrey explains: *"MPBR [more principle based regulation, author's note] requires that regulated actors actively and meaningfully engage with principles at the highest level with a view to generating technological content capable of achieving desired regulatory outcomes. This contemplates both a more hands-on role for boards of directors and senior management in terms of their oversight and stewardship of regulatory compliance matters" and, simultaneously, a more strategic business role for firm compliance, risk management, and audit personnel.*" Awrey, supra at 287-288. That is to say that principle based regulation may require a holistic approach encompassing other fields of law, such as corporate law, in order to deliver the expected results. Though it may appear utopian, that is not so far apart from the legal changes that are expected in the near future in the EU, as it will be shown later in this chapter.

⁷⁸ Awrey uses over the counter markets as an archetype of the kind of challenges that financial regulation must face in terms of complexity, asymmetry of information and, of course, innovation. OTC transactions are also particularly relevant, in Awrey's view, because they are at the basis of the origination and distribution of risk (in the form of asset backed securities) that contributed to (or, perhaps, even generated) the great financial crisis of 2008.

⁷⁹ Awrey, supra at 315.

E. New economics of financial regulation

Another interesting theoretical proposal for a regulatory framework that can properly deal with financial innovation is offered by Zachary Gubler and his new economics of financial regulation⁸⁰. By studying financial innovation as a process of change, Gubler observes a dynamic where financial intermediaries and markets are both complementary and substitutes to each other. In the innovation process, a substitution occurs and a complex financial relationship that was originally between a financial intermediary and its client becomes more standardized and commodified: in other words, it becomes a product and instead of being managed by a financial intermediary, it becomes managed by the market⁸¹.

This shift has a price, of course: not only the standardization process makes the product – and the underlying relationship – less flexible, but it also makes such relationship more complex. Indeed, the new contractual structure not only incorporates the original features of the relationship between the intermediary and the client, but it also creates a tradable instrument and a categorization of holders⁸².

⁸⁰ Zachary Gubler, *The Financial Innovation Process: Theory and Application*, 36 Del. J. Corp. L. 55 2011.

⁸¹ “As the market becomes a more perfect substitute for a bank in the managing of risk related to a given product, the bank removes that product from its balance sheet and the relationship in which it is embedded, and transfers it to an arm’s-length transaction in the financial markets, thereby creating a “new market.” (...) As products work their way through the financial innovation process, becoming more standardized and less affected by information asymmetries, the risks associated with those products become correspondingly less profitable for banks to manage relative to the next best alternative.” These rising opportunity costs compel banks to offload these risks to the market and replace them with more complex, customized risks that are not as easily handled by the market.” Gubler, *supra* at 64 and 74. As widely explained above, the process, is driven by a variety of factors, including regulation and capital adequacy rules.

⁸² Part of this process is accomplished through “pooling and tranching”: “there was an incentive on the part of banks to move these assets, and their associated risks, to markets, which, as discussed above, can act as a substitute for these risk-managing functions. The principal challenge,

To exemplify and make Gubler's account clear: a loan or credit facility is generally less complex than a bond, though it services the same purpose.

Increased complexity in the products leads also to increased complexity of financial intermediaries: despite new kind of relationships shift from their balance sheet to the market in the form of products, tranches of these products remain or come back in the assets of intermediaries, making extremely difficult to evaluate their exposure to risk.

In light of such complexities and considering their origin, according to Gubler⁸³ we are left with little choice but to harness financial intermediaries' superior knowledge and make them contribute to an effective regulatory framework.

*however, was in overcoming the information asymmetries and lack of standardization in these debt instruments. The mortgage loans that made up these instruments had been extended to a variety of different parties with different credit histories and business prospects. Furthermore, by virtue of relationships with the borrowers of these loans, banks had superior information regarding these credit histories and business prospects, compared to markets. In order to overcome these information asymmetries, banks needed a way to assuage investors' fears regarding the risks underlying the loans being sold. The banks sought to accomplish this goal through "pooling" and "tranching," two core features of CDO design. By pooling a number of different loans together, the banks were able to minimize risk by exploiting the principles of diversification, assuming, as they did, that the loans in the pool were not highly correlated." Further, by dividing the CDOs into distinct tranches, each representing a different level of risk and return, the banks provided the investor with a measure of flexibility regarding the level of risk it was obligated to assume." Finally, banks prevailed upon credit rating agencies to stamp a large portion of the total value of the deal with the much-coveted triple "A" rating. These security design features allowed banks to move these assets to markets." Gubler, *supra* at 66-67.*

⁸³ *"My analysis suggests that that the debate over mandatory centralized clearing overlooks important information asymmetries that result from the complicating effect that the financial innovation process has on instruments, institutions and markets. Instead of a mandatory CCP-clearing rule, the economy would likely be better served by an alternative institutional structure that capitalizes on the local knowledge of market participants concerning product and institutional complexity, but that seeks to capture some of the benefits of a CCP-cleared market"* Gubler, *supra*, at 119.

*F. Pre-approval methods*⁸⁴

On a slightly different note, yet still pointing to the regulation of the innovation process, we should mention those advocating for the adoption of products pre-approval methods. There are several theoretical proposals currently on the table⁸⁵; they seem to be driven by different goals, but they share common justifications nonetheless.

Whether the aim is to avoid systemic risk or to achieve consumer protection⁸⁶, all the proposals draw from other regulated sectors, such as the pharmaceutical one, and praise for the introduction of bodies (agency, commission etc.) to review and approve new financial products before they are sold in the market. Once more, the demon to fight is complexity, main by-product of the financial innovation process.

However, contrary to the theories described above, a pre-approval process is not meant to resolve complexity and its effects – it rather aims at avoiding complexity in the first place. Instead of envisaging a cooperative relationship between regulators and regulated entities, it requires the latter to disclose information in order to obtain approval of a certain financial product.

In a nutshell, an approval agency shall review the economics and legal features of a product, assess them against pre-determined standards and determine whether they form

⁸⁴ I address pre-approval methods for sake of completeness, although their limited application does not serve the broader purpose of mitigating the innovation and law dynamics.

⁸⁵ Among them, one of the most recent may be ascribed to Hilary Allen, *The Road to Precautionary Review of financial products*, Suffolk University Law School Research Paper No. 15-32 (draft of July 2015). See also Gerald Epstein and James Crotty, *Controlling Dangerous Financial Products through a Financial Pre-Cautious Principle*, in 72 *Ekonomiaz* 270 (2009). Still on similar lines, but with strong focus on consumer protection, Elizabeth Warren, *Product Safety Regulation as a Model for Financial Services Regulation*, 42 *The Journal of Consumer Affairs* 452 (2008).

⁸⁶ Assuming these two objectives can really be seen as distinct.

a suitable package for the market to manage. Proof of suitability is to be delivered directly by the financial intermediary interested in selling the new product.

In spite of its different dynamics and its adversarial way of dealing with information asymmetries, product approval constitutes a method of regulating financial innovation based on selecting and distinguishing ex post the good innovation from the bad one. Thus, it is an indirect way of steering innovation and its process, intervening downstream. Yet, several of its underpinnings are shared by the hypothesis proposed before. That is why, before moving to the next session dealing with practical examples of innovation process regulation it is worth summarizing the common elements of the all theoretical proposals hitherto described.

G. Bottom line of theoretical proposals

The above list of proposal provides a limited example of how different legal scholars have tried to address the issue of financial innovation. It does not intend to be complete, but only to shed a light on the shift of perspective that ought to take place if we want to be both pragmatic and effective in dealing with the future of our financial system. They all share, as each and everyone of us currently does, a financial crisis bias – i.e. they are all informed by the experience of the financial crisis and largely draw from its lesson. But they also revive issues, as well as theories of governance⁸⁷, that precede the crisis, so that they represent a constant of either financial history or regulation.

⁸⁷ See Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, Minnesota Law Review, Vol. 89 (2005) p. 342.

What matters, though, for the purpose of this analysis are their common traits, which can be summarized as follows:

- the existence of certain normative elements, whether we call them principles, standards (thus attributing a positive connotation) or problems (thus attributing a negative connotation) that guide us in distinguishing the good and bad of financial innovation;
- the awareness of the fact that financial intermediaries currently play the main role in the innovation process and that, in doing so, they are often driven by motives which do not match the above mentioned normative elements;
- the acknowledgment of financial intermediaries' superior expertise with respect to their regulators, with the asymmetry remaining constant, or even increasing, as innovation is produced;
- the necessity to harness such expertise of financial intermediaries in order to make informed choice on good and bad innovation by establishing some sort of dialogue between regulators and regulated actors;
- the insight that we cannot afford to regulate innovation after it has extricated its effects but that we should rather drive innovation to desired outcomes or stop dangerous innovation before it takes hold;

Having distilled the common grounds of the theoretical proposals, I can now move on to discussing some practical examples of innovation process regulation.

H. Regulating the process of innovation instead of its results – some practical examples

As with the theoretical proposals mentioned above, the great financial crisis made regulators, states and international organizations think about some sort of preventive system to avoid the experience of the crisis or, to the very least, to be prepared in case it happens again.

Much of the work has been done in the institutional design of financial markets, with closer supervision of banks and an almost obsessive desire to understand and gain information of what happens at the macro-level – fighting the evil of systemic risk⁸⁸.

These institutional developments were certainly important; luckily enough, though, there was more than that: an intuition that mere top-down supervision would have not been sufficient to re-establish trust in the financial system and, most of all, that systemic risk could and should have been prevented starting from basic contractual relationship in the financial market. That is to say that there are also other important issues to be tackled, such as investors protection, conflicts of interest or access to credit – to name a few – the addressing of which is not only necessary *per se*, but it may also contribute to preventing systemic risk in the first place.

In the EU experience, such sort of “breakthrough” is attributable to those institutions who have been dealing with the above issues on a daily basis, i.e. national financial authorities. They hit upon the idea that, to the extent market actors are informed by principles such as investor protections in the creation of new financial products, innovation is less of a problem and more of an opportunity.

⁸⁸ See, *supra*, on systemic risk, p. 9.

Thus, a short analysis of some national financial authorities' practice in supervising financial products can tell a story of innovation-process regulation⁸⁹.

(I) *The experience of the Autoriteit Financiële Markten*

The Autoriteit Financiële Markten (AFM) is the Dutch financial authority, entrusted with the task of supervising the entire financial market sector and of ensuring its fairness and transparency⁹⁰. Though it is not requested to look after financial stability and prudential supervision (the latter been a duty upon the Dutch Central Bank⁹¹), the AFM perceives its task has been instrumental to financial stability, precisely in light of that bottom-up approach mentioned above⁹².

For the purpose of this analysis, it is important to briefly highlight the AFM's general approach to supervision and, in particular, its activities in the field of product development. Indeed, the AFM's approach is telling of the way it perceives current issues in the financial sectors, while its product development supervision and the way in which

⁸⁹ For a more comprehensive work on national financial authorities practice in some EU Member States, see Yane Svetiev and Annetje Ottow, *Financial Supervision in the Interstices Between Private and Public Law*, 10(4) *European Review of Contract Law* 469 (2014). Part of my analysis of national financial authorities practice draws on the work and methodology of Svetiev and Ottow.

⁹⁰ See general description of the AFM, at <http://www.afm.nl/en/over-afm.aspx>.

⁹¹ See mission of De Nederlandsche Bank at <http://www.dnb.nl/en/about-dnb/onze-missie/index.jsp>.

⁹² "(...) both interviewed officials emphasized that under the AFM's present approach to supervision the two tasks are seen as complementary: ensuring the good quality of financial products and trust between private party participants in financial transactions is seen to contribute to prudential stability of the financial sector." Svetiev and Ottow, *supra* at 512.

such supervision is carried out represent a significant example of how to reconcile the identified problem with a suitable solution.

To be clear: in the aftermath of the great financial crisis, the AFM identified one fundamental issue affecting the normal functioning of financial markets, this being investors' complete lack of trust in financial intermediaries. We may picture financial markets as a complex web of contractual relationships between investors, issuers and financial intermediaries, the latter being the true engine of the flow of funds between the first two. Trust, needless to say, is at the basis of every contractual relationship; in the absence, we would be overly suspicious and even refuse to enter into a clearly profitable transaction (because we would probably think that it is too good to be true).

Being the lack of trust the identified problem, in the AFM's view there could be few solutions but for financial intermediaries to change their business conduct vis-à-vis their customers. In other words, a cultural shift should have taken place in the market so that business actors would place the quality of their products and services at the top of their agenda, thus benefiting customers and preserving their interests⁹³.

⁹³ To use the former AFM Chairman's words: "*In some countries regulators have begun to explore the hypothesis that the culture of a financial institution, indeed of the sector as whole, is a critical factor determining behavior. Simply said the term culture is used to describe 'how things are getting done' beyond what is written in the procedures and implemented in the systems of the organization. It describes, among others, the attitudes and values of people. If these are not aligned with the performance objectives of banks, for example treating customers fairly, a lot of control through procedures and bureaucracy within banks is necessary to ensure desired outcomes. I hope you will recognize that a parallel logic can be created on a sector level: if the values and attitudes of the sector are not aligned with the performance objectives of society a lot of control through regulations and supervision is necessary to keep the sector within the boundary conditions set out by society. (...) Let me take this hypothesis as a starting point for a more fundamental approach in redressing the issues of the financial sector. Thus the main challenge is first of all upon banks to build safety and fairness cultures – i.e. cultures that are aligned with the expectations of society. Secondly, regulators have a responsibility of stimulating and supporting institutions to embark on such a course.*" See speech by Theodor Kockelkoren, at the time

With this objective in mind, the AFM worked together with business actors to have them accomplish this cultural shift. And product oversight is an important part of this story.

The AFM begun studying financial products back in 2012⁹⁴, before the Dutch legislators enacted a law that formally required financial institutions to have a product development process in place. In that early experience, it was already clear to the AFM that a proper assessments of complex financial products could not prescind from a dialogue with financial service providers, aimed at exchanging information, data, views and results⁹⁵.

In this way, when the new financial products legislation came into force on January 1st 2013, the AFM was best prepared on how to play its supervisory role.

Indeed, the legislation prescribes to financial institutions the adoption of processes and procedures to deliver financial products which are conceived, from the beginning, by taking into due account the interest of customers⁹⁶.

Chairman of the AFM, on the Global Risk Regulation Summit, 2nd of December 2013 in Amsterdam, available on the AFM's website.

⁹⁴ See report on leveraged products (turbos).

⁹⁵ *Ibidem*.

⁹⁶ It is worth reporting the relevant article of the Dutch Market Conduct Supervision Decree as it represents a clear example of principled based regulation: “1. *A financial enterprise as referred to in Section 4:14 or 4:15 of the Dutch Financial Supervision Act that offers or structures a financial product and makes such product available shall have appropriate procedures and regulations in place to ensure that balanced consideration has been given to the interests of consumers, the clients and the beneficiaries of such financial product during the development of the financial product, and that the financial product is demonstrably the result of this consideration of interests.* 2. *The procedures and regulations referred to in the first subsection shall be recorded and shall ensure that:* a. *The target customer in the financial product has been defined on the basis of an analysis of and description of the target investor's intended objective when investing in such financial product* b. *tests are conducted in order to establish how such financial product performs as a whole and how the separate elements of such financial product perform under various scenarios. Such tests should ensure that such financial product does not conflict with the objective referred to under item a., while also taking into account the nature of such product.* c. *The product information and, to the extent that can reasonably be expected, the distribution of the financial product are both suitable for the target investor referred to in item a.* d. *Checks of and, if necessary and appropriate, updates of the procedures and measures*

These processes and procedures are internal to financial institutions, who also discretionally decide on the methods of implementation; more importantly, it leaves them with freedom to innovate⁹⁷. The AFM, instead, provides guidance to market participants and engages in active dialogue with them to ensure that they eventually take the most appropriate decision⁹⁸ and that innovation reflects the principles embedded in the regulation.

referred to in subsection 1 shall take place on a regular basis. 3. The financial enterprise shall regularly adjust the procedures and measures referred to in subsection 1 relating to the financial products that it offers or that it has compiled and made available in the market. Such adjustments of the procedures and measures shall take place at times to be determined by the financial enterprise itself, or when there otherwise is reason to do so. 4. In the event that a financial product harms the interests of a consumer, client or beneficiary for whom the product has been developed, the financial enterprise shall adjust the product as quickly as possible, or the financial enterprise shall cease to offer or structure the financial product and cease to make the financial product available in the market.”

⁹⁷ *“The design of products is the responsibility of financial institutions. Supervision on compliance of the rules by the AFM does not shift this responsibility. The financial institution can best judge what fits its culture and processes, the product demand by consumers and which customer segments it wants to serve. Supervision by the AFM does not mean that the AFM pre-approves products or sets exact rules on the design of the product development process and the resulting products. The AFM thinks that pre-approval would reduce innovation of financial products and increase the risk of moral hazard. If we would pre-approve products, financial institutions might only submit products of which they are sure that they would be approved, or they might test the limits and avoid taking their own responsibility. Innovation is an important factor of a dynamic financial market and we must be careful not to stifle it. Also, consumers might assume that a pre-approved product implies that the product is guaranteed to be safe. Moral hazard will increase if customers completely stop thinking about the quality of financial products. Processes and products could be different for different types of financial institutions of market segments. The financial institutions itself knows best what process will work for their decision making system, culture and their target clients. Setting exact rules could be perceived as taking away the responsibility for designing good quality products while this responsibility is part of their core business.”* See AFM report on *Product oversight for financial institutions*, p. 5, available on the AFM website.

⁹⁸ *“While the AFM has formal powers to take punitive action, our supervision approach focuses on increasing self-reflection on their own conduct by financial institutions. Rather than changing one product or process because of an enforcement action, active dialogue between the AFM and the financial institution should promote that financial institutions refrain from introducing unsuitable products in general. (...) The Dutch rules for supervision of products and processes is an open norm, which leaves room for financial institutions to implement them giving consideration to on their culture and type of organization. The AFM offers some guidance on those aspects of the rules that we feel are particularly important.”* Id., p.6.

In other words, the AFM acknowledges that market participants do know better the technicalities of both products and procedures and that its thorough understanding of such technicalities is dependant upon a proper exchange of information. The Dutch authority's soft approach and collaborative method is clearly a peculiarity compared to the adversarial relationship between supervisor and supervisee that we usually imagine when we think about financial conduct authorities.

Nevertheless, the effectiveness of such approach has been proven by the 2013 yearly report recently published by the AFM⁹⁹, where the authority itself clearly stated: "*prevention is better than punishment*"¹⁰⁰. Remarkably, in 2013 the AFM monitored 6.500 financial products and removed 9 of them from the market¹⁰¹.

Although an assessment is obviously relevant to the extent one advocates a particular approach, the AFM experience is significant regardless of it being a successful story or not. It is a practical example of what legal scholars have dubbed principle based regulation¹⁰² and an instance of pragmatic use of the limited information we have in order to influence financial innovation. In fact, if we summarize the AFM's perspective in few points, we can clearly see that:

- identification of a business culture incompatible with valuable society's objectives (investors' protection and interests, most of all);

⁹⁹ See AFM Annual Report 2013, published on 22 April 2015 on the AFM website.

¹⁰⁰ Id, at p. 5.

¹⁰¹ Id, at p. 8.

¹⁰² See above.

- need to guide business actors towards spontaneous compliance with such of objectives, in order for them to compete on the basis of quality of products and services (similarly to other market sectors);
- necessity to leave market actors with the freedom to use their superior knowledge and expertise to develop new products;
- use of appropriate powers of intervention by the authority only in residual situations where pre-set objectives are neglected by the business actors.

It may all seem very simplistic and trivial, but that is a valuable alternative to a constant run after detailed technical rules intended to grasp knowledge in continuous evolution.

(II) EU general trend: MIFID II and MIFIR

Directive 2004/39/EC of 21 April 2004 (MiFID) represents the cornerstone of the regulation of financial markets in the European Union. It regulates, *inter alia*, the authorisation and the supervision of investment firms, the requirements for the provision of investment services and activities, the authorisation and supervision of trading venues and the protection of investors.

Though introduced in 2004, MiFID was to be implemented by Member States by 1st November 2007; ironically, soon after implementation financial markets were shocked by the crisis; the latter influenced the process of revision of MiFID both in terms of substance and in terms of time: indeed the review begun after the G20 Summit in Pittsburgh on 24-25 September 2009, the legislative proposals were adopted by the Commission on 20 October 2011 and agreement between the European Parliament and

the Council on a compromised text was reached only on 14 January 2014. As a result, the new package is introduced 10 years after its predecessor.

G20 Summit commitments in the field of financial markets¹⁰³ do inform the new package, together with the need to remedy several loopholes that the crisis have unveiled. Yet, the package is also the result of the developments and innovations that financial markets have experienced over the years as well as of the need, stressed by the European Council of 18 and 19 June 2009 to establish a European single rule book applicable to all financial institutions in the internal market. According to recital 3 of MiFIR, it was “*the need to establish a single set of rules for all institutions in respect of certain requirements and to avoid potential regulatory arbitrage as well as to provide more legal certainty and less regulatory complexity for market participants*” that led to the strong harmonization represented by the adoption of the Regulation.

The effective implementation of both MiFID II and MiFIR requires the adoption of implementing and regulatory technical standards¹⁰⁴: in this respects, the high number of regulatory technical standards to be issues is a prima facie indication of how the European legislator has not abandon its aspiration to fully grasp the complexity of financial markets; to the contrary we are still in the realm of the coyote seeking the Road Runner.

¹⁰³ Insert reference to G20 summit commitments.

¹⁰⁴ Adoption of MiFID II by the Member States should occur by 3rd July 2016 and applied by 3rd January 2017; similarly, MiFIR will apply from 3rd January 2017. However, the Commission’s intention to postpone the introduction of MiFID II has recently been announced, the reason being the large number of technical rules to be implemented. Apparently, the Commission has proposed a one deferral to the Council and the Parliament and decision on the matter by the latter two is still awaited.

In any event, there are some elements of MiFID II and MiFIR that are worth analysing, in particular to the extent that they mark a substantial shift from previous regulatory paradigm. Thus, we may pretend that some sort of path dependency affected these two pieces of legislation inasmuch as they regulate renowned aspects of financial markets, while a door for new approaches is left open with respect to innovative elements.

One of the key aims of the MiFID 2/MiFIR package is to strengthen investor protection. In light of the importance of the topic and of the many initiatives taken in this respect, investor protection will be dealt with in the section below.

(III) From MiFID to MiFID II – MiFIR: adding bite to investor protection

The issue of innovation in the field of investor protection can be tackled under many different perspectives: i) product governance procedures; ii) product intervention; iii) corporate governance and organizational structure; iv) provision of investment services.

In order to grasp the extent of innovation, it is important to trace the relevant legal framework established by MiFID in the first place. Each of the above categories will then be addressed.

i. Investor protection under MiFID

To offer investors a high level of protection was one of the aims driving the harmonization process triggered by MiFID. Protection was to be insured mainly through organizational requirements and specific obligations for the providers of investment services.

With respect to organizational requirements, investment firms had to maintain and operate effective organisational and administrative arrangements with a view to taking all reasonable steps designed to prevent conflicts of interest from adversely affecting the interests of clients.

In the context of providing investment and ancillary services, investment firms had to act honestly, fairly and professionally in accordance with the best interests of their clients. Information provided to the latter had to be fair, clear and not misleading and had to include a series of data regarding the service, the instrument and the costs. Firms were also to gather information from clients in order to understand their level of knowledge, so that they could fine-tune the advice on that basis.

In terms of dispute resolution, the introduction of out-of-court remedies for investors' redress was encouraged, together with a power to intervene collectively through court actions by consumer organizations.

Finally, national supervisory authorities were to be provided with specific police powers.

MiFID II and MIFIR strengthen the measures listed above and introduces new measures such as product governance procedures.

ii. Product governance procedures

If MiFID concentrated its intervention on the distribution moment, when investment firms provide investment services to clients, MiFID II anticipates intervention at the stage of manufacturing of financial instruments: *“investment firms which manufacture financial instruments for sale to clients shall ensure that those financial instruments are*

designed to meet the needs of an identified target market of end clients within the relevant category of clients, the strategy for distribution of the financial instruments is compatible with the identified target market, and the investment firm takes reasonable steps to ensure that the financial instrument is distributed to the identified target market.”

In order to achieve the above results, firms have to implement an organizational structure:

“an investment firm which manufactures financial instruments for sale to clients shall maintain, operate and review a process for the approval of each financial instrument and significant adaptations of existing financial instruments before it is marketed or distributed to clients. The product approval process shall specify an identified target market of end clients within the relevant category of clients for each financial instrument and shall ensure that all relevant risks to such identified target market are assessed and that the intended distribution strategy is consistent with the identified target market.”

Once distributed, the distributing firm shall regularly review the instrument in order to ensure that the manufacturing characteristics (eg. target market) are fulfilled.

iii. Product intervention

Connected to the product governance described above are the product intervention powers introduced by MiFIR: though it is true that MiFID provided competent authorities with the power to require suspension and removal of financial instruments (the direct power usually stands with trading venues), the new regime empowers competent authorities with direct intervention to prohibit or restrict a) the marketing, distribution or sale of certain financial instruments or structured deposits or (b) a type of financial activity or practice.

Such power can be exercised under certain circumstances such as investor protection concerns or threat to the orderly functioning and integrity of financial markets. Under the normal procedures, competent authorities have to notify authorities of other member states as well as ESMA before acting, but under exceptional circumstances they can take urgent actions.

Should national competent authorities not act when conditions are met, the power to temporarily restrict marketing and distribution of financial instruments and activities rest with ESMA (EBA in the case of structured deposits).

iv. Corporate governance and organizational structure

In addition to the organizational requirements set by MiFID and by the product governance described above, MiFID II addresses the responsibilities of, and supervision by, management bodies of investment firms, whose task is to ensure that the measures for investment protection are implemented.

Organizational requirements concerning conflict of interest are also strengthened by affecting the remuneration systems: *“an investment firm which provides investment services to clients shall ensure that it does not remunerate or assess the performance of its staff in a way that conflicts with its duty to act in the best interests of its clients. In particular, it shall not make any arrangement by way of remuneration, sales targets or otherwise that could provide an incentive to its staff to recommend a particular financial instrument to a retail client when the investment firm could offer a different financial instrument which would better meet that client’s needs.”*

A further organizational obligation consists in the recording of all telephone conversations and electronic communications with clients relating to transaction orders. Minutes or notes should be taken with respect to face to face conversations in the context of which orders are placed.

v. Provision of investment services

Though the provision of investment services was the focus of MiFID, innovations introduced in the field are numerous.

First, firms will be required on request to demonstrate to competent authorities that individuals providing investment advice to clients possess the necessary knowledge and competence to do so.

Secondly, when providing independent advice, firms are required to follow stringent procedures, such as assessing a sufficient number of instruments available on the market.

Furthermore, investment firms that provide advice on an independent basis or provide portfolio management will be banned from accepting or receiving fees, commissions or any monetary benefits from third parties.

Specific obligations are also introduced when offering bundled services.

I. What can we learn from these practical examples

In the previous Chapter we have analysed how the CMU project is going to affect the way in which banks run their business. On the long-term, we can predict that much

attention will be paid on the role of banks as financial intermediaries between investors and capital markets (s.c. the fee earning business).

Assuming that that would be the case, the experiences in the product regulation sector described above are to be judged as a signal of hope – hope that the regulatory framework will be prepared to tackle the new issues, the hot topics to be.

However, much is still to be done in this sense. The evolution ought to be widespread. Most of all, the need for change in the regulatory approach is to be recognized politically, so that a standard can be set – in the EU and worldwide.

VI. CHAPTER 5 – CONCLUSION

In this work I have elaborated on the relationship between law and change and established its reflexive nature, with specific reference to financial law (though it can be extended to other areas of law).

I have then tried to analyse how this relationship has manifested itself in the past in the field of financial shocks, in order to validate its correctness.

By looking ahead at undergoing innovation, I conclude that the future is not going to be bright and that our legal system is not prepared to deal with change.

I have finally analysed principle based regulation in the field of product regulation as a method to account for innovation and guide it as a process.

My claim is that principle based regulation should be applied generally in order build a system flexible enough to deal with the inevitability of change and innovation.

That would entail a different role for financial authorities, whose activity should shift from watchdog to guide, and whose relationship with market actors should turn from adversarial to collaborative.

There is no use in the “patch work” approach that financial regulation is experiencing: we discover flaws from crisis after crisis and we try to correct them. Yet the system that we build each time is either the cause of the next crisis or the fuel that exacerbates the crisis effects.

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