BANCA D'ITALIA
EUROSISTEMA

Financial Market Regulation in the Wake of Financial Crises: The Historical Experience

Seminari e convegni
Workshops and Conferences

Edited by Alfredo Gigliobianco and Gianni Toniolo

November 2009

number 1

BANCA D'ITALIA
EUROSISTEMA

Financial Market Regulation in the Wake of Financial Crises: The Historical Experience

Seminari e convegni
Workshops and Conferences

Edited by Alfredo Gigliobianco and Gianni Toniolo

Preliminary versions of the papers in this volume were presented at the Banca d'Italia workshop on Financial Market Regulation After Financial Crises: The Historical Experience, *held in Rome, Palazzo Koch, on 16-17 April 2009. The workshop was organised by the Economic and Financial History Division of Banca d'Italia's Structural Economic Analysis Department (Servizio Studi di Struttura Economica e Finanziaria).*

This is the first publication of the Banca d'Italia series Workshops and Conferences.

The proceedings may be requested from:

Banca d'Italia
Servizio Studi di Struttura Economica e Finanziaria
Divisione Biblioteca e Archivio Storico
Via Nazionale, 91
00184 Roma
Italy

They are also available on the Internet at:

www.bancaditalia.it

Printed by the Printing Office of the Banca d'Italia - Rome, November 2009

CONTENTS

Part C

THE DESIGN OF REGULATION: EXPERIENCE AND THEORY

Appendix

CONTRIBUTORS

Sigbjørn Atle Berg (*Norges Bank*)
Conceptión Betrán (*Universidad de Valencia)*
Erik Buyst (*Katholieke Universiteit Leuven*)
Øyvind Eitrheim (*Norges Bank*)
Alfredo Gigliobianco (*Banca d'Italia*)
Claire Giordano (*Banca d'Italia*)
Yury Goland (*Russian Academy of Sciences, Institute of Economy, Moscow*)
Robert Hetzel (*Federal Reserve Bank of Richmond*)
Ivo Maes (*Nationale Bank van België/Banque Nationale de Belgique*)
Pablo Martín-Aceña (*Universidad de Alcalá*)
Joseph Mason (*Lousiana State University-Baton Rouge, LA*)
Angeles Pons (*Universidad de Valencia*)
Martin Pontzen (*Deutsche Bundesbank*)
Fabrizio Saccomanni (*Banca d'Italia*)
Juha Tarkka (*Suomen Pankki/Bank of Finland*)
Gianni Toniolo (*Duke University and LUISS, Rome*)
Eugene White (*Rutgers University, New Brunswick, NJ*)

PARTICIPANTS

Alberto Baffigi (*Banca d'Italia*) - Discussant
Federico Barbiellini Amidei (*Banca d'Italia*) - Discussant
Stefano Battilossi (*Universidad Carlos III de Madrid*) - Discussant
Sigbjørn Atle Berg (*Norges Bank*) - Author
Marcello de Cecco (*Scuola Normale Superiore, Pisa*) - Discussant
Luca Einaudi (*Italy's Prime Minister Office, Rome*) - Discussant
Øyvind Eitrheim (*Norges Bank*) - Author
Andrea Enria (*Banca d'Italia*) - Chair
Olivier Feiertag (*Université de Rouen*) - Author
Marc Flandreau (*Graduate Institute of International and Development Studies, Geneva*) - Author
Daniele Franco (*Banca d'Italia*) - Chair
Andrea Generale (*Banca d'Italia*) - Discussant
Alfredo Gigliobianco (*Banca d'Italia*) – Author/Discussant
Claire Giordano (*Banca d'Italia*) - Author
Giorgio Gobbi (*Banca d'Italia*) - Discussant
Yury Goland (*Russian Academy of Sciences, Institute of Economy, Moscow*) - Author
Frank Heid (*Deutsche Bundesbank*) - Discussant
Robert Hetzel (*Federal Reserve Bank of Richmond*) - Author
Sophia Lazaretou (*Bank of Greece*) - Discussant
Žarko Lazarević (*Institute for Contemporary History, Ljubljana*) - Author
Ivo Maes (*Nationale Bank van België/Banque Nationale de Belgique*) - Author
Pablo Martín-Aceña (*Universidad de Alcalá*) - Author
Donato Masciandaro (*Università Bocconi, Milan*) - Discussant
Joseph Mason (*Lousiana State University-Baton Rouge, LA*) - Author
Giangiacomo Nardozzi (*Politecnico di Milano*) - Chair
Marco Onado (*Università Bocconi, Milan*) - Discussant
Martin Pontzen (*Deutsche Bundesbank*) - Author
Fabrizio Saccomanni (*Director General of Banca d'Italia*) - Author
Luigi Federico Signorini (*Banca d'Italia*) - Chair
Luigi Spaventa (*Università La Sapienza, Rome*) - Discussant
Juha Tarkka (*Suomen Pankki/Bank of Finland*) - Author
Gianni Toniolo (*Duke University and LUISS, Rome*) – Author
Ignazio Visco (*Deputy Director General of Banca d'Italia*) - Chair
Eugene White (*State University of New Jersey Rutgers-New Brunswick, NJ*) – Author

FOREWORD

Fabrizio Saccomanni[*]

I am very pleased to welcome at the Bank of Italy the participants of this Conference on post-crisis financial regulation. I believe that a historical perspective can contribute to guiding monetary authorities and financial regulators in this very delicate moment, in which we are attempting to redesign and bolster the shattered international monetary and financial system.

As you all know, Italy was hit by a major earthquake two weeks ago; the town of L'Aquila has been devastated. This tragedy led me to draw a parallel with the financial earthquake we are currently undergoing. Both seismologists and financial economists, in fact, are able to detect whether a build-up of pressure is occurring, and which could lead to a shock; at the same time, however, both are unable to predict exactly when the shock will occur, where it will strike and what propagation and repercussions it will have.

There is, however, a crucial difference between seismologists and economists. The former, working together with civil engineers, have been able to build quake-proof buildings, thereby minimizing the number of victims caused by an earthquake. Unfortunately, we, as financial economists and regulators, have not been able to build quake-proof financial systems. This is a reason for which we have to be humble and to make every effort to understand what went wrong, in order to avoid mistakes being repeated in the future.

Our task is, however, more difficult than that of engineers, because in our field the cause-effect nexus is much less straightforward than in civil engineering. Our understanding of the propagation mechanism of a primary impulse is far from complete; besides, one must worry about the effect of regulation not only on the overall productivity of financial systems, but also on their ability to promote innovation. While assessing the trade-off between stability and productivity at a given technology level seems to be a feasible task, one cannot really gauge the amount of innovation which we forego as a consequence of each piece of new regulation we introduce. We need to improve our understanding of what the implications of a crisis are for the overall productivity and effectiveness of the financial system, which are crucial to reduce the cost of capital, to improve the management of financial risk and, therefore, to promote investment and growth in the economy and to increase the general welfare.

The Bank of Italy, like other central banks, is deeply interested in the work of historians. History offers numerous cases of crashes and contagions on which it is worthwhile meditating. In this conference, we want to go beyond that: our aim is to learn something about the response of regulators to crises and the response of operators to regulation worldwide. If constant patterns do exist in these interactions, history and game theory may be allies in ferreting them out. Historical experience can help us shed new light on important themes, such as overregulation, timing of the regulation, and the role of lobbying pressures.

Striking a balance between exercising effective prudential regulation and promoting innovation in the financial sector is not a trivial task and must be taken into consideration in designing any new regulatory framework. This is the task currently confronting monetary and

---

[*] Director General of Banca d'Italia.

financial authorities in the *fora* of international cooperation. On some key principles there seems to be growing consensus.

On top of the list I would put the ban on what has been defined the shadow banking system, namely that system made up of “conduits” or of special purpose vehicles that were not regulated and of which very little was known even by the banking supervisors. These vehicles, at the moment of the crisis, managed to transfer the risks back to the “normal” banking system eventually propagating the contagion throughout the global financial system. To avoid this from happening again, the optimal perimeter of regulation needs to be large: not because I am particularly fond of regulating, but due to the fact that, if we were to confine ourselves to supervising only those intermediaries which are thought to have a systemic relevance, financial innovation would quickly transfer most of the more complex risks outside of that perimeter. It is precisely the “patent” of systemic irrelevance that may transform a systemically irrelevant operator into a systemically relevant one.

My view is that no agent in the financial field should be left free to act without being subject to some form of regulation, of variable intensity depending on the circumstances, so that regulators can determine their systematic relevance. This must be the case also for operators like the rating agencies, which are not intermediaries but have played a crucial role in the origination and marketing of highly complex and risky financial products.

The job of the regulator is obviously not immune from criticism. The two poles between which financial authorities seem to waver are interference and dirigisme on one side and regulatory capture on the other. Both must be avoided by keeping the rules and the regulator itself under constant scrutiny. Checks and balances mechanisms must exist not only for the regulated, but also for the regulators. Rules and procedures, clear accountability processes should be used in order to prevent both interference and complacency.

The current pressure coming from the public is such that a new financial architecture is bound to emerge. We must, however, always bear in mind that regulatory design is only the first step towards re-stabilizing financial markets worldwide. The actual implementation of any new regulation will also require a determined action at the international level in order to reassure market participants that the excesses and the mistakes of the past will not be tolerated any longer.

I am sure that the debate you are going to conduct at this workshop will provide useful indications for policy makers to tackle these complex issues.

INTRODUCTION

REGULATORY RESPONSES TO FINANCIAL CRISES IN SEARCH OF A PATTERN

Alfredo Gigliobianco[*]

The focus of the present volume – which originates from a workshop held at the Bank of Italy in April 2009 – is the regulatory response given to financial crises in the past, across countries. Alongside the scholarly interest of such a review, which hardly needs further explanation, our hope is also to offer some insights that may be useful in re-designing regulation in the present time of distress. It ought to be clear, however, that our aim is far more circumscribed than explaining regulatory tendencies as such. Financial crises have been examined under many perspectives, including that of regulatory failures. However, their effects on regulation are less known. The studies assembled in this volume, which touch on a significant array of countries, can be viewed as part of a historical survey on this issue. The basic question is whether regulatory responses form a pattern, and more specifically, whether they tend to be biased with respect to an optimum, however defined. Thus, the keywords which most usefully map the terrain covered by the authors are: unwarranted faith in regulation or in the market, overregulation, diagnostic errors, trigger effect, regulatory cycles, lobbying, conflicts of interest. Our effort has been to include in the same intellectual exercise both issuing and non-issuing banks; the regulation of issuing banks usually predates that of non-issuing ones, but the basic "political" mechanisms governing the evolution of legislation are the same. Some authors also made reference to the design of the bail-outs engineered to stem the crises, but while this is a very interesting topic, crisis-management is not one of the main themes of this volume.

Before sketching a summary of the findings of the authors along these lines, one should acknowledge that the crisis which started in 1929 really represents a watershed in the matter of regulatory responses. While the reaction to previous crises had been rather mild and scattered, in the mid-Thirties the banks, or the larger set of financial institutions, had to submit to comprehensive and forceful legislation almost everywhere. To this effect, three factors concurred: the severity and worldwide dimension of the financial crisis, the deep depression that ensued, the prevailing theoretical mood, which had turned away from market fetishism. Although, one must add, only part of the legislation then enacted could be justified by the doctrine of the time concerning financial crises (to this we shall turn back briefly under the headings: regulatory cycles, trigger effect).

Let us return now to our seven keywords. The first two – *unwarranted faith* and *overregulation* – may be discussed together, as overregulation often stems from a "demand" of public intervention (from depositors, public opinion, politicians, etc...) which, in the aftermath of a severe crisis, does not take into account the fallibility of regulators nor the costs of regulation. Still, one should not forget that overregulation may have quite different origins than crises, as we shall later see.

Faith in, or mistrust of, regulation leads to the inevitable question whether market discipline (and the regulation designed to reinforce it) is preferable to norms and practices which imply that

[*] Banca d'Italia. E-mail: alfredo.gigliobianco@bancaditalia.it
JEL: G01, G28, N20.

I thank Federico Barbiellini Amidei and Claire Giordano for their thoughtful comments on a previous version of this introduction.

legislators and public officials “know better”. At least two of the authors, Hetzel and White, both writing about the American experience, unequivocally argued in favour of the market and against the wisdom of regulators. The debate on this issue among the participants to the workshop was lively, and tended to better define or even to question the concept of market discipline. Markets are themselves institutions (Spaventa); market “discipline” reinforces irrational behaviour during bubble episodes (Onado); markets for certain products, whether financial or not, may not even exist (Visco). Mason contends that bank regulation is “typically functional in nature (telling the bank what it can and cannot do) rather than merely transparency-enhancing”. The very distinction between market-reinforcing and non market-reinforcing regulation is not clear-cut, since most of the regulation, in one way or another, is aimed at compensating for some market failure. Whilst this is a theoretical and practical node of great importance, the hard facts assembled in the workshop do not allow to go beyond the useful, but a bit generic, plea to regulators to fully exploit market channels and mechanisms. Not surprisingly, since the original question asked was not what type of regulation produces better results, but what occurs to regulation after crises.

A summary analysis of the national cases seems to lead to the following proposition: after major, severe crises, the faith in the market dwindles (provided that the cultural atmosphere is not strongly *laissez-faire*), and the partisans of strong regulation tend to have the upper hand: Glass-Steagall Act of 1933, German Banking Act of 1934, Italian Banking Act of 1936, etc... We put a restrictive condition between brackets because several cases show that a crisis, even a major one, is not capable to spur a heavy regulatory response if the general mood of the economists, the legislators and the public is oriented in the opposite way. The Spanish episode of 1854 is illustrated by Martin Aceña. White shows that the costly bank failures of the early Eighties in the United States did not stop the liberalization process which was already under way as a reaction to the previous decades of financial repression. Other similar cases are those of Belgium in 1885-86, depicted by Maes, and, perhaps, of Russia in the past decade, described by Goland.

By *diagnostic errors* I mean the failure of analysts and politicians to correctly identify the causes of a crisis; normally, the therapy which follows a diagnostic error is wrong. The issue came up in the workshop during the discussion of the American regulatory reaction to the Great Crisis. Historians are aware of White’s and Kroszner and Rajan’s strong indictment against Carter Glass, who was the driving force behind it, accused of being an ideologue. As known, these critics argued that a careful examination of the US banks which had been involved in security dealings and tradings proved that their situation was no worse than that of the banks which had behaved along supposedly more prudent lines. An error of a different kind was incurred in by the Italian legislators of 1926, which, according to Gigliobianco, Giordano and Toniolo, tailored their law on phenomena which had been typical of the previous crisis of 1907, thus failing to take into account the transformation of universal banks, during and after WWI, into giant holding companies owning industrial firms. One special case of diagnostic error is the *trigger effect*. This occurs when new legislation is not, in truth, designed to respond to a crisis: the crisis merely creates an opportunity (favourable public opinion, weaker banks, urgency of action) to introduce legislation which rests on a different motivation, typically the desire to control and to direct credit flows. This is in fact a case, rather frequent in the post-Great Depression years, of voluntary error. Barring the trigger effect, errors stem out of a combination of poor data, aroused public opinion, foolishness, faulty doctrine.

As in many fields of human endeavour, *cycles* do exist in regulation. The impulses which generate those cycles, though, are diverse. The already cited authors of the paper on Italy identify a regulation-innovation cycle in their national experience. They analyse the regulator’s reaction to financial innovation, and the consequent response of the financial companies which try to circumvent the existing regulation by moving to unregulated fields or inventing new, and therefore unconstrained, ways to operate. Mason traces a product cycle in finance: it starts with innovative, highly customized products (often intermediated by new financial entities) which offer high margins but cannot be generally traded; as these new products become popular, standardisation sets in, so that they become more liquid, while at the same time giving less opportunity for profit. The key factor in the current crisis has been that diffusion of the new products did not go hand in hand with standardisation, so that the level of information asymmetry in the system soared. Mason's conclusion is that regulators ought to wake up and realize they live in a far larger financial system than that defined by the formal regulatory perimeter. Another source of cyclicality, detected by Berg and Eitrheim in the Norwegian case, is the "general mood" of the regulators, which in turn depends on the real cycle of the economy (easing and tightening cycles, in the words of Heid, their discussant). The authors contend that bank regulation is a highly human activity: legislators and regulators tend to be influenced by the common opinion on the state of the economy, which makes it unlikely that they implement optimal solutions in the long term. They respond to crises with stricter regulation, but as the upturn becomes manifest and the financial sector looks more resilient (and the memories of the past crisis fade away), regulatory standards tend to get relaxed.

Tarkka, while non explicitly mentioning cycles in discussing the Finnish experience, is nonetheless inviting us to consider an altogether different source of dynamics: the changing economic ideas in the domain of economic growth, which in turn produce a shift in the aims of financial regulation. A large amount of financial legislation enacted in the late Thirties, and more evidently in the first decades after WWII, responds in fact to the goal and perceived possibility to foster growth through credit. The financial system is conceived as one of the tools directed to promote economic development. An explanation of the relationship between this kind of legislation and financial stability needs to take into account the high margins which were the result of low competition, as well as extensive nationalization of banks. Since, as we have said before, our aim is not to explain the aims of regulation as such, but rather the changes in regulation at very specific points in time, the awareness of cyclical phenomena unrelated to crises is instrumental in putting the influence of crises in the correct perspective.

Lobbying was not widely discussed at the workshop, which is a pity since a lot of clues point to a considerable activity by the "industry" in order to obtain favourable legislation, and more often to foil unfavourable legislation. The Italian case shows that banking lobbies were very active both at the end of the XIX century (to the point that the incompatibility between being a member of Parliament and a bank official was written in the Banking Act of 1893, enacted after a major crisis) and during and after the crises following WWI, which led to a very timid enforcement of the 1926 legislation (large banks were never the object of on-site examination). In Belgium, "fierce" lobbying by the banks led the legislators to discard the idea of centring the regulatory design on the bank of issue. Not necessarily a "bad" outcome: the episode shows that, under certain circumstances, lobbying may bring a positive contribution to decision-making. Bordering with lobbying – but beyond the line of law abidance – is the territory of corruption. Some food for thought on this subject can be found in the paper by Goland.

The issue of *conflicts of interest* is especially relevant, in our context, with reference to a monopolistic bank of issue on the path of becoming a central bank, which also operates as a commercial bank. Both the lender of last resort function (which is intrinsic in the role of the central bank) and the supervisory function (which may or may not be coupled with central banking) are liable to conflict with the commercial function, which entails competition with the commercial banks. As shown by the papers concerning Spain, Italy, Belgium, lending of last resort and supervision (as well as foreign exchange policy, but this is outside our domain) tend to be hampered by such conflict. Practically in all countries, the problem has been solved by barring central banks from commercial banking activities, thus turning them into bankers' banks. One major difference between the two main strands of banking that we considered is that issuing banks, in the process of becoming central banks and after, tended to converge towards a unique model, while other types of banks remained more country-specific.

Before concluding, I wish to focus again briefly on the Great Crisis, in order to contrast two aspects of the reaction. On the side of quantity, so to speak, we observe that most countries, with few exceptions, enacted a very pervasive legislation; on the side of merit, the fact stands out, beyond a superficial uniformity, that the rules were by no means the same across countries. While, for example, Italian banks were barred from long-term lending, American ones were encouraged in many ways to enter this new field. Vast differences existed in the organization of supervision. The peculiarity of each reaction must be ascribed both to different facts – crises were not the same across countries, even if interlinked – and to different national systems, that is to the special interconnection between banks, production and State which in each country had developed along history. In order to enhance the comparability of such diverse national experiences, a background paper containing a classification of all possible aims and tools of regulation was prepared by Giordano: it is the closing piece of the volume.

In the end, rather than finding one pattern of response, we were able to identify the "disturbances" which most often enter the post-crisis decisional process. The awareness of such factors, and some knowledge of their functioning, are instrumental in understanding (for academics) and in governing (for policy makers) the response to major financial crises. Let us take the example of overregulation, which is one of the most threatening foes of the modern economic profession. The papers collected here support the idea that its determinants are identifiable (theory, trigger effect, cycle) so that the phenomenon cannot be ascribed solely to the severity of the crisis. We also came to agree that abstracting from national specificities is fruitful only to a limited extent: in the field of finance, country-specific factors, in terms of equilibrium between local and national forces, bank-industry relationship, legal tradition, do matter, even if it can be argued that they will matter less in the future.

This volume, as previously mentioned, originates from a workshop held at the Bank of Italy, on 16 and 17 April 2009. The project was fathered by Gianni Toniolo. Fabrizio Saccomanni, Director General of the Bank, opened the workshop. Some of the papers presented are not included in the book, for different reasons, but we gratefully acknowledge the contribution which came from those authors to the deepening of the analysis and to the general discussion: they were Marc Flandreau, Žarko Lazarević, Olivier Feiertag, Sophia Lazaretou. At a later stage, the papers went through a process of review which was carried out by the authors themselves, taking into account suggestions and criticisms that came from the discussants and the chairs of the sessions: Alberto Baffigi, Federico Barbiellini Amidei, Stefano Battilossi, Marcello de Cecco, Luca Einaudi, Andrea Enria, Daniele Franco, Andrea Generale, Giorgio Gobbi, Frank Heid, Donato Masciandaro, Giangiacomo Nardozzi, Marco Onado, Luigi Federico Signorini, Luigi Spaventa, Ignazio Visco. Gianni Toniolo and Eugene White provided further comments in their concluding remarks. Significant editorial improvement came from several members of the Bank's Economic History Division: Rita Anselmi, Alberto Baffigi, Federico Barbiellini Amidei, Elio Cerrito, Claire Giordano, Riccardo Massaro, Sandra Natoli, Antonella Pulimanti, Ivan Triglia. Finally, we wish to thank those who made the April workshop possible, especially Rita Anselmi and Carlo Muscariello.

PART A

AN EVALUATION OF LONG-TERM NATIONAL EXPERIENCES

LESSONS FROM THE HISTORY OF BANK EXAMINATION AND SUPERVISION IN THE UNITED STATES, 1863-2008

*Eugene N. White**

The history of American banking provides five distinct regulatory/supervisory regimes that cast light on the difficulties of constructing a regime that will guarantee the efficiency as well as the safety and soundness of the system. A basic taxonomy of regulation and supervision is provided to identify the key elements and rationale of each regime. Mark-to-market and prompt closure of insolvent institutions produced the lowest cost to depositors, shareholders and taxpayers, whereas discretion and forbearance created the banking cataclysms of the 1980s and 2000s.
JEL: G28, N21, N22.

1. Introduction

As the recent banking crisis in the United States has reminded us, effective supervision is an important instrument guaranteeing bank safety and integrity. Major reforms to bank supervision were engineered in 1990s in response to the crises of the 1980s, but these proved largely inadequate in the current crisis, raising many basic issues. What are the appropriate and effective instruments for bank supervision? Should supervision focus on re-enforcing market discipline or should it rely on regulators discretion and their independent evaluations? What is the trade-off between the costs of supervision and bank efficiency? Where should supervision be conducted: in an independent agency or within the central bank? This paper compares the five distinctive policy regimes governing American banking from 1863 to the present to provide some answers to these fundamental questions.

Examination and supervision by government agencies appeared very early in the United States because of the guarantees provided to banknotes and the fostering of single-office banks. The fundamentals of bank supervision were established with the National Banking System in 1863-1864. In contrast, countries with branch banking systems, like Canada and Britain, relied on internal bank audits rather than a government regulator until late in the twentieth century. Consequently, the U.S.'s long experience provides an opportunity to study several distinct supervisory regimes.

As the regulatory regimes have changed, the needs for supervision have been altered. In the first section, I lay out a taxonomy of regulation and supervision of the key elements of a policy regime and their theoretical justifications. I use this framework to examine the five major regimes that the United States has experienced in the last 150 years. The National Banking Era (1863-1913) is followed by the early years of the Federal Reserve System (1914-1932), the New Deal Era (1933-1970), the post-New Deal period (1970-1990), and the Contemporary Era (1991-2008).

Supervision was initially designed to reinforce market discipline and that remained its focus until the 1930s when faith in the market was largely abandoned. The regulations and supervision of the New Deal attempted to produce a profitable, stable banking industry with deposit insurance where competition and risk-taking were limited under the watchful eyes of regulators who were

* Department of Economics, Rutgers University, New Brunswick, New Jersey, USA and NBER. Email: white@economics.rutgers.edu

granted considerable discretionary authority. The internal contradictions of the New Deal regulations, complemented by a rise in deposit insurance, produced the massive savings and loan and banking disaster that led to a dismantling of much of the regulatory regime. Yet the supervisory apparatus was retained and there was no return to market discipline. Instead, discretion was partly withdrawn, rules were tightened and enforcement enhanced but without any change in the insurance of financial institutions. Misdiagnosis of the problems produced a new regulatory regime that again failed to provide early warnings of the most recent banking crisis, leading to the most costly of all American banking disasters.

2. The role of bank supervision

While regulation and supervision of banking is often driven by political economy with firms vying for advantage, its justification arises chiefly from the very basic problem that the financial industry seeks to solve, the asymmetry of information.[1] Put simply, the lender in a financial contract has less accurate information than the borrower. Financial markets and institutions developed, in part, because the costs of making and monitoring loans between individuals are very high; and firms specializing in the collection of information can reduce the information asymmetry at a much lower cost, thereby increasing the flow of funds to productive investments and spurring economic growth.

As is well-known, asymmetric information poses two specific problems, adverse selection and moral hazard. The former arises at the signing of a contract because higher risk borrowers are more eager to seek credit at a given rate of interest. Consequently, when a lender cannot easily distinguish between more and less risky borrowers, there is the danger that riskier firms will be adversely selected. After credit is granted, moral hazard arises because the recipient of the funds has incentives to take more risk or misappropriate funds that the lender finds difficult to observe because monitoring is costly. The presence of these problems will reduce the willingness of lenders to provide funds, thereby lowering investment in the economy. By specializing in the collection of information on potential borrowers and gaining economies of scale and scope, financial institutions can reduce the information asymmetries, better selecting and monitoring borrowers.

While banks help to solve the asymmetric information problems vis-à-vis lenders, the problem reappears because they act as delegated monitors for their depositors. Instead of facing the problem of monitoring borrowers to whom they have directly lent, depositors are confronted by an asymmetry of information vis-à-vis bank mangers who may take higher risks or misuse funds. The incentive for depositors to monitor managers is sharply reduced by the free rider problem because they are numerous and collection of information is costly.

The depositor-banker asymmetric information problem may be mitigated by the ability of depositors to punish banks by rapidly withdrawing funds if they believe that risks have increased, that is, the threat of a bank run. Yet, bank runs can multiply and become a panic because the public cannot distinguish between solvent and insolvent banks. Prevention of panics, which impose general costs on the economy, has been one factor convincing many countries to adopt explicit or implicit government deposit insurance. However, once the public's deposits are insured, the government or its insurance fund is then faced with the problem of moral hazard and must monitor insured financial institutions to limit excess risk-taking and misappropriation of funds.

[1] For further discussion of these issues see Mishkin (2001), and Crockett *et al.* (2003).

These problems have contributed to policy interventions that take nine basic forms:[2] (1) controls on entry, (2) capital requirements, (3) limits on economies of scale, (4) limits on economies of scope or diversification, (5) limits on pricing, (6) liability insurance, (7) disclosure requirements, (8) bank examination, and (9) bank supervision. Although many of these interventions are imposed as anti-competitive measures at the behest of an economic interest group, they may also be considered as responses to asymmetric information problems between depositors and their banks. The first six regulate the operation of the market, while the last three can be thought of as re-enforcing the first six and improving information flows so that market discipline will be more effective. Typical justifications for these interventions are as follows:

(1) Entry is controlled by regulations governing bank chartering, which aims to screen out entrepreneurs who may be excessive risk takers. Its objective is to solve the selection problem faced by depositors who must choose a bank and cannot easily evaluate its riskiness.

(2) Capital requirements attempt to control moral hazard by limiting the degree to which a bank may be leveraged, thus exposing depositors to losses from risk-taking by the management.

(3) Limits on economies of scale take the form of restrictions on branch banking and horizontal mergers. Although these regulations were often imposed at the behest of competitors, the original justification in the U.S. focused on the difficulty of monitoring multi-office banks.

(4) Limits on economies of scope and diversification may constrain banks' portfolio choices or the types of business or subsidiaries they may acquire. These limits are imposed to prevent managers from taking on more risk or exploiting conflicts of interest between different customers.

(5) Limits on pricing. Usury laws and other interest rate restrictions are often justified on the grounds that consumers need protection from predatory lenders who conceal information.

(6) Liability insurance's objective is to free the depositor from the difficult task of monitoring banks and the anxiety that may lead to banking panics. Deposit insurance premiums may eliminate the moral hazard problem if the premiums are priced to reflect the risk taken by the bank.

(7) Disclosure requirements address the free rider problem that reduces the incentive for individuals to collect information. By setting accounting rules and requiring disclosure of specific information, the public will be better able to monitor banks' risk, reinforcing market discipline.

(8) Bank examinations provide government-supplied auditing. If they are disclosed to the public, examinations reinforce market discipline. If they are kept secret (usually on the grounds that they contain proprietary information), discipline is then devolved to the government supervisors.

(9) Bank supervision and enforcement focuses on an assessment of management's exposure to risk. It may be discretionary or rules-based and it is enforced by the imposition of penalties. Supervision recognizes that managers can make quick changes in a bank's portfolio between reports and examinations to avoid disclosing information.

[2] This categorization is derived but differs from Mishkin (2001: 8ff).

How these interventions should be implemented raises important issues for the general architecture of the financial system (Mishkin 2001). A central question is the degree to which the market can be relied upon to solve the problems of asymmetric information. If the problems are not severe, the need for regulations-interventions 1 to 6- will be minimal and interventions 7 and 8 should provide the additional information required for the market to monitor and discipline banks. If the problems are severe, regulations and bank supervision may be needed. How restrictive they should be will have to be weighed against how much they reduce the efficiency of the banking system.

Another major issue is where should bank supervision be conducted? Should it be in a single independent agency or in multiple specialized agencies or in the central bank? Those who argue in favor of a separate agency (or agencies) claim that the incentives of a central bank engaged in bank supervision and monetary policy may not be well aligned with depositors' interests. The central bank might try to prevent a potential insolvency or financial crisis, deploying monetary policy at the expense of its macroeconomic objectives. On the other hand, it might use its supervisory authority to pressure banks to assist its macroeconomic goals. Those who are in favor of combining supervision and central banking argue that supervision should be located in the central bank because this arrangement will enable it to carry out more effectively its role as lender of last resort.[3] The history of American bank supervision over the past century and a half offers a laboratory to examine how various solutions to the asymmetric information problems have succeeded. Five bank regulatory regimes are examined, reflecting choices about the relative importance of efficiency and asymmetric information, as well as the role of the monetary authorities.

3. Bank supervision in the National Banking Era, 1863-1913

The foundations of the American supervisory system were laid down in the second half of the nineteenth century. This period is important not only because it determined the future structure of the banking, but also because it provides us with a significant example of a lightly regulated, highly competitive regime where regulation and supervision were primarily aimed at reinforcing market discipline.

Building on the states' experimentation with free banking system in the antebellum era, the National Currency Act of 1863 and the National Banking Act of 1864 established a federally regulated banking system. These acts marked the return of the federal government to banking regulation after President Andrew Jackson's veto of the charter of the Second Bank of the United States in 1832 and the loss of its charter in 1836. During the intervening years, banking regulation was left entirely in the hands of the states, which experimented with a variety of regulatory regimes. The Civil War caused the collapse of some state banking systems; and the departure of Southern opponents to federal banking enabled the U.S. Congress to pass these two acts. The newly formed national banking system shrank but did not eliminate the systems of state-chartered banking. Henceforth, the U.S. had a "dual" banking system where regulation and supervision was controlled by both federal and state authorities, more often in competition than in cooperation with one another.

The Acts of 1863 and 1864 set up a system that changed little over the next fifty years. To supervise the new "national banking system", the legislation created the Office of the Comptroller

---

[3] See Bernanke (2001) for some of these arguments.

of the Currency (OCC), nominally under the U.S. Treasury. The head of this independent agency, the Comptroller, was appointed by the President.

Following the example of the state free bank systems, incorporation was "free", that is, subject to the minimum regulations, a charter was given to the organizers of a new bank. Although early comptrollers requested information on the economic prospects of the community where a bank wanted to open, existing banking facilities, and the character of the organizers, discretionary authority was abandoned in the early 1870s. Comptroller John J. Knox who wrote in his 1881 Annual Report: "(...) the Comptroller has no discretionary power. (...) but must necessarily sanction the organization, or reorganization, of such associations as shall have conformed in all respects to the legal requirements".[4] Free entry was given an additional fillip because the federal regulators had to contend with competition from state regulators who might offer the organizers a state charter if a federal one was not forthcoming.[5]

The regulatory regime imposed on national banks produced a distinctive nationwide system of unit or single office banks at a time when large branching systems were beginning to develop in Canada and Europe. This industrial organization was the product of a combination of low minimum capital requirements and strong barriers to branching that severely constrained many banks from gaining economies of scale. Minimum capital requirements were scaled according to local population with an eye to ensuring that even small towns might have a bank. Initially in 1864, a bank was required to have a minimum capital of $50,000 for town with a population under 6,000, where the population was between 6,000 and 50,000, $100,000 was needed, and in cities larger than 50,000, $200,000 was the minimum capital.[6] These capital requirements were not scaled according to assets or risk, as are modern regulations, but the imposition of double liability on shareholders aimed at increasing incentives to monitor management and ensure the soundness of the bank.

The second Comptroller of the Currency's interpretation that national banks could not establish branches ensured that every new town or suburb, would have a de novo bank, not a branch of an existing institution. The result was by 1880, there were 2,076 national banks. However, the antebellum state banking systems, while battered by the Civil War had not disappeared. Slowly in the 1880s, the state legislatures began revising their banking statutes setting new banking regulations and organizing their own supervisory bank agencies. Faced with the well-developed national banking system, they set regulations that were equal to or more often weaker than federal bank regulations. State capital requirements were lower for small towns, enabling state-chartered banks to establish themselves ahead of national banks. In response, Congress lowered the minimum required capital for towns with a population under 3,000 to $25,000 in 1900; some states countered by further reducing their requirements. Combined with the rapid growth of the American economy, this "competition in laxity" between federal and state regulators gave the nation 7,514 national banks and 14,512 state banks in 1914.[7] Although the American banking industry was very competitive, this fragmentation severely constrained the formation of larger institutions that might have been more efficient, if they could have gained economies of scale, and sounder, if they had been allowed greater geographic diversification.

[4] Comptroller of the Currency (1881: 11).

[5] Entry was temporarily tightened after the panic of 1907. One telling fact about the ease of entry was Comptroller Murray's insistence that charter applications should be executed in person rather than by correspondence (Robertson 1995: 59-61, 66-9).

[6] A minimum capital of $50,000 in 1864 would approximately be $681,000 in 2008 adjusted for inflation.

[7] In addition, trust companies and mutual savings banks closely competed with banks to provide the public with banking services.

Restrictions on assets and liabilities made American commercial banks relatively narrowly defined institutions, limiting potential economies of scope. The founders of the national banking system were concerned that banks would be exposed to excessive risk if they made long-term loans.[8] Many states imposed similarly tough restrictions, and hence real estate formed only a small portion of bank portfolios. American banks were also prohibited from holding equities because these were not evidences of debt. Consequently, commercial banks had little role in the expanding equity markets, although they did offer "call loans" to brokers that were collateralized by bonds and stocks. The dominance of the real bills doctrine, emphasizing that banks would only be safe if they made short-term "self-liquidating" loans induced most banks to have portfolios with relatively short average maturities. The narrow definition of commercial banks removed them from other lines of commerce and from operating in most other types of financial services.

Usury laws were the most important restrictions on pricing. The National Currency Act and National Bank Act subjected all national banks to the same usury limits that states applied to their state-chartered banks. Although state usury rates ranged from 6 to 10 per cent with maximum penalties of forfeiture of the principal and interest, regulations were rapidly weakened about 1870. Many states repealed their usury laws and those which kept them reduced their penalties. By the end of the period, most transactions appear to have been largely unaffected by the usury laws.[9]

For the public, perhaps the greatest concern of the antebellum banking system was the riskiness of bank-produced currency, which led to experiments to insure the public's bank liabilities. While a large literature has shown that many state banking system produced banknotes that usually retained their par value for long periods of time, panics and unsound regulation made this less than certain. By permitting bank to issue banknotes equal only to 90 per cent of the par value of the U.S. government bonds that the bank had purchased and deposited, the national banking system guaranteed the value of the banknotes.[10] State banknotes were driven out of existence by a 10 per cent federal tax. These safeguards were sufficient to ensure that no national banknote holder received anything less than the par value of the note.

Deposits, which over the course of the late nineteenth century became an increasingly important liability for banks, had no guarantee but their expansion was limited by the imposition of reserve requirement. Country banks were required to hold reserves equal to 15 per cent of their total deposits, three-fifths of which could be held on deposit in a national bank in a designated reserve city. Reserve city banks were ordered by law to hold 25 per cent reserves, half of which could be held in national banks in one of the designed three central reserve cities, New York, Chicago and St. Louis, which were required to hold all 25 per cent of their reserves in vault cash.[11] As in the case of capital requirements, the revitalized state banking systems often adopted lower reserve requirements to gain a competitive advantage vis-à-vis national banks. The national banking system did not insure bank deposits, but after the panic of 1907, seven states established their own mutual guarantee funds for their state-chartered banks. Before their demise, these systems created incentives for moral hazard that proved disastrous for the guarantee funds and produced widespread failures.

[8] The rules for most national banks set a maximum maturity of five years, limited the size of a loan to half the value of the appraised land, and determined that real estate loans could not exceed 25% of a banks' capital.

[9] See Rockoff (2003).

[10] Note issued was also limited to 90% of paid-in capital. In 1900, this regulation was eased so that banks could issue banknotes equal to 100% of the value or market value of the bonds up to 100% of their paid-in capital.

[11] These regulations came into effect in 1874, which also abolished reserve requirements on banknotes. See White (1983: 26-8).

The OCC was established to ensure compliance with federal regulations.[12] But penalties for violations were limited and the primary purpose of disclosure and examination were to reinforce the discipline of the market. Initially, national banks were required to provide a detailed quarterly report and a very limited monthly statement. The fixed dates and absence of auditing permitted banks to easily engage in "window dressing". In 1869, Congress responded to Comptrollers complaints and instituted call reports of condition to improve disclosure. National banks were required to provide the Comptroller with five call reports per year with information on their balance sheets, with three of these made on dates randomly chosen by the Comptroller to limit opportunities for "window dressing" of the banks' books. Every day's delay in delivery of the call report was subject to $100 fine, and banks were required to report the payment of a dividend within ten days or face a similar penalty.[13]

The Comptroller of the Currency was charged with performing a minimum of two examinations per year for all national banks. National bank examiners were not paid a salary but instead a fee for examining a bank, based on the bank's capital and paid by the bank.[14] Out of these fees, examiners had to pay for expenses and their assistants. Although examinations were supposed to be unannounced, the surprise was often compromised by the predictability of an examiner's travel plans given his efforts to minimize cost, enabling banks to prepare for a visit if forewarned. Comptrollers regularly complained about the incentive effects of these legislated fees.[15] Each state retained the right to examine its state-chartered banks. Although little is known about how state bank examiners carried out their tasks, the general belief was that state bank examinations were more lax than national bank examinations. The initial purpose behind the examinations was to ensure that banks would be able to redeem their banknotes upon presentation. Examinations were conducted from the "bottom up" where examiners scrutinized the cash, assets and accounts of the bank to ensure that they complied with the letter of the law.[16] Although Comptrollers sent examiners instructions for examination, they emphasized that there could be no "cast-iron rules, covering minute details".[17]

Prudential supervision was circumscribed. Although many Comptrollers emphasized the importance of discussing the principles of good management with bank officials and requesting correction of problems, the Office of the Comptroller did not accept responsibility for a bank's mistakes. Comptroller Knox wrote "It is scarcely to be expected, if a robber or a forger is placed in control of all its assets, that a national bank can be saved from disaster by the occasional visits of an examiner".[18] The only penalty available to the Comptroller of the Currency was the revocation

---

[12] Regular examinations first appeared in the United States before the Civil War when six states, New York, Vermont, Indiana, Michigan, Ohio and Iowa created mutual guarantee funds to protect holders of the banknotes and sometimes depositors. Recognizing the moral hazard problems from such a system, all of these states created supervisory agencies. In Indiana, Ohio and Iowa, there were salaried examiners who carried out regular inspections and had the discretionary authorities to set a variety of penalties (Robertson 1995: 25-6).

[13] Robertson (1995: 79-81).

[14] For banks outside of the established reserve cities, the examination fee ranged from $20 for a bank with capital under $100,000 to $75 for a bank with a capital over $600,000. Compensation for examiners of banks in reserve cities was set by the Secretary of the Treasury upon recommendation of the Comptroller.

[15] Before the 1875 amendment to the National Bank Act, examiners were paid $5 for each day of examination and $2 for every 25 miles he traveled by the examined bank (Robertson 1995: 76-9).

[16] Officers and directors must be "complying with the requirements of the law and whether they are in any way violating any of its provisions" (Comptroller of the Currency 1881: 35-6).

[17] Comptroller of the Currency (1891: 26).

[18] Comptroller of the Currency (1881: 38).

of a bank's charter for serious violations. Consequently, the Comptroller relied on the cooperation of the directors and officers of a bank to correct violations.[19]

Prohibiting branching and setting very low minimum capital requirements profoundly affected the structure of the industry. The over twenty thousand federal and state banks at the end of the period could scarcely have been thoroughly monitored and disciplined with the modest examination forces at the disposal of the Comptroller of the Currency and the state bank authorities. Their task may be viewed as attempting to reinforce market discipline. Double liability imposed on national banks and most state banks placed additional liability on shareholders and increased their monitoring of bank officers. Disclosure requirements, especially the surprise call reports, aimed at producing accurate reports of the condition of the banks, while unannounced examinations audited the bank books. The Comptroller and other bank authorities did not exercise much discretionary authority but instead made it clear to the public that their primary function was to ensure that banks complied with the letter of the law. The "insurance" of banknotes backed by U.S. government bonds did not induce any moral hazard as they were fully guaranteed with bonds.

Failures were not uncommon, especially during economic downturns; and bank customers responded to bad news with local bank runs, the ultimate market sanction. Assessing this regime is hampered by incomplete information on state banks and so much of the analysis must be confined to national banks that have relatively consistent data for the century and half. As seen in Figure 3, national failures averaged annually under 0.5 per cent of all national banks, rising to over 1 per cent in severe crises. Perhaps not surprisingly banks kept fairly high capital to asset ratios, as seen in Figure 1. Depicted in Figure 2, bank returns oscillated considerably. During major economic downturns, bank runs escalated into full-fledged panics that challenged the liquidity of the whole banking system. The market responded to these crises by the creation of additional liquidity, in the absence of a central bank, through the agency of the clearing houses; and if that failed, by a general suspension of payments, temporarily closing the banks. While less than sufficient to prevent crises, market discipline − reinforced by the supervisory regime − was relied upon to ensure the banking system's liquidity, solvency, and viability.

4. The early years of the Federal Reserve, 1914-1932

The panic of 1907 and the recession of 1907-1908 were particularly severe and made apparent the dangers to the economy of the absence of a lender of last resort. However, the arrival of the Federal Reserve did little to alter the essential regulatory and supervisory regimes established by the National Bank Act, even as there was a rising tide of bank failures in the 1920s, as seen in Figure 3. To gain access to the discount window, banks had to become members of the Federal Reserve System, subscribing to the stock of their regional Federal Reserve Bank. National banks were compelled to join and state banks had the option to become members, if they could meet the regulatory requirements of national banks. The result was that there were now three classes of banks: national banks, state member banks, and state non-member banks − and a new bank regulator, the Federal Reserve.

During World War I and the years immediately afterwards, banking prospered and the number of banks continued to grow rapidly, reaching a high water mark of 29,417 in 1921. However, the deep postwar recession marked the beginning of two new challenges to banks. First, depressed prices for agricultural products induced a persistently high level of bank failures that gradually reduced the number of national and state banks. Secondly, the provision of funds by

[19] Robertson (1995: 71, note 13).

banks to manufacturing and commerce was challenged by financial markets and institutions, especially investment banks. Commercial banks had been the dominant provider of funds during the nineteenth century because of their special role in obtaining information to select and monitor borrowers. However, markets for information had been developing, thanks in part to the rating agencies, that enabled firms to directly borrow by issuing bonds and stocks. Furthermore, the merger movement in American industry beginning in the 1890s had created giant corporations which had immense financing needs. Because of the restrictions on branching, banks remained relatively small compared to these potential clients and could not provide sufficient funding. Investment banks filled the gap, assisting the new corporate entities with their securities issues.

The liberal chartering regime of the National Banking Era persisted in the early years of the Federal Reserve System, driven in part by the anxiety of Comptrollers that national banks would lose role as the dominant members of the Federal Reserve. But, frightened by rising bank failures, Comptrollers exercised their discretionary authority to limit the entry of new banks beginning in 1924.[20] By the second half of the 1920s less than half of the new charter applications were approved. The primary justification for this shift in policy was that many communities were already adequately served and that the viability of institutions might be threatened by new entry. Comptroller Joseph McIntosh wrote that "there is too often a desire to organize banks in localities where the communities are amply served and which would not support new institutions with a likelihood of any fair measure of success".[21] Tighter chartering policies combined with persistently high numbers of failures and some mergers, slowly reduced the number of all commercial banks that fell from 29,417 in 1921 to 24,258 in 1929 − an 18 per cent drop in just eight years.

Statutory capital requirements at the federal level were unchanged, and were for the most part unaltered by the states. Inflation effectively reduced the minimum capital requirements, more than halving them. Competition began to appear in the form of branching instead from new single office banks. Branch banking had been very limited before the First World War. In this period, only state-chartered banks could open branches; in 1909 nine states permitted state-wide branching and another four allowed limited branching. Consequently, only 292 banks operated 548 branches in 1910. In spite of a desire by large banks to expand, state laws remained relatively restrictive and by 1924 there was only one more state that permitted state-wide branching and another five that allowed limited branching. The National Bank Consolidation Act of 1918 gave very limited branching rights to national banks by allowing them to acquire another bank and maintain its office. Later the McFadden Act of 1927 permitted some limited branching to national banks in states that already permitted their state-chartered banks to branch. In spite of these impediments, there were 751 banks operating 3,522 branches by 1930; branching banks provided only 16 per cent of total bank offices, highly concentrated in California.[22] This glacial pace of change prevented banks from gaining economies of scope and diversification of their deposit bases and loan portfolios.

Banking remained narrowly defined, and the Federal Reserve Act of 1913 did little to change the powers of national banks, with the exception that they were authorized to conduct a trust business. Consequently, during the 1920s, commercial banks gradually lost ground in the provision of funds to business, most notably to investment banks that could float new issues of bonds and stocks. Barred by law from handling equities, larger banks shifted their corporate finance to

[20] Robertson (1995: 95-6).

[21] Comptroller (1927: 13). We have very little information on the chartering practices of states, although the decline in the number of banks suggests that they too became more restrictive.

[22] White (1983: 156-65).

separate securities affiliates that enable them to act as full-fledged investment banks and brokerages. Banks and their affiliates effectively formed universal banks that could offer their business and individual customers an array of financial services and gain significant economies of scope. Although commercial banks had experimented with how to combine a variety of financial services since the turn of the century, the booming stock market of the late 1920s spurred many larger banks to form securities affiliates. These institutions grew in number from 10 to 114 between 1922 and 1931 enabling commercial banks to claim 45 per cent of the market for bond originations by 1929.[23] The affiliates were mostly commonly linked to their parent bank by making each shareholder of the bank become a pro rate shareholder of the affiliate or placing the stock of the affiliate in a holding company that also owned the commercial bank. However, as such bank affiliates were outside of examination and supervision process, essentially unregulated subsidiaries, created the potential for conflicts of interest and for concealing or misrepresent information as assets could be easily moved between a bank and its affiliate.[24]

While usury laws continued to slowly fade, there were major changes in the regulation and protection of liabilities. As the Federal Reserve took over the provision of currency by printing Federal Reserve notes, the bond-secured banknotes of national banks waned in importance. The Federal Reserve Act reduced reserve requirements, differentiating requirements for demand and time deposits, and eliminated the right for correspondent bank balances to be counted as legal reserves. All legal reserves of member banks had to be in the form of deposits with their Federal Reserve banks. By the time of the 1917 Amendment to the Act, the requirements stood at 7 per cent for demand deposits and 3 per cent for time deposits held by country banks, 10 per cent and 3 per cent respectively for reserve-city banks and 13 per cent and 3 per cent for central reserve city banks.[25] While reducing the pyramiding of deposits that had contributed to banking panics, these new requirements effectively removed the justification for protecting the redemption of deposits. At the state level, the state deposit insurance schemes withered into insignificance.

The most important change in disclosure was the shift away from surprise call reports. In 1916, the last year-end surprise call was made; the result was a gradually weakening of the discipline that these demands had made, although examinations were still conducted by surprise. Otherwise, there were no significant changes in the basic rules of disclosure. The Federal Reserve Act attempted to improve bank examination. Payment of national bank examiners was switched to fixed salaries with expenses rather than compensating them for the number of banks visited; and banks were assessed for the costs of examination in proportion to their assets. In addition to the OCC and the state bank authorities, the twelve Federal Reserve Banks were empowered to make special examinations of both national and state-chartered members in their districts and the Federal Reserve Board could examine any bank at its discretion. Banks now faced the possibility that they could be examined by several different agencies, each with its own standards, providing multiple reports. Nevertheless, the Comptroller remained the primary supervisory authority for national banks and the state authorities for state banks.

There was little uniformity of examination practice across the country. Some Federal Reserve banks assessed member banks for examinations, while others absorbed the charges. The Board ordered that every state member bank would be subject to examination by the Board except if it found the state examination to be sufficiently rigorous. Rivalry between the agencies surfaced quickly. Initially, the Comptroller instructed his examiners to send the Federal Reserve banks

[23] See Peach (1941).

[24] Crockett *et al.* (2003: Ch. 5).

[25] White (1983: 144).

member banks' reports of condition but to omit certain schedules on the grounds that the Federal Reserve's officials were not legally authorized to see the confidential portions of examination reports.[26] The Comptroller maintained that the only information need by the Reserve banks was for making discount loans, which it contended were not "hazardous" and posed little risk.[27] Although later Comptrollers shared more information with the Federal Reserve, the Comptroller's office thus maintained that there was a clear and well defined line between supervision and monetary policy.

Although the evolution of the federal bank supervisory agencies is well known, the history of the 51 state agencies is very limited. However, one study of the Great Depression bank failures highlighted the importance of setting the right incentives for bank supervision. The terms of the chief state bank supervision, usually appointed by the governor, varied from state to state. The longer the supervisor's term the greater the number of state-chartered bank failures in the depression, suggesting that the beneficial effects from a longer term, insulating the regulator from political influences was overwhelmed by the greater ability of the industry to lobby him. Some benefit was gained from granting the state bank supervisor sole authority to liquidate banks, which reduced the number of bank failures. Perhaps most shocking was that when supervisors were granted the sole authority to issue new charters, failure rates were higher. These disturbing findings were attributed to the ability of state bankers and politicians to corrupt state bank regulators.[28] Contemporaries were well aware of these problems and some of them attributed them to the fragmentation of supervisory authority, pointing out that banks could play regulators off against one another.[29]

In the first two decades of the Federal Reserve era, there were only modest changes in the practice of bank supervision. Although there had been some restraint on the issues of new charters, it remained a system based on market discipline. The new Federal Reserve Board and banks created additional layers of supervision, with a potential for complicated overlap. Banks were, however slipping beyond the narrow definition of a commercial bank and out of the oversight of bank examiners as they formed affiliates, not subject to disclosure, examination or supervision by federal or state authorities. As seen in Figure 1, the declining ratio of capital to assets suggests an increase in potential risk from an adverse macroeconomic shock. Although returns were not significantly higher, as seen in Figure 2, failures were. Furthermore, the system of undiversified unit banks, which was extreme in the rural areas, was contracting with numerous failures.

5. The New Deal for banking, 1933-1970

The financial collapse of the Great Depression prompted the imposition of a new regulatory regime and a shift in bank supervision away from market discipline towards a supervisory regime with considerable discretion. Aggravated by the Federal Reserve's unexpected and continuing contractionary monetary policy, the economic downturn of 1929-1933 brought the financial system to the brink of collapse. The rising tide of bank failures was accelerated by full-scale panics, which only halted when President Franklin D. Roosevelt declared a national bank holiday on 6 March 1933. In June 1929, the 24,504 commercial banks had held $49 billion of deposits; but by the time

[26] The Comptroller's position was sustained by the chief legal counsel of the Federal Reserve Board in 1915 who determined that the examination records were under control of the Comptroller and that he had the authority to refuse to deliver them to the Fed (Robertson 1995: 107-12).

[27] This point of view was informed by the real bills doctrine and the operation of the early Federal Reserve where its primary role was seen as providing discounts on the basis of secure collateral for which it required relatively little information.

[28] Mitchener (2006).

[29] Bach (1949: 274).

that banks were reopened after the 1933 holiday, there were only 14,440 banks with $33 billion of deposits. Losses from failed banks totaled $2.5 billion, half of which was borne by depositors and half by stockholders and other creditors.[30] The end of the bank holiday presented bank regulators with a huge task. For banks that were not obviously solvent, conservators were appointed. These banks were reorganized under new charters, absorbed by other banks, a few were voluntarily liquidated and the rest were placed into receivership. This winnowing of the banks and general economic uncertainty induced banks to expand the bond holdings at their expense of loans and raise their reserves to historic levels. The result was a very conservative industry where failures all but vanished for the next four decades.

Out of this disaster a new regulatory regime, the New Deal, was forged by the Banking Acts of 1933 and 1935 and subsequent legislation. While the New Deal radically altered many parts of the financial system, the legislation governing commercial banking was relatively conservative. The structure of the banking system was not altered. Innovations introduced by larger banks were prohibited, unit banks were protected, barriers to entry were raised and limits on pricing were set. The Banking Act of 1933 created the Federal Deposit Insurance Corporation (FDIC), and all of the Federal Reserve's member banks were required to join. Nonmember banks were allowed to join, subject to the approval of the FDIC. Insurance was provided for depositors by a mutual guarantee fund, supported by the premiums paid by the insured banks, which were calculated as a percentage of their deposits. Virtually all banks joined, and in 1935 depositors were protected up to a limit of $5,000, which meant that 43 per cent of the nation's deposits were insured. The government placed little faith in market discipline that had been the guiding principle before 1929, and the authorities were granted considerable discretion in carrying out examination and supervision.

The era of easy entry was brought to an end. The collapse of the banking system convinced most policy makers and bank regulators that the country had been "overbanked" and that entry of new banks had to be controlled. Although competition between the Comptroller and state authorities had helped to fuel the growth of small banks, the FDIC gained the ultimate authority over chartering decisions because it had the power to withhold deposit insurance.[31] Yet, there was also considerable caution exercised by the chartering authorities. Following on the massive bank failures, Comptrollers J.F.T. O'Connor and Preston Delano emphasized the primacy of preserving existing banks. The Banking Act of 1935 gave federal authorities broad discretionary authority over the decision whether to grant a bank charter. They were obliged to examine a prospective bank's capital structure, its potential earnings, its management, and the convenience and needs of the community. For national banks, the Comptroller emphasized that a charter would not be granted "unless there is a need for additional banking facilities in the location chosen, and a reasonable prospect that the bank will operate successfully".[32] Competition in the industry was a low priority. The OCC or state banking authority decided whether there was already sufficient competition in a community: "for excessive competition can result in such a weakening of existing banking institutions as to bring consequences so injurious to the welfare of the community as to outweigh any benefits to be anticipated from increasing the intensity of competition".[33] Thus, in contrast, to the pre-depression era, far fewer banks were chartered. Change only came when Comptroller James J. Saxon eased constraints on national banks in 1961 and granted many more charters, inducing state authorities to follow suit.

[30] See Friedman and Schwartz (1963: Ch. 7) and White (2000).

[31] Robertson (1995: 126).

[32] Comptroller of the Currency (1934: 14).

[33] Comptroller of the Currency (1951: 3).

Not only was free entry abandoned but double liability that had served as an extra incentive to increase the monitoring of bank managers was removed, weakening market discipline. Eventually, the regulatory agencies developed their own instruments to monitor capital adequacy. Beginning in 1962, the OCC and the Federal Reserve used an eight factor system to measure adequacy for purposes of a bank examination, taking into account the quality of management, liquidity of assets, history of earnings, quality and character of ownership, burden of occupancy expenses, volatility of deposit structure, internal controls and local economic conditions.[34] However, financial ratios were regarded only as guidelines and the agency emphasized the need for discretion because "a well-managed bank, free of asset problems, is entitled to operate on a higher leveraged capital base than one which has asset problems".[35]

Constraints on geographic expansion by banks that could create larger institutions only eased slightly, adding little to potential economies of scale and diversification. The narrow limits on branching imposed on national banks by the McFadden Act of 1927 were lifted and they were allowed to branch under the same rules as state-chartered banks in their states. For the forty years after the New Deal, changes in the legal status of branching moved at a glacial speed, as anti-branching lobbies foiled new state legislation. In 1951, 17 states permitted statewide branching and 14 allowed limited branching − where the number or location of branches could be highly restrictive − with 17 firmly committed to unit banking. By 1967, only two more states permitted statewide branching and three more limited branching. Even as late as 1978, only 21 states allowed statewide branching and 16 limited branching.[36] When banks sought to increase by mergers and acquisitions, Congress responded by passing the Bank Merger Act of 1960. Federal bank regulators were given the authority to block mergers with the same criteria as were used to restrict other types of entry. Competition was very narrowly defined in a key ruling by the Supreme Court in 1963, *U.S. v. Philadelphia National Bank,* that distinguished commercial banking as a "relevant line of commerce".

The possibilities for banks gaining economies of scope were rolled back by the New Deal, decreasing competition in the financial industry. After banks had wiggled out of the narrow banking definitions of the National Bank Act in the 1920s, the New Deal placed new constraints on them. A virtually complete divorce of commercial banking and investment banking was engineered by the section of the 1933 Banking Act, known as the Glass-Steagall Act, that forced banks to separate from or liquidate their security affiliates. The general argument behind this legislation was that combining investment and commercial banking exposed commercial banks to increased risk and problems from the exploitation of conflicts of interest.[37]

Although mixing commercial and investment banking was prohibited, there were potential economies of scope and diversification from combining banking with other types of financial services, which banks attempted to exploit in the post-World War II period. Expanding the scope of activities within banks was frustrated when the Federal Reserve and Congress blocked Comptroller Saxon's proposals in the early 1960s to expand the bank powers, leaving the New Deal regime largely unchanged.[38] When banks attempted to expand by subsidiaries into investment advising,

[34] Comptroller of the Currency (1962: 66-7).

[35] Comptroller of the Currency (1974: 281).

[36] White (1992: 88).

[37] Crockett *et al.* (2003: Ch. 5).

[38] The vice president of the Federal Reserve Bank of Philadelphia, Robert N. Hilkert, commented: "The Federal Reserve's basic disagreement with the Comptroller seems to boil down to whether bank supervision should be substantially relaxed at this time. Mr. Saxon seems to be saying it should, and the System is saying that it shouldn't" (quoted in Robertson 1995: 147-54, 161).

insurance, data processing and other activities through the device of bank holding companies, Congress responded to complaints from their competitors by passing the Bank Holding Company Act of 1956. This act placed multiple bank holding companies under the supervision of the Federal Reserve that could regulate their acquisition of new banks and their entry into new lines of business. Again when banks sought to circumvent this by forming one-bank holding companies, Congress passed the Banking Holding Company Act of 1970, subjecting them to control by the Fed.[39]

While commercial banks were excluded from some lines of business they had sought out, regulations were changed to induce them to move into long-term lending to households and business. The Great Depression had been devastating for the mortgage industry and investment banking; and the New Deal regulators sought to encourage commercial banks to move beyond their short-term lending tradition by legal and supervisory changes. First, the Banking Acts revised the powers of banks to make real estate loans. Secondly, examination practices were altered. The standard acceptable maximum maturity for a loan had been six months, after which examiners had usually classified loans exceeding this term as “slow” and banks were pressured to liquidate them. Examiners were informed now that a loan should not be classified as “slow” simply because of the length of its maturity. The long-term result of this policy was an increase in the maturity mismatch of banks’ assets and liabilities, with the potential for increased exposure to risk from interest rate changes.

While economies of scale and scope were large thwarted, the potential profitability of established banks was improved by the prohibition of paying interest on demand deposits and the delegation of power to the Board of Governors to set maximum time deposit rates, a power which was exercised under Regulation Q. Not surprisingly economic studies of the industry found that substantial rents were earned by banks in the New Deal era. Ignoring the culpability of the Federal Reserve in failing to mitigate the shocks of the early 1930s and thereby driving many more banks to the wall, policy makers and regulators took the system of unit banking as a given and saw the restriction of competition as a means to ensuring the solvency and profitability of banks.

Previously liabilities had been regulated because of concern for ability of a bank to meet liquidity demands. The pyramiding of reserves for national banks, where reserve city banks had higher cash to deposit ratios, reflected the fact that banks in those cities had served as bankers’ correspondent banks channeling funds from banks to the nation’s money markets and were subject to greater declines in reserves during a liquidity crisis. Now reserve requirements became a tool of monetary policy. Before the New Deal, reserve requirements were determined by statute, now they were determined by the discretion of the Federal Reserve, which could employ them as an instrument of monetary policy. The Fed would presumably handle the liquidity problems of the banks as a lender of last resort.[40] Insurance of liabilities was now solely the task of the FDIC for commercial banks with the Federal Savings Loan and Insurance Corporation insuring savings and loan associations. Maximum coverage per account slowly rose from $5,000 in 1934 to $20,000 in 1969. Although most increases just kept pace with inflation, they gradually raised the real maximum coverage. Combined with customers shifts in deposits to gain coverage, the percentage of bank deposited insured by the FDIC climbed from 45 per cent in 1934 to over 60 per cent by 1969.[41]

---

[39] White (2000: 779-80).

[40] The bond-back national bank notes were converted into an obligation of the Treasury and were eventually removed from circulation. See Friedman and Schwartz (1963).

[41] White (1998).

Formally, little had changed in terms of disclosure since the National Banking era. Information on national banks was obtained by four reports of condition, an annual report of income and the bank examinations. But, disclosure requirements lost the element of surprise for nearly three decades. Between 1945 and 1960, calls for reports of condition had been made 21 times on the last business day of June and 24 times on the last business day of December. When the first surprise year-end call was made by the OCC, the Federal Reserve and the FDIC on 28 December 1962, deposits were 2.6 per cent lower than on December 31, 1962; a fact that confirmed regulators beliefs that there was considerable window-dressing of accounts. As a result, the surprise call reports were reinstated.[42] Government discretion did not completely eliminate the role of the market, and more information for market discipline was provided in 1964 when Congress required banks to supply information that had long been required of non-financial corporations to their stockholders, notably proxy statements, annual financial reports and notices of major changes in ownership.[43]

More information was also compelled to help consumers make informed choices. Responding to complaints about banks misleading customers, Congress passed the Consumer Credit Protection Act in 1968 or the Truth-in-Lending Act. The act compelled banks to clearly state the annual percentage rate of interest and include non-interest charges for consumer loans. However, this act still relied on market discipline to a large degree because it was aimed at ensuring a clear disclosure of the terms of a loan so that customers would be able to easily form a judgment. In 1970, Congress passed the Fair Credit Reporting Act that required banks to give individuals and firms information from their credit files so that errors could be corrected. The federal agencies implemented new examination procedures for consumer protection but resented the burden of consumer protection and complained that it stretched their narrow resources.[44] The Community Reinvestment Act of 1977 was more interventionist. Banks were accused of "redlining" or depriving certain urban areas of credit. Under the new legislation banks were required to provide evidence that they served communities and the bank agencies developed examination procedures to search for redlining. One unintended consequence of these new unfunded mandates from Congress for the agencies was that they forced them to shift their increasingly limited resources away from safety and soundness examinations.[45]

Under the New Deal, examination procedures were drastically revised and the objectives substantially modified, reflecting the absence of faith in the market. The bank regulatory agencies were pushed in an even more radical direction with the objective of making examination reinforce monetary policy. The creation of the FDIC added a new examination agency. Banks insured by the FDIC were required, if not members of the Federal Reserve, to submit to examination by the FDIC. But, initially the FDIC could only examine national and state member banks if it obtained written consent from the Comptroller, Board of Governors, or state supervisors. Only in 1950 was the FDIC given the authority to make special examinations at its own discretion of member banks. The potential regulatory overlap was substantial. National banks could be examined by the Fed, the Comptroller and the FDIC. State member banks were subject to examinations from the Fed, the

---

[42] White (1992: 18).

[43] White (1992: 20).

[44] White (1992: 21-2).

[45] White (1992: 41-3).

FDIC and their state authorities, while non-member state banks could be examined by the FDIC and the state agencies.[46]

This overlap of responsibilities created duplication and conflict between the agencies that often behaved as rivals. To address the problem of each agency developing its own examination criteria, the Secretary of the Treasury convened in 1938 a conference consisting of representatives of the Comptroller, the Federal Reserve, and the FDIC to cooperate on examination policies. The result was a revision of the classification of loans and investments and a move away from the established practice of market valuation of assets to one that gave discretion to examiners. The standard practice for bank examiners had been to classify weak loans as “slow”, “doubtful” and “estimated loss”. Loans were now designated I, II, III, and IV. Loans assured of repayment were Class I, loans with a substantial risk of loss were assigned to Class II. If there were strong doubts about repayment, a loan was placed in Class III, while Class IV was reserved for loans where there were losses. 50 per cent of Class III and all of Class IV loans were deducted in the computation of the “net sound capital of a bank”. Securities of investment grade were in Group I; those that were “speculative” were put in Group II. Defaulted bonds were listed in Group III and stocks in Group IV. 50 per cent of the net depreciation of Group II and all of the depreciation in Groups III and IV were deducted from “net sound capital”. Whereas classification had previously depended on the market value of securities and banks were pressed to sell depreciated securities, examiners were instructed to consider other factors. The conference reported that “bank investments should be considered in light of inherent soundness rather than on a basis of day to day market fluctuations”.[47] The collapse of the securities markets had left many concerned that the market could not provide proper valuations and this was now enshrined in examination policy. In essence it gave examiners considerable latitude for forbearance in determining whether to reduce a bank’s net sound capital.

More generally, this move away from market valuation reflected an attempt to subordinate bank supervision to monetary policy. The underlying assumption was that examination policy would reinforce monetary policy by taking into consideration general economic conditions. Examination officials were relieved of duty of forcing the sale of “intrinsically sound” assets in periods of recession or deflation, while they would presumably take a tougher view of what was a correctly valued asset in a boom.[48] One contemporary expert called this change “a striking advance over previous examination practice in the direction of avoiding examination pressure to liquidate intrinsically sound assets in time of deflation”.[49] In his memoirs, Marriner Eccles, who served as chairman of the Board of Governors from 1934 to 1948, proudly pointed to the coordination of bank examination among the different agencies and the adoption of an examination policy that would exert countercyclical influence as one of his major accomplishments.[50] While there was no formal policy, the federal agencies jointly called for banks to exercise restraint in the extension of “inflationary loans” in 1947, and bank examiners who viewed their job too narrowly were criticized.[51] However, there were dissidents who opposed making supervision complement monetary policy. In 1950, Clark Warburton argued that the Board of Governors should not be

[46] Friedman and Schwartz (1963: 436).

[47] Board of Governors, Federal Reserve Bulletin (July 1938).

[48] As the early historian of the OCC, Ross Robertson, observed, how this would be put into practice was given little attention as no guidelines existed for this inherently countercyclical examination policy (Robertson 1995: 136-8).

[49] Bach (1949: 276).

[50] Friedman and Schwartz (1963: 534).

[51] Bach (1949).

involved in the examination of member banks, but focus on monetary policy, leaving the former to the FDIC, the Comptroller and state authorities.[52] Furthermore, implementation was difficult because the FDIC and the Comptroller did not share the view that supervision should be subordinate to monetary policy.[53]

Since the National Bank Act, the only enforcement tool available to bank regulators was the revocation of a bank's charter, which obviously was reserved for only the worst problem cases. Consequently, the enforcement of the Truth in Lending Act and the Fair Credit Reporting Act was left to the Department of Justice, to which "willful" violations were reported. The regulatory agencies enforcement powers were finally expanded in 1966, when Congress passed the Financial Institutions Supervisory Act that gave regulators the powers to issue cease-and-desist orders to banks and to suspend or remove directors, officers and other bank officials.[54]

Given the relatively stable macroeconomic environment and tight regulatory regime imposed on banks, these examination and supervision procedures proved adequate to the task. As seen in Figure 3, few banks failed; and they were only the smallest institutions. Most failures involved fraud that examiners sometimes unearthed. One study found that fraud was the primary cause for 66 per cent of bank failures between 1959 and 1971.[55] The narrowly defined banks of the New Deal era gradually let their capital decline relative to assets as seen in Figure 1, and this increased leverage plus anti-competitive measures like Regulation Q increased their returns in Figure 2. Congress fretted about even the smallest failures, but on the whole the corseted industry was very stable.

6. The demise of the New Deal, 1970-1990

The New Deal regulatory system for banking was destroyed by the rapid inflation of the 1970s that accelerated the competitive pressures that had been building up for several decades. Narrowly defined commercial banking, restrained from competition by barriers to entry, branching, merger, diversification and pricing, gradually saw its position as the dominant intermediary erode in the booming post-World War II economy. Whereas commercial banks had held 51 per cent of all financial intermediaries' assets in 1950, they had only 37 per cent in 1970 and 27 per cent by 1990. Less regulated intermediaries, including pension funds, finance companies and mutual funds seized most of the banks' losses. Perverse regulatory incentives, notably the moral hazard induced by deposit insurance, led to risk-taking and then the largest bank failures since the Great Depression, as seen in Figure 3. Responding to the evolving crisis, Congress removed many of the restrictive barriers that had defined the New Deal. Even examination and supervision were substantially reduced. Shocked by bank failures of the 1980s, supervision was strengthened in the 1990s but de-regulation continued. The result was an industry that grew in scale, scope and complexity, which authorities scrambled to supervise.

The banking disasters of the 1980s brought an end to the limits on competition imposed by the New Deal. The OCC and other agencies no longer demanded that banks seeking charters prove that a community could sustain a new bank and rejections became infrequent. Failures of banks and S&Ls forced many states to repeal their anti-branching statutes as they sought to enable stronger

[52] Warburton (1950).

[53] Friedman and Schwartz (1963).

[54] White (1992: 19).

[55] Benston (1973).

banks to take over weak or failing institutions. For these reasons, beginning in 1975, states began to offer each other banks reciprocal entry privileges, first as bank holding companies and as branching banks. In addition, barriers to geographic competition were weakened when the Department of Justice under the Reagan administration eased opposition to horizontal mergers. By 1990, 35 states permitted statewide branching and only three continued to adhere to unit banking. The result was an irregular breakdown of the anti-branching statutes with states and banks vying for strategic advantage to build nationwide institutions. Only in 1994, did the Riegle-Neal Interstate Banking and Branching Efficiency Act begin the process of eliminating all barriers to nation-wide branching, which became effective in 1997. Barriers erected by the Glass-Steagall Act and state laws that separated commercial banking, investment banking and insurance were also slowly eroded in the 1980s as the Federal Reserve gradually granted more powers to subsidiaries in bank holding companies. Finally, the Gramm-Leach-Bliley Financial Services Moderization Act of 1999 permitted universal banking within the structure of a financial holding company. These holding companies are permitted to engage in financial activities that are prohibited to banks. For example, while Federal Reserve member banks may only invest in investment grade bonds (rated Baa or better), the holding company subsidiaries are not similarly constrained.[56]

The success of the New Deal interest rate regulations rested on general price stability and a low and stable interest rate environment. In the 1950s, these conditions were met, but rising inflation and interest rates in the sixties slowly undermined Regulation Q. When inflation spiked in the 1970s and the Fed responded in 1979 by driving up interest rates to control inflation, the commercial banks and S&Ls saw both their profits and net worth drop. Given regulatory constraints, they found it difficult to pay market rates on deposits, leading to disintermediation. The most severely affected were the S&Ls, which had the greatest maturity mismatch, their portfolios filled with long-term fixed rate mortgages. The percentage of unprofitable insured S&Ls rose from 7 per cent in 1979 to 85 per cent by 1981; and it is estimated that the whole industry was insolvent by \$100 billion.[57] Commercial banks, pressured by competition and disintermediation and protected by rising levels of deposit insurance, similarly took on more risk.

Congress responded to this crisis by easing some of the New Deal's restrictions to allow financial institutions to adjust to the market and prevent depositors from fleeing. In 1980, the Depository Institutions Deregulation and Monetary Control Act enacted a six-year phase out of interest rate ceilings and raised the deposit insurance maximum to \$100,000.[58] The Garn-St. Germain Act of 1982 then authorized banks and S&Ls to offer money market instruments that would pay market rates of interest and allowed the S&Ls into consumer loans, commercial real estate and business loans. The insolvent S&L industry took advantage of the moral hazard of this situation to increase its risk in the hope of a higher return to move it back into solvency. This gamble failed when interest rates remained high. Massive closures wiped out most of the industry at a cost that exceeded the disaster of the 1930s. The separate status of the S&Ls was effectively terminated. The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) imposed the commercial bank capital standards on S&Ls, the FSLIC was terminated, and deposit insurance for the remaining firms was transferred the FDIC.

Greater risk-taking led banks' capital to asset ratios to fall. In response, the first capital ratio requirement of 5 per cent, later raised to 6 per cent, was set in 1981. Measured as a flat percentage of all balance sheet items, it did not take into account the riskiness of a bank's portfolio. Given the

---

[56] Spong (2000: 81-4).

[57] S&Ls were separated insured by their own mutual guarantee fund the Federal Savings and Loan Insurance Corporation (FSLIC).

[58] Backed by the "full faith and credit" guarantee of the federal government, the FSLIC prevented a panic for its insured members, but banks outside its insurance net that relied on state guarantee funds were hit by bank runs in 1985.

international scope of banking and concerns that banks might elude their national regulators, twelve countries of the Basel Committee on Bank Supervision signed the Basel Accord in 1988 to set new rules for risk-based capital requirements that would come into effect in 1993. The Accord set a minimum of capital asset ratio of 8 per cent, of which at least 4 per cent was Tier 1 capital from bank's capital accounts, with Tier 2 capital coming from subordinated debt and other reserves. The banks' on balance sheet and off balance sheet assets were risk-adjusted by a weighting scheme. Off-balance sheet business grew considerably, and it included standby letters of credit, loan commitments, loan sales, securitization and provision of derivatives. By 1990, the credit equivalents of these off-balance sheet positions stood at 50 per cent of the value of commercial and industrial loans. Above the requirements set by the Basel Accord, the Federal Deposit Insurance Corporation Improvement Act of 1991 required a well-capitalized bank to have a 6 per cent Tier 1 capital asset ratio and 10 per cent total risk capital asset ratio. Dissatisfaction with the Basel Accord focused its failure to take into account credit risk and the market value of assets. The latter was addressed in 1996, but a new Basel II Accord was reached in 1999 that allowed banks to use internal risk assessments as inputs to their capital calculations and which would be implemented beginning in 2006-2007.[59]

Under the New Deal regime, regulators grew complacent as there were only a small number of bank failures. The rising number of closures followed by the massive collapse of banks in the early 1980s upset the traditional practices of bank supervision that had developed over the course of the nineteenth century and had been modified by the New Deal. Increasingly sophisticated financial practices and organization made the "bottom up" approach to examination outdated and forced the agencies to shift to a "top down" approach, focusing the management and risk exposure. To handle the new challenges, banks were forced to disclose more information to regulators who were equipped with new enforcement tools. However, the New Deal had given the bank agencies considerable discretion to treat troubled or failing institutions. During the crises of the 1980s, this discretion led to forbearance towards failing banks that allowed them to take more risks and towards bailouts of large banks with the adoption of the "too big to fail" doctrine at a vast cost. The winnowing of the banking industry in the 1980s, like that in the 1930s, plus a stable macroeconomic environment in the 1990s, produced a profitable and stable banking industry for the remainder of the twentieth century.

The bank regulators were rudely awakened when the United States Bank of San Diego failed in 1973, the eighty-sixth largest bank in the country, first large bank failure since the Great Depression. Although the failure was fourteen times larger than previous post-New Deal failures, it resembled smaller failures in that its collapse was brought about by one insider's diversion of lending to his many enterprises that OCC examinations had missed. The United States Bank failure was followed by one that did not resemble the small bank insolvencies that the agencies had easily managed. The 1974 failure of the Franklin National Bank of New York, the country's twentieth largest bank, reflected sophisticated risk-taking. Funding its expansion with short-term deposits, Franklin had tried to jump into the New York market by make prime-rate loans to less than prime-rate firms. When earnings of the bank plummeted the bank unsuccessfully gambled on speculation in foreign exchange to revive its fortunes.[60] Although the bank regulatory agencies were aware of the bank's severe problems, they showed considerable forbearance. The Federal Reserve provided a large loan, the OCC resisted closing the bank, and the FDIC was slow to arrange an assumption package. The federal regulators justified their actions on the grounds that the demise of Franklin

[59] Unfortunately, there is little evidence to show that capital regulation has succeeded in the prevention of bank failures. One study found that between 1989-1993, of the 159 banks requiring regulatory action in New England, only 5 had capital asset ratios below 5% and 77 had ratios above 8% (Peek and Rosengreen 1997).

[60] Sinkey (1979).

might have sparked a more general liquidity crisis. Problems were much more widespread than these headline banks. The rising interest rates and depreciation of the dollar that had foiled Franklin National's bold expansion plans produced major difficulties for many banks. At the end of 1970, there were 104 "problem" national banks − banks whose classified loans exceeded 40 per cent of their capital − but they held only 1 per cent of national bank assets. By 1974, "problem banks" accounted for 39 per cent of all bank's assets.[61]

In 1980, the First Pennsylvania Bank became the first major federal bank bailout. The bank had expanded rapidly by offering high-risk loans and buying securities with the expectation that interest rates would fall. When interest rates jumped in 1979, the bank lost access to the certificate of deposit market on which it had depended for funding. Given the size of the bank, federal regulators were concerned that its failure would provoke a crisis. The FDIC seized upon a relatively unused provision in the law and declared the bank to be "essential to provide adequate banking service to the community", justifying a bailout of the bank with a capital infusion. This "Too Big To Fail" doctrine became a model for later FDIC actions during the massive bank failures that followed the collapse of the oil and real estate booms of the early 1980s. Figure 3 shows the jump in the number of bank closings. The biggest bailout was the Continental Illinois National Bank and Trust Company of Chicago, the nation's sixth largest bank. When it was discovered that Continental had acquired a portfolio of worthless loan participations generated by the Penn Square Bank of Oklahoma City, it was declared "too big to fail" and all depositors, not just insured depositors, were protected. The FDIC purchased $4.5 billion of the bank's bad loans, assumed $3.5 billion of its debt to the Federal Reserve, and then recapitalized Continental by buying 80 per cent of its shares for $1 billion.

The resolution of failed banks occupied bank regulatory agencies' attention through the 1980s until the early 1990s. The number of insured banks closed by the FDIC peaked in 1989 at 206 with $24 billion of deposits, although the largest closures occurred in 1991 when 124 banks with $54 billion of deposits were shut. Only in 1995 did the number of closures fall to single digits.[62] All totaled, the FDIC disbursed $98 billion between 1980 and 1995 to cover the losses of closed banks.[63]

The banking crises and collapse that began in the 1970s and finally wound up in the early 1990s forced major changes on bank supervision. Although traditional reports of condition are still the mainstay of disclosure, banks have been compelled to report additional information, including compliance with consumer protection, red-lining, and currency transfers. Concerned that federal agencies might not adequately have scrutinized banks, they were obliged in 1991 to submit annual reports that have been audited by independent public accounts to the FDIC.[64] In addition to this information, federal bank supervisors have deployed various computer-based early warning systems to monitor banks' conditions, based on more frequent disclosure of information.

The shift in examination procedures began after the failure of the United States Bank of San Diego when OCC engaged the consulting firm of Haskins & Sells in 1974 to carry out an external review of the OCC operations and examination procedures. This review prompted the most

---

[61] The OCC graded banks on a scale of 1 to 4, based primarily on loans and management but including other factors such as liquidity and earnings, as dictated by discretion. Banks with classified loans totaling 40 to 80% of capital and over 80% of capital were in the four lowest categories for capital. Banks rated 3 and 4 were considered "problem banks," requiring special attention (White 1992: 29-31).

[62] Carter *et al.* (2006: 697-8).

[63] Carter *et al.* (2006: 699-700).

[64] Spong (2000: 142).

complete and thorough changes in the examination process since the establishment of the OCC in 1864.[65] The report criticized the traditional approach to bank examination that was from the "bottom up" where compliance with regulations and the nearly complete auditing of the banks operations was the focus. The report emphasized the bank examiners would be more effective if they approached their task from the "top down", focusing on the quality of bank management, internal controls and the interpretation of financial data. No longer were surprise examinations at the heart of the examination process. Instead of attempting to examine all assets with limited agency resources, examiners reviewed internal loan reviews. The number of on-site examinations was drastically reduced and there was increased dialog between examiners and bank managers and board members.[66] Federal law now requires that banks have a minimum of one on-site examination every twelve months, though this can be extended to eighteen months for well-capitalized institutions. All federal agencies must coordinate their examination schedules and, in 1996, Congress charged the agencies to set up a framework to decide which agency would lead examinations.[67]

All bank agencies came under fire in a General Accounting Office study in 1977 that criticized the OCC, the Fed and the FDIC for their differing approaches to examination. In the 1978, Federal Financial Institutions and Regulatory Control Act Congress created the Federal Financial Institutions Examination Council, whose membership included the Comptroller, a governor of the Federal Reserve, the chairman of the FDIC. It also established a liaison with the state regulatory agencies.[68] Its task was to establish uniform standards and principles for examination and make recommendations for supervision. One of its first accomplishments was the adoption of the Uniform Interagency Bank Rating System in 1978. The new uniform system of rating banks was given the acronym CAMEL, where banks were rated on a scale from 1 to 5 on the basis of their capital adequacy, asset quality, management, earnings, and liquidity. Later the system was amended to include sensitivity to market risk and renamed CAMELS. Banks in Group 3 showed signs of weakness that could expose a bank to failure. Group 4 had severe problems that required immediate supervisory attention, while group 5 required attention and immediate assistance. Uniform examination report forms were devised and common training for examiners was established, and there were increased liaisons with state agencies.[69]

Enforcement powers for supervision were increased as banking problems emerged. The agencies complained that their enforcement powers were too limited, being restricted to civil fines, cease-and-desist orders, and a charter revocation with bank officials being only removable for personal dishonesty, not incompetence. In response, the Financial Institutions Regulatory and Interest Rate Control Act of 1978 gave regulators the power to dismiss or fine directors officers and employees.[70] These powers were enhanced by the 1989 Federal Institutions Reform, Recovery and Enforcement Act (FIRREA) that increased discretionary enforcement powers and fines against banks and their officers to compel compliance. However, as already discussed one of the principle concerns that emerged during the banking and savings and loan crises of 1980s was that bank supervisors had used their discretionary authority to delay prompt action against troubled banks. This forbearance in the hope of recovery rarely showed any benefit.

---

[65] White (1992: 27).

[66] White (1992: 37-8).

[67] In 1994, Congress passed the Community Development Banking and Financial Institutions Act (CRA) to promote economic recovery of communities "under-served" by banks. Compliance with these act led to the institution of CRA examinations (Spong 2000: 122).

[68] Spong (2000: 57).

[69] White (1992: 44).

[70] White (1992: 40).

Forbearance towards failing banks also had a political dimension. Although bank supervisory agencies were independently funded, they came under increased pressure from several administrations, most notably the Nixon and Reagan administrations that sought reductions in regulation. In 1969, the OCC was placed under an employment ceiling, leaving the Comptroller to complain that he had an inadequate staff to conduct examinations.[71] Pressure became more intense under the Reagan administration that sought to reduce the size and scope of the federal government in the early 1980s, just as bank failures were beginning to rise. The OCC saw a decline in its expenditures and its workforce shrank. From 3,282 employees, of whom 2,282 were examiners in 1979, the OCC shrank to 2,702 employees and 1,835 examiners by 1982. Staff at the OCC turnover reached 15 per cent in 1984. The decline in supervision was particularly acute in Texas where the median exam interval in 1986 was 700 days for banks that subsequently failed or needed assistance.[72] After the cost of the banking crisis became apparent, the agencies were permitted to expand again. Total real expenditures by the FDIC rose by 50 per cent between 1982 and 1989.

7. The Contemporary Era, 1991-2008

The banking and savings and loan disaster of the early 1980s winnowed the financial industry. Paralleling the disaster of the 1930s, the weakest institutions disappeared and the surviving banks sought to strengthen their balance sheet positions. For nearly a decade after 1990, the banking industry looked strong and robust, with few problem or failing banks. All the banking agencies were able to report up until 2007 that the institutions subject to their oversight met or exceeded their targets for capitalization and risk-taking. The suddenness of the collapse is thus all the more surprising, but the genesis of this most recent collapse has part of its roots in an important change in the nature of American bank supervision after the disaster of the 1980s.

In reaction to the agencies' exercise of forbearance for banks and other financial institutions, their discretionary authority was substantially circumscribed by the Federal Deposit Insurance Corporation Improvement Act of 1991 that established a new supervisory framework to protect a bank's capital. Known as "prompt corrective action", the supervisory procedure sets non-discretionary triggers for ensuring that problems are resolved early. Banks are assigned to one of five categories based on three capital ratios based on their capital to risk-weighted assets, where assets are assigned explicit weights. When a bank crossed certain set thresholds of these three ratios, mandatory supervisory actions are taken. These range from increased monitoring by federal agencies to an array of restrictions and remedies.[73]

Forbearance that characterized the crisis of the 1980s was thus effectively ruled out. However, by ruling out discretion, banks were able to develop new complex financial instruments that are not subject to the statutory standards and allow them to assume more risk with existing capital. The most notorious of these were of course, the mortgage-backed securities that were held off-balance sheet in Structured Investment Vehicles (SIVs) that skirted the rules-based control system that was sufficiently rigid that it was difficult to quickly adjust to innovations. Banks were able to increase their risk and hence their return, while regulators appeared to be faithfully executing their mandates. Some of these problems were addressed; for example, in 1997 capital

[71] White (1992: 25).

[72] White (1992: 61).

[73] Spong (2000: 85-95).

standards were adjusted to take into account bank's trading activities.[74] Nevertheless, these problems highlight the difficulty of shifting to a less discretionary regime.

Perhaps, the most important feature of the regulatory system that did not change was the insurance of deposits. While the maximum insurance of an account remained unchanged at $100,000, the Too Big To Fail Doctrine that had emerged in the previous era was widely believed to make deposit insurance effectively 100 per cent. The constancy of this feature may have lulled the public and regulators to forget the moral hazard implications. But banks certainly exploited it by taking increased risks just beyond the pale of bank supervision.

In this more rules-based regime, the Ratings Agencies played an increasingly important role. The bank regulators had budgetary and human resources constraints that limited their ability to monitor the quality of assets that institutions acquired. Thus, over time they came to rely more heavily on the ratings provided by the Ratings Agencies to determine risk exposure. The conflict of interest for the Ratings Agencies between rating securities and offering advice on how to structure them undermined their usefulness and thereby weakened the ability of the bank regulatory agencies to adequately monitor banks.

While the failure of bank supervision obviously played a role in the banking collapse of 2007-2008, it is less clear how other regulatory changes contributed. The disappearance of the constraints on branching and the abandonment of the last vestiges of the Glass-Steagall Act increased the freedom of entry, branching, and merger and banks could enter new lines of business that allowed them to gain new economies of scale and scope. Whether they used their opportunities to increase risk-taking is less clear at the moment. Some critics have blamed the abandonment of the Glass-Steagall Act for the crisis, yet stand-alone commercial banks and stand-alone investment banks appear to have been as troubled as the financial holding companies that formed the new "universal banks". Nevertheless, the fast changing character of the financial system increased the challenge to federal bank supervisors, who had a relatively rigid rules-based statutory supervisory regime, who faced an increasingly complex and evolving banking system, adept at increasing risk.

8. Whither supervision?

The National Banking Era provides an unusual episode where bank supervision's principal objective was to reinforce the discipline of the market. Although banks were narrowly defined to offer short-term business loans, entry was easy and they were lightly regulated. Perhaps the most important constraint was the prohibition on branch banking that prevented them from gaining economies of scale and sufficient diversification. Their bank notes were guaranteed by being backed by U.S. government bonds, but deposits were not insured. Market discipline was enhanced by the imposition of double liability of shareholders. Surprise call reports of condition sought to ensure the accuracy of reporting and surprise bank examinations, conducted from the "bottom up" ensured an effective audit and compliance with regulations. With its only instrument for enforcement being the revocation of a bank's charter, the chief federal supervisory agency was emphatic that its job was not the prevention of bank failures. Judged by the capital ratio, banks were conservative by modern standards. Although the capital to asset ratio declined overtime to approximately 18 per cent by 1913, it averaged well over 25 per cent. The return to capital varied with the business cycle but exhibited no trend around the mean of 7.5 per cent. Banking failures were an ever-present feature of the banking system, never absent from any year and sometimes rising to upwards of 1 per cent of all banks. For the years where data is available 1907-1913, the 69

---

[74] Spong (2000: 96).

national banks (out of over 7,000 national banks) that failed paid out approximately 65 cents on the dollar of deposits to their customers within three years.[75] Although not the worst years under the national banking system, these figures suggest that losses to depositors were very modest. Yet, failures under the national banking system may have been the consequence of the prohibition on branch banking. There were no bank failures in this period in Canada, a country where large branching banks were dominant.[76] Nevertheless, the National Banking Era presents a strong case for supervision focusing on the reinforcement of market discipline.

The first years of the Federal Reserve System did not mark an abrupt shift in supervisory regime, but it set the stage for the dramatic change of the New Deal. There were three notable features of the period from 1914 to the Great Depression. First, the larger banks began to escape some of the strictures of the National Banking System. As conventional commercial banking remained narrowly defined and its relative share of the financial system shrank, the biggest banks moved aggressively to form securities affiliates, grabbing a large share of investment banking. Secondly, the bank regulators pulled slightly back from reinforcing market discipline, by reducing surprise call reports and limiting some entry. The third feature was a general weakening of the banking sector, focused in the agricultural areas. Returns and capital to assets both slumped in the immediate postwar recession, although they both recovered somewhat. But these averages hide the fact that declining primary product prices caused defaults on loans and farm foreclosures, leading to higher than ever bank failures. The bank failure rate in Figure 3 moved well above the average of the previous era and stayed high even during the boom years of the 1920s. Again, these problems may be largely laid at the door of the lack of branch banking. But, even in Canada there was one bank failure in 1923.

The problems of the regulatory, but not the supervisory, regime were coming home to roost. The 766 national banks (out of about 8,000 banks) that failed had a poorer record, paying out approximately an average of 40 cents on the dollar from 1921 to 1929, which entailed a loss of $217 million at a time when total deposits at national banks totaled $16 billion.[77] Nevertheless it was not a heavy burden on the economy, the $216 million represents the equivalent of $2.6 billion in 2008 dollars or 0.2 per cent of GDP in 1925. The banking collapse during the Great Depression stands out in the mind as the greatest disaster. Certainly it towers over the previous regimes' experience. Depositors and stockholders collectively lost $2.5 billion. This represented 2.4 per cent of current GDP or $38.7 billion in 2008.

Market discipline was nearly completely jettisoned with the onset of the New Deal banking laws. Regulation re-imposed a very narrow definition of banking, although banks were encouraged to offer longer term loans to business, increasing their maturity mismatch. Barriers to competition were raised and reinforced by limiting entry, mergers and branching. Protected from competition within the industry and from outside and fixing a maximum of interest payable on deposits, the banking industry became profitable after its collapse during the depression. The return on capital, depicted in Figure 2, was higher on average than during the early years of the Federal Reserve and the National Banking period, driven perhaps by the increased leverage from a lower capital to asset ratio. Furthermore, returns appear to have been more stable. The basic examination procedures had not changed, but the philosophy of supervision favored the regulators discretion, not the mood of the market, permitting forbearance for troubled institutions. Even more radical, was the effort by

[75] Calomiris and White (1994: 171) and Board of Governors of the Federal Reserve System (1943: 283).

[76] Bordo, Redish and Rockoff (1994).

[77] Total losses to depositors from all bank failures, national and state banks, were estimated a $565 million (Board of Governors of the Federal Reserve System 1943: 283).

the Federal Reserve in the first half of this period to make supervision subordinate to monetary policy. This tight regulatory and supervisory regime helped to prevent bank failures, which as a percentage of all banks or deposits, fail to show up on the radar, as seen in Figure 3. The low failure rate and high return was, nonetheless, a consequence of a restrictive regime where competitive pressures were slowly building up.

The unexpected inflation of the 1970s undermined the weakening pillars of the New Deal regime. Although labeled the post-New Deal in the figures, the surge in bank failures and decline in profitability in the middle of this last period mark the death knell of the New Deal. When the system collapsed, not only were the New Deal's barriers to competition swept away, so were restrictions that had been in place since the National Banking period. Entry was free again, but more importantly branching was eventually permitted nationwide; and universal banking was allowed within a holding company. Interest rate and other pricing limits were abandoned. Helping to drive the rate of return to an historic high was a decline in the capital ratio, both of which are glimpsed in the figures. Supervision did not follow so clear a path. When bank failures erupted, depositors were given increased protection from the market by higher levels of deposit insurance for accounts and the adoption of the Too Big to Fail doctrine. Attempting to give banks another chance, the federal agencies used their discretionary authority for forbearance, leading to even larger failures. The increased incentives to risk-taking and supervisory policy produced an even more costly disaster than the Great Depression. During the 1980s, losses to the savings and loans totaled \$74 billion and commercial banks \$52 billion, excluding the losses of shareholders. The total, \$126 billion was the equivalent of 3.4 per cent of GDP or \$200 billion in 2008 dollars.

The reaction of Congress to the disasters of the 1980s was to remove much of the regulators' discretion by setting statutory rules and added considerable enforcement powers to back them up. Given that there was no change in the insurance regime, the financial institutions had the incentive and the ability to circumvent the limitations on risk-taking. The overall cost of this disaster now far exceeds all previous experience. One common estimate of the losses to the banks is \$1.7 trillion, although we will only know the true losses later. This sum represents a 11.6 per cent of 2008 GDP.

Looking over a century of bank supervision, one cannot but be dismayed by its failure to constrain risk-taking induced by deposit insurance and its rising cost. The resources of the regulatory agencies are finite and both discretion and rules-based supervision offer different perils. The least costly system was the National Banking Era but it is politically unlikely that we would revert to an uninsured bank regime; however, the inability of supervision to control risk-taking in any of the insured regimes suggests that deposit insurance must be limited to make supervision more effective by reintroducing more market discipline.

Figure 1
National Banks' Capital to Asset Ratio
1864-1998

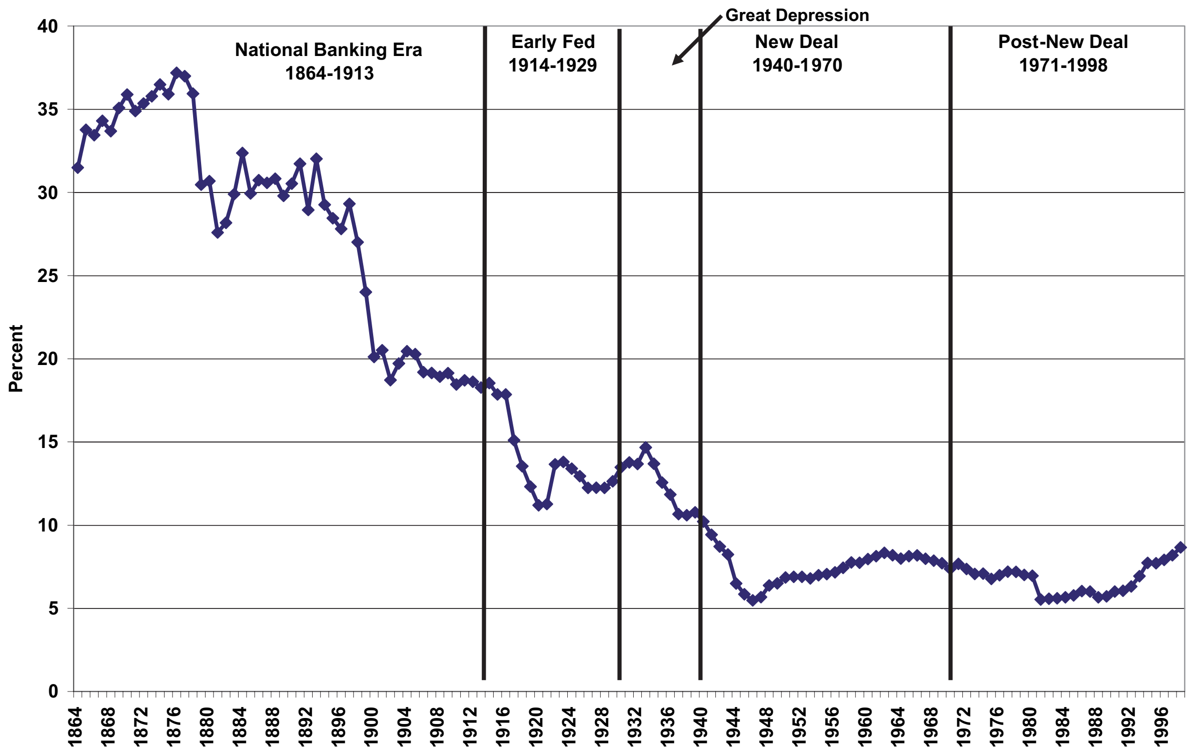
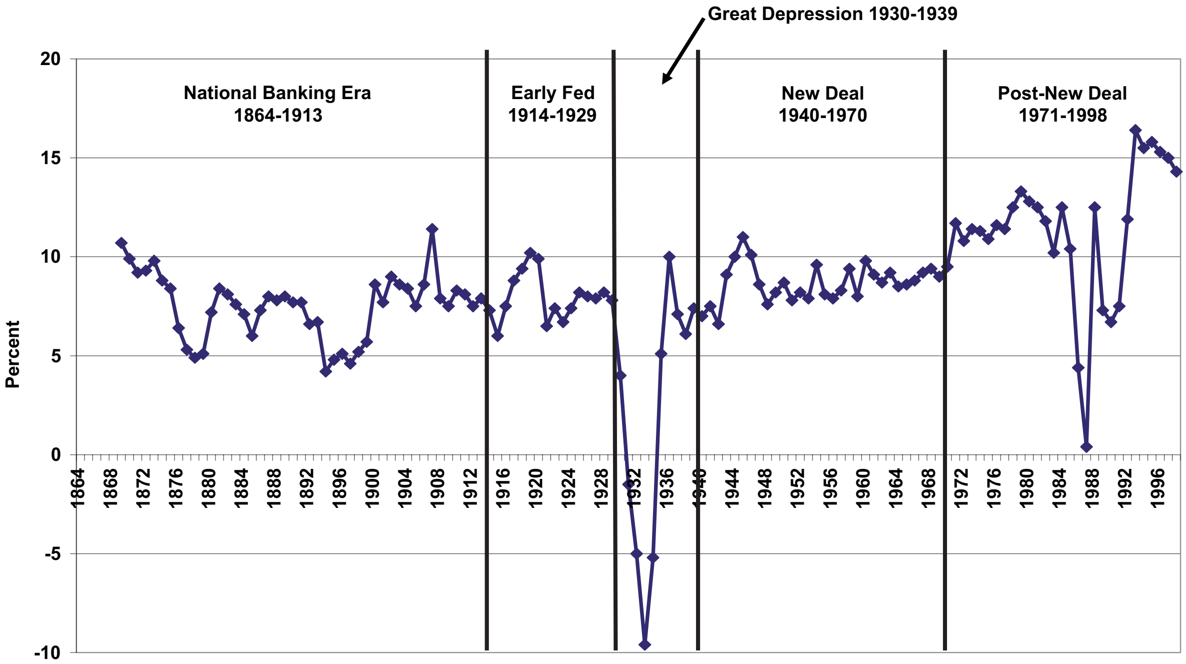
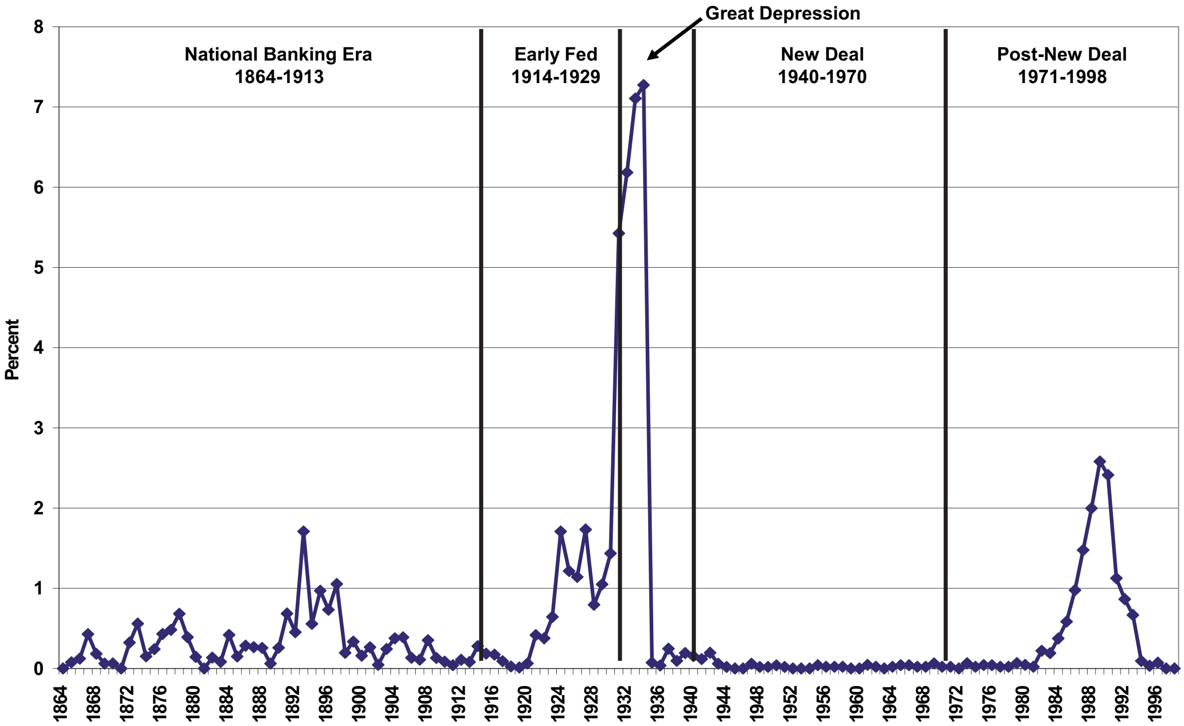


Figure 2
National Banks' Returns to Capital
1869-1998



Note: Returns are measured as the ratio of profits to capital..

Figure 3
Percentage of National Banks Closed to Total National Banks
1864-1998



REFERENCES

Bach, G. L. (1949), "Bank Supervision, Monetary Policy, and Governmental Reorganization", *Journal of Finance*, 4, No. 4, pp. 269-85.

Benston, G. J. (1973), "Bank Examination", *The Bulletin,* 89-90, New York University Graduate School of Business Administration.

Bernanke, B. S. (2001), "Comment" in Mishkin, F.S. (ed.), *Prudential Supervision: What Works and What Doesn't*, University of Chicago Press: Chicago, pp. 293-8.

Board of Governors of the Federal Reserve System (1938), *Federal Reserve Bulletin*, July.

———— (1943), *Banking and Monetary Statistics, 1914-1941*, Board of Governors of the Federal Reserve System: Washington D.C.

Bordo, M. D., Redish A. and Rockoff, H. (1994), "The U.S. Banking System From a Northern Exposure: Stability versus Efficiency", *Journal of Economic History*, 54, pp. 325-57.

Calomiris, C. and White, E.N. (1994) , "The Origins of Federal Deposit Insurance", in Goldin, C. and Libecap, G.D. (eds.), *The Regulated Economy: A Historical Approach to Political Economy,* University of Chicago Press: Chicago.

Carter, S.B. *et al.* (eds.) (2006), *Historical Statistics of the United States, Millennial Edition*, Vol. 3, Cambridge University Press: Cambridge.

Comptroller of the Currency (various years), *Annual Reports,* Government Printing Office: Washington D.C.

———— (1962), *National Banks and the Future,* Comptroller of the Currency: Washington D.C.

Crockett, A., Harris, T., Mishkin, F.S. and White, E.N. (2003), *Conflicts of Interest in the Financial Services Industry: What Should We Do About Them?,* CEPR and International Center for Monetary and Banking Studies: Geneva.

Federal Deposit Insurance Corporation (various years), *Annual Reports,* Federal Deposit Insurance Corporation: Washington D.C.

Friedman, M. and Schwartz, A.J. (1963), *A Monetary History of the United States, 1867-1960,* Princeton University Press: Princeton.

Mishkin, F.S. (2001), "Prudential Supervision: Why Is It Important and What Are the Issues?", in Mishkin, F.S. (ed.), *Prudential Supervision: What Works and What Doesn't*, University of Chicago Press: Chicago, pp. 1-29.

Mitchener, K.J. (2006), "Are Prudential Supervision and Regulation Pillars of Financial Stability? Evidence from the Great Depression", NBER Working Paper, No. 12074.

Peach, W. N. (1941), *The Security Affiliates of National Banks*, The Johns Hopkins Press: Baltimore.

Peek, J. and Rosengreen, E.S. (1997), "How Well Capitalized are Well Capitalized Banks?", *New England Economic Review*, 42.

Robertson, R.M. (1968, 1995), *The Comptroller and Bank Supervision: A Historical Appraisal,* Office of the Comptroller of the Currency: Washington D.C.

Rockoff, H. (2003), "Prodigals and Projectors: An Economic History of Usury Laws in the United States from Colonial Times to 1900", NBER Working Paper No. 9742.

Sinkey, J.F.Jr. (1979), *Problem and Failed Institutions in the Commercial Banking Industry*, JAI Press: Greenwich.

Spong, K. (2000), *Banking Regulation,* 5th Edition, Federal Reserve Bank of Kansas City: Kansas City.

Warburton, C. (1950), "Co-ordination of Monetary, Bank Supervisory and Loan Agencies of the Federal Government", *Journal of Finance*, pp. 161-6.

White, E.N. (1983), *The Regulation and Reform of the American Banking System, 1900-1929,* Princeton University Press: Princeton.

—————— (1992), *The Comptroller and the Transformation of American Banking, 1960-1990* , Office of the Comptroller of the Currency: Washington D.C..

—————— (1998), "The Legacy of Deposit Insurance: The Growth, Spread, and Cost of Insuring Financial Intermediaries", in Bordo, M.D., Goldin, C. and White, E.N. (eds.), *The Defining Moment: The Great Depression and the American Economy in the Twentieth Century*, University of Chicago Press: Chicago, pp. 87-124.

—————— (2000), "Banking and Finance in the Twentieth Century", in Engerman, S.L. and Gallman, R.E. (eds.), *The Cambridge Economic History of the United States: The Twentieth Century,* Vol. 3, Cambridge University Press: Cambridge, pp. 743-802.

—————— (2003), "The New Deal and Commercial Banking", in Kasuya, M. (ed.), *Coping with Crisis: International Financial Institutions in the Interwar Period,* Oxford University Press: Oxford, pp. 61-81.

INNOVATION AND REGULATION IN THE WAKE OF FINANCIAL CRISES IN ITALY (1880s-1930s)

Alfredo Gigliobianco[*] , *Claire Giordano*[**] *and Gianni Toniolo*[***]

Between the 1880s and the 1930s, three "regulatory cycles" can be identified in Italy. In the underlying model, each financial crisis gives rise to regulatory changes, which are circumvented in due time by financial innovation, that can then contribute to the outbreak of a new financial crisis. In Italy, overtrading of the banks of issue in the 1880s contributed to the 1888-1894 financial crisis, which yielded regulation concerning only these banks and restricting their activity. The German-type universal banks, created at the turn of the century and unconstrained in their undertakings, were at the core of the 1907 and the 1921-1923 crises. These led to a banking law in 1926 which, arguably, was born obsolete, in that it was not aimed at regulating universal banking as it had developed until then, but it contained general provisions regarding the whole range of deposit-taking institutions. Finally, the evolutionary adaptation of the universal banks into holding companies, not taken into account by the preceding law, contributed to the 1931-1934 banking crisis, followed by the 1936 bank legislation.

JEL: G28, N20, N40.

1. Introduction

In his forthcoming book about the origins of market institutions in Victorian England, Paul Johnson writes: "Each set of 19th century market regulations produced new constraints but also an array of opportunities for businessmen and financiers to develop innovative ways. With unerring inevitability, innovation prompted regulation, and new ways of doing business promoted further rounds of boom and bust" (Johnson 2009, forthcoming).

Johnson's observation lends itself to a fairly universal application, at least as financial markets and regulation are concerned. In its wake, each financial crisis gives rise to a regulatory change in order to supplant the obsolete legislation and to prevent the occurrence of similar events in the future. In due time, financial innovation which sidesteps the restrictions and requirements imposed by the institutional setting emerges to exploit new profit opportunities and/or adapt to a new business environment, fuelling in turn a further financial crisis. We find that this "regulatory cycle", possibly with one exception, fits Italy's experience in the 1880s-1930s period.[1]

Between the Peninsula's political unification in 1861 and the Great Depression of the early 1930s, Italy's financial system proved to be highly unsettled, punctuated as it was by numerous episodes of financial instability of varying severity. Most crises provided the intellectual and political impetus for a new regulatory wave, which was then followed by unregulated financial

---

[*] Banca d'Italia. E-mail: alfredo.gigliobianco@bancaditalia.it

[**] Banca d'Italia. E-mail: claire.giordano@bancaditalia.it

[***] Duke University and Libera Università delle Scienze Sociali, Rome. E-mail: giannit@econ.duke.edu

The authors wish to thank Elio Cerrito and Sandra Natoli for their useful comments and suggestions, as well as all the participants of the conference "Financial Market Regulation After Financial Crises: The Historical Experience". The opinions expressed are those of the authors, and not necessarily of the institutions represented.

[1] The idea of a regulatory cycle can be traced back to Kane (1986), who adopts the expression "regulatory dialectic", and to Miller (1986), who aptly recognizes taxes and regulation as impulses to innovation.

innovation. Only the post-1945 adaptation of the Banking Law of 1936 seemed to produce (or accompany) a long period of financial stability, which persisted on the whole until 2008.

As Italy's financial market was until recently, and possibly even nowadays, largely bank-oriented, financial crises mainly coincided with banking crises, which are thus the subject of our narrative. The term "financial innovation" is therefore taken in a broad, and perhaps loose, sense to include new processes or business practices that banks employed to carry out their intermediation activity, untrammelled and unheeded.

Three types of financial innovations are identified in the period under study. Overtrading of the banks of issue in the 1880s contributed to the 1888-1894 financial crisis, which yielded regulation concerning only these banks and restricting their activity. The German-type universal banks, created at the turn of the century and unconstrained in their undertakings, were at the core of the 1907 and the 1921-1923 crises. These led to a banking law in 1926 which, however, was born obsolete, in that it was not aimed at regulating universal banking as it had developed until then, but it contained general provisions regarding the whole range of deposit-taking institutions. Finally, the evolutionary adaptation of the universal banks into holding companies, not taken into account by the preceding law, contributed to the 1931-1934 banking crisis, followed by the 1936 bank legislation.

The paper is structured in the following way. A brief overview of the main financial crises in Italy since unification is followed by four sections devoted to as many episodes of financial instability and to the subsequent regulatory legislation. A final section sums up the main findings and briefly accounts for post-war financial regulation. A first appendix lists the main banking reforms in Italy from the XIXth century onwards. A second appendix describes in detail the contents of the three main crisis-prevention regulatory laws. A third and last appendix concerns the crisis-management institutions created in Italy in the period under study.

2. Italy's financial instability

For the scope of the paper, it must be noted that Italy's financial sector was (i) underdeveloped at least until 1914, (ii) bank-oriented, (iii) highly unstable until 1931, stable thereafter.

Underdevelopment can be roughly measured by Goldsmith's Financial Interrelation Ratio (FIR), which was 0.2 in 1861, 0.3 in 1881 and 0.4 in 1914, below that of countries of comparable per capita GDP levels. Thereafter, Italy's FIR reached the level roughly to be expected in relation to its per caput GDP: 0.6 in 1930 and 0.4 in 1951. The FIR attained its peak in 1973 (1.7). It was approximately 1.5 at the beginning of this century (Goldsmith and Zecchini 1999; Carriero *et al.* 2003).

At the onset of the XIXth century, the Italian financial system was made up of a handful of traditional public credit institutions[2], of a few joint-stock banks (*società anonime*),[3] and private bankers. No stock exchange worth mentioning existed at the time. In the following decades, other institutions came to life: mutual savings banks (*casse di risparmio*) from 1822[4], other public

[2] Banco delle due Sicilie, Banco di Santo Spirito, Monte dei Paschi, Compagnia di San Paolo.

[3] They were mainly discount banks, in Florence, Leghorn and Rome.

[4] The *casse di risparmio* were initially charity institutions, created to collect the lower classes' savings, but, over time, they turned into proper credit institutions.

limited-liability banking companies from 1856, cooperative banks (*banche popolari*) from 1865, and small rural banks (*casse rurali*) from 1883. The Cassa Depositi and Prestiti (similar to the French *Caisse des Depôts et Consignations*), founded in 1863 to fund public works and invest in Treasury bonds, soon (1875) became the main depository of postal savings. Pivotal to the system were the numerous banks of issue, which operated also as commercial banks.[5] Onado (2003) describes the Italian financial system at the time of unification as underdeveloped, based mainly on its banks of issue and on a few financial circuits directed towards specific sectors of the economy. Subsequent development was slow and, as we shall see, punctuated by banking crises.

Besides being underdeveloped, Italy's financial system was bank-oriented. Almost all the XIX[th] century was characterized by the existence of numerous local stock exchanges, most of which were all but irrelevant. Financial market unification, measured by price convergence, was not achieved until the 1880s (Toniolo *et al.* 2003). The price-maker for Italy's government bonds was the Bourse de Paris. After 1900, the Milan Stock Exchange gradually grew to concentrate most of the country's bond and equity deals; it remained however relatively small, thin and expensive, while banks retained a considerable market power. Between 1900 and 1906, both the number of listed companies and equity transactions increased in a most promising way. The crisis of 1907 dealt a blow to Italy's equity market from which it did not fully recover until at least the 1980s. It was, therefore, the banking system that provided the majority of financial services.

Until the early 1890s, the system was dominated by six banks of issue and by a couple of large commercial banks, one of which, created by the Perèire brothers, had survived the fall of the French parent company. From the 1890s onwards, the system was led by a handful of German-type universal banks while the Bank of Italy (resulting from the merger of three banks of issue and the takeover of a fourth) gradually assumed the standard functions of a central bank. In the interwar years, a number of State-owned or State-promoted long-term credit institutions flanked commercial banks by providing long-term credit via a large use of State-guaranteed bond issuance. One of the reasons for this development can be ascribed to the gradual transformation of the large banks which by the mid-1920s looked more like holding companies than traditional universal banks, each providing credit first and foremost to the joint-stock companies in which they had invested.

Finally, Italy's financial system proved to be unstable until 1931-36 (the period of time covered by the paper), while it showed a remarkable stability in the following years, possibly up to the current crisis.

Given the above-mentioned features of the system, Italy's financial crises were all essentially banking crises. Most of them were preceded or accompanied by stock market crashes and one of them by a currency crisis, while Italy never experienced episodes of sovereign default on external or domestic debt.

The paper deals with four financial crises, those of the early 1890s, of 1907, of 1921-23, and of 1931-1934. We do not deal with the first post-unification crisis of 1873, when Italy shared in the first significant international crisis (Kindleberger 1989: 146).[6] This was, in fact, mainly a stock market crisis, which did not affect the six Italian banks of issue (accounting for over half of

[5] Banca Nazionale, Banca Nazionale Toscana, Banca Toscana di Credito and Banco di Roma (added in 1870) were already banks of issue and inherited as such by the new State, whilst Banco di Napoli and Banco di Sicilia became banks of issue in the modern sense only in 1866, after Italy's unification.

[6] The crisis began in Vienna, it then spread to other European (Dutch, Italian, Belgian) and US stock markets.

financial intermediation), it posed no systemic threat, and it was not followed by any regulatory action.[7]

The four financial crises, here reviewed for their impact on subsequent financial regulation, occurred alongside corresponding international crises, but at the same time presented marked idiosyncratic features. The co-movement of the financial and real economy variables was negligible in 1907, but was quite considerable in the other three cases, all marked by falling output and employment. The crises of the early 1890s and early 1920s interacted with and possibly reinforced a situation of deep social distress with serious political repercussions. Most crises were either triggered or accompanied by stock market crashes and the crisis of 1888-94 was a typical "twin" bank and currency crisis.[8]

After the Second World War, the Italian economy enjoyed a long period of lower real economy volatility and of financial stability. Some bank failures did occur, however posing no systemic threat. In the 1970s price, income and employment volatility increased and financial stability was threatened by the little known and under-researched solvency crisis of a few long-term credit institutions (*Istituti di credito speciale)* which were bailed out and eventually restructured by the State. For the following three decades, Italy again enjoyed a remarkable financial stability.

3. The overtrading of banks of issue: 1888-1896

This section is devoted to the first regulatory cycle, focusing on the nature and ratio of the banking act of 1893. The act of 1893 – which gave origin to the Bank of Italy – is the most important and consequence-ridden piece of the first phase of regulation.

The Italian story parallels in many respects that of Great Britain some fifty years earlier. Initially, regulation of the banks of issue was due to their nature of joint stock companies rather than to their note issuing activity.[9] When, in 1866, the convertibility of the lira was suspended[10], the Italian financial debate partially echoed the British one, with bullionists set against anti-bullionists and with the adherents to the currency school against those of the banking school. In Italy, however, the setting was complicated by the fact that the fragility of new-born State did not allow the central Government to defy the powerful regional groups, each supporting the persistence and expansion of the banks of issue which had been active in the former States. The controversy concerning discretion vs. rules in banking, which had been crucial in the British debate, was partially effaced by the more sensitive political issue concerning plurality vs. unification of note issue. The focus of this dispute was not on the merits of free-banking, but rather on those of monopoly vs. oligopoly of note issue (Cardarelli 2006). A rather extensive body of regulation regarding the banks of issue (which had reached the number of six) was put in place, but it was not uniform across banks and it was difficult to enforce, due both to its cumbersome nature and to the political backing which any violation could muster.

[7] The crisis involved savings banks and cooperative banks (together accounting for about 20 %of the credit market), but it was private bankers and joint-stock companies (which accounted for 25% of the market) that suffered the most. The crisis resulted in a downsizing of the banking sector, with a capital loss equivalent to about 2-4% of 1873 GDP (Carriero *et al.* 2003).

[8] The nominal exchange rate of the lira with respect to the US dollar dropped from 103.5 in 1889 to 94.8 in 1894, whilst the real exchange rate dropped from 104.8 to 95.4, implying a devaluation of nearly 10% (Ciocca and Ulizzi 1990).

[9] We refer here mainly to the case of Banca di Genova, founded in Genoa (Kingdom of Sardinia) in 1844.

[10] Due to the preparation of the war with Austria-Hungary, with the subsequent difficulties in the international financial markets.

In 1881 a law was passed to reintroduce the gold standard by 1883. A widespread belief among the disciples of the currency school was that monetary stability and financial stability were intimately tied under the gold standard regime.[11] Convertibility to gold constituted a constraint on credit expansion and therefore a deterrent to financial imprudence. Some contemporary economists argued that the convertibility of banknotes into gold was the pivot of an orderly functioning of the money and credit market. Once convertibility was guaranteed, no other form of regulation was deemed necessary. Banking school supporters, on the other hand, argued that financial crises could develop even under a regime of convertibility (Messedaglia 1876), but never got far enough as to propose regulation on non-issuing banks.

The resumption of convertibility in 1883 was backed by a gold-denominated international loan which increased bank reserves and allowed for credit expansion. Overheating of the economy, largely brought about by investment in building construction, resulted in a *de facto* suspension of convertibility in 1887. In that year, the real estate bubble began to deflate and a number of banks which had extended generous credit to the building sector ran into serious difficulties. Some of them (Banca Tiberina and Banco di Sconto e Sete) failed, after an ill-conceived and unsuccessful bail-out attempt by the largest bank of issue, Banca Nazionale nel Regno d'Italia.

Meanwhile, the public debate concerning the banks of issue became intense. It was inflamed by the awareness that the banks of issue had not remained aloof from the real estate bubble. The quality of their assets was uncertain, especially since some of these banks, either because of business relations or in response to government pressures, had largely financed the construction firms or the banks involved in the bubble, even after real estate prices had started to decline. The concern about the soundness of the banks of issue turned into scandal at the end of 1892, when two MPs of the low Chamber read excerpts of a report, written by State examiners, concerning the Banca Romana, one of the six banks of issue. The document, which had been kept secret by the government, revealed not only huge bank losses, but also the illegal measures Banca Romana had undertaken to remain afloat. The scandal prompted a new examination of all six banks of issue and speeded up the legislative process towards a new law.

In barely six months the law was passed and it was enacted on 10 August 1893. Basically, the regulatory response consisted in the following. The number of the banks of issue was halved from six to three. Currency circulation was tightly regulated by imposing a limit to its outstanding amount, a 40 per cent reserve requirement and norms on capital adequacy.[12] Convertibility was reaffirmed in principle, but the decree which should have set the legal framework for its application was never brought about. The three banks of issue were placed under tight Government control: the discount rate could not be changed without the assent of the Government and was to be the same for all three banks. Furthermore, the operations they were allowed to undertake were stated one-by-one in the law (rather than in the individual bank charters); the chief officials had to be approved by the government; and finally, the control apparatus was reinforced and obtained the necessary political backing. Even note-printing was tightly controlled, to the point that the printing of each banknote could not be completed without the application of a stamp by a State official.

Needless to say, the 1893 law was harshly criticized by free market economists, particularly by those writing for the "Giornale degli Economisti", who condemned the suspension of the public's right to conversion of banknotes.[13] Pareto also belittled the effectiveness of government

[11] See Issing (2003), Borio (2004) and Borio and Toniolo (2006), among other publications on the subject.

[12] See Appendix 2 for the details.

[13] The "Giornale degli Economisti" was a major economic journal of the time, directed by de Viti de Marco, Mazzola, Pantaleoni and Zorli, and in it Pareto had a monthly column.

supervision, which was considered inferior to market discipline (or "public supervision" as he puts it), that is by the public exercising its right to conversion.[14]

In the wake of the crisis fuelled by overlending, two issues had come to the forefront. A macro issue – an excess of money circulation – and a micro one with systemic implications – the soundness of the individual banks of issue. The reduced number of banks was probably intended to be a response to both matters: the emergence of a clear leader (Bank of Italy) was seen as a decisive step towards the unification of note issue and the control of money supply. The macro issue, including the stability of exchange rate, was addressed by imposing limits to circulation and metallic reserve requirements, but not by re-introducing convertibility since this move was feared to be too costly (e.g. in deflationary terms) for the economy as a whole. The remaining regulation was designed to tackle the micro issue. Once asset quality had been taken care of (in principle) by limitations on the kind of permissible assets, one had to worry about imperfect application of the law: hence, the capital ratio. Guaranteeing the stability of the individual banks of issue was also a motivation for prescribing a liquidity ratio, although its main justification was in the macro domain (Negri 1989: 207). Next came the Government's veto right on the nomination of top managers and the prohibition of MPs to serve in the banks' governing bodies. These provisions were a clear response to pro-bank lobbying, which had been pervasive in the preceding years. Finally, the strengthening of supervision. The scandal of Banca Romana had severely shocked the public opinion, and a clear message had to be sent out : abundance of controls, severity of penalties.

A crucial point of the story is that the banks of issue had gained a bad reputation: their managers were perceived to be at odds with the public interest and were not trusted by the political leaders who were trying to raise Italy out of its financial mess. Shortly after the enactment of the law (February-March 1894), a decisive battle against the private interests operating within the Bank of Italy was engaged by the Finance Minister Sydney Sonnino on a relatively unimportant issue. As a result, the director general Grillo and the president of the board of directors Parodi had to leave. This also stressed the new will of the Government to end old practices of elusion and evasion of the law (Bonelli and Cerrito 2003).

But while the financial crisis was waning and the system was beginning to function under the newly-introduced rules, the international financial turmoil set in motion three years earlier by the Baring crisis struck Italy with a massive flight of foreign capital (October 1893 to March 1894). Consequently, the two main commercial banks failed, victims to runs, and tens of local banks followed suit. Losses were of the same magnitude of those of the preceding decade and have been estimated to be approximately 2.5 per cent of GDP (Carriero *et al.* 2003: 504). Either the banking law did not change market expectations about the country risk or it arrived too late (it came into force only on 1 January 1894) to shelter the country from domestic and international shocks. This sudden and deep after-shock in the crisis did not elicit new significant regulatory action. Some adjustments were made to the banking law of 1893, which regulated only the banks of issue, but no lesson was drawn from the insolvency of the two largest commercial banks. Pantaleoni (1895) noted that the general public was hostile towards those who had made runs on the banks, by withdrawing their deposits. These agents were named *ribassisti* (short sellers) and enemies of the people, while the Government and the police, who deprived the depositors of their right to be reimbursed, were seen as saviours. As for the idea of bank legislation, the famous economist confined himself to reporting a witty note taken from Charles Sumner: "There ought to be no laws to guarantee property against the folly of its possessors" (Pantaleoni 1895: 160).

[14] In particular, see Pareto (1893a) and Pareto (1893b).

A Government Committee was set up to study reforms of the existing corporate law. Its recommendations included the proposal of setting aside three tenths of the capital of joint stock banks as a guarantee for deposits (Vivante 1895). These were not, however, translated into law. Inaction was possibly due to the fact that political energies had been exhausted (new priorities emerged immediately after the crisis) and to the lack of an economic or legal theory sound enough to provide a rationale for regulation beyond the realm of note issuance: as we have seen, it was widely believed that currency and financial stability were the two sides of the same token. Hence, the only rule specifically aimed at banks in the Italian legislation remained the Article 177 of the Code of Commerce, which required banks to transmit their balance sheets every month to the Trade Court (*Tribunale di commercio)*. Their actual publication, owing to organisational difficulties, was delayed, however, by over a year.

Once the tsunami passed, a period of rapid GDP growth in a stable monetary, financial and exchange rate environment got under way. Abundant remittances by Italian workers abroad, contributed to the creation of large gold reserves which, as we shall see, would make the difference in the 1907 crisis. While convertibility was never formally declared, by 1902 the exchange rate had reached its par and the interest rate applied to the government debt steadily declined. Also, the stock market staged a considerable upswing; the number of listed companies rapidly increased.

4. The pro-cyclicality of universal banks: 1907

The main financial innovation of the pre-war period of sustained growth was the expansion and evolution of the so-called universal bank. For the first time since Italy's unification, banks – in particular the three largest ones created during and after the crisis of 1894 - came to play a leading role in corporate finance. They forged close ties with their client companies, both large and medium-size. Trustees of the banks routinely sat on the boards of the companies or were appointed as consultants. Banks advised and assisted IPOs, frequently underwriting large amounts of shares to be gradually placed thereafter on the market. As a result of this innovative practice by unregulated intermediaries, banks acquired relevant market-maker positions in the three main stock exchanges (Milan, Turin and Genoa), whilst often holding in their portfolios consistent amounts of shares either from IPOs or as collateral for loans. The main banks were therefore partly responsible for the rapid increase of equity prices, which suited them well by swelling the value of their assets; this, in turn, made it easier for the banks to float new capital on the market. Increased capitalization attracted new depositors, thus contributing to a rapid expansion of bank lending and equity underwriting.

Particularly impressive was the growth of Società Bancaria Italiana (SBI, established in 1898), the junior member of the large universal bank league (the other two being Banca Commerciale Italiana, est. 1894, and Credito Italiano, est. 1895).[15] The new issues were mostly made in connection to M&A operations by which the bank acquired a number of smaller credit institutions and expanded its operations to become the "third credit pillar" of the rapidly industrializing North Western regions (Bonelli 1971: 32). Similarly to the two larger universal banks, SBI engaged in extensive industrial lending, promoted IPOs and new capital issues, advised and financed restructuring operations. Having started operations on a large scale only in 1900, when its competitors had already conquered the largest, most solid and profitable industrial clients, and being less firmly established as a universal bank than its rivals, SBI had to base its business on riskier clients that had often been discarded both by the other big banks and by the larger savings banks. Huge if perilous business came to the bank also through the acquisition of the previously

[15] The initial 1898 SBI's capital of 4 million lire was progressively increased to reach 50 millions 8 years later (Bonelli 1971: 30-31).

mentioned Banca di Sconto e Sete under liquidation (Bonelli 1971: 34). Moreover, by 1907 SBI was controlled by a group of Genoese business people which "included some of less scrupulous representatives of the stock exchange speculation" (Bonelli 1971: 32).

In 1906, aggregate demand – both for consumer and investment goods – was buoyant. Wages and profits increased, as did the already excessive demand for credit. In the second half of the year, interest rates progressively rose; international markets signalled the onset of the liquidity crunch that would characterize the following year. Italian banks sharply reduced credit to stock market traders. In October a liquidity injection by the Bank of Italy avoided the transmission of difficulties in Genoa to the other Stock Exchanges. To a farsighted observer, these developments should have highlighted the fragility of a system characterized by overstretched credit institutions, an over-indebted industrial sector and bank-dominated, oligopolistic, rather thin and illiquid equity markets. But very few people, in Italy or abroad, understood the dangers of increasing tension in the international liquidity markets.

News coming from the United States advised banks to further limit credit to stock exchange operations, thus accelerating the fall in equity prices. However, the Bank of Italy saw no reason for concern about the stability of the main banks. Banca Commerciale and Credito Italiano discontinued their attempts at containing the decline in equity prices, whilst SBI alone persevered in attempting to raise the price of its own shares and that of its main debtors. The insolvency of one of its important client companies (Ramifera) highlighted the vulnerability of SBI and of the whole banking sector. The Bank of Italy stepped in to finance a consortium of bankers and stock market brokers aimed at avoiding the liquidation of Ramifera with its likely implications for SBI. This move by the Bank of Italy signalled the possibility of further lending of last resort interventions, and revived earlier proposals for amendments of the existing regulation of the banks of issue in order to allow for additional liquidity creation (*i.e.* expansion of circulation).

In September the stock market nose-dived again. Bank of Italy branch managers reported widespread evidence of a credit crunch. Hence, a considerable amount of liquidity was fuelled into the system out of concern for both the real economy and the position of smaller banks deriving from the drying-up of inter-bank credit (Bonelli 1971: 88). Pressed for liquidity, corporate clients of the large banks drew on their deposits, as did members of the general public. It became clear that SBI, the weaker ring of the chain, was in urgent need of a greater liquidity injection. The Bank of Italy persuaded SBI's two main competitors to join a consortium which lent 50 million lire to the ailing bank, warning of contagion should the public lose confidence in the third largest bank in the country.[16] It is perhaps interesting to note that in order to close the deal, SBI had to accept the creation of a supervisory committee and subject itself to inspection. This financial relief measure kept SBI going for a few weeks but it did not restore confidence. The Bank of Italy again persuaded the two main SBI's competitors to participate in a lending consortium. This time, however, financial assistance was made conditional on SBI being put under control of the lenders, who would then dispose of its assets. The unintended consequence for the Bank of Italy of its first large-scale lending of last resort operation was that it became involved in the management of a commercial bank. The Bank of Italy decreed that SBI was to survive. Thus, capital was reconstituted with fresh subscribers and Bonaldo Stringher, the head of the Bank of Italy, put one of his closest aids at the helm of SBI. By late Spring 1908, the crisis was overcome.

What "lessons", if any, were learned from the crisis of 1907? The main ones were about crisis management rather than prevention through adequate regulation. Both the Government and

[16] Polsi (2001) emphasizes the fact that, for the first time and in a virtually unique case of the history of Italian finance, the Bank of Italy managed to bail out an important bank without requiring an upfront disbursement of taxpayers' money.

the Bank of Italy brought home the "domino effect" argument of avoiding big bank failures. To prepare for the management of future similar crises, the Bank of Italy came to believe that more ammunition had to be added to its arsenal, in particular more flexibility was required of its liquidity management. In 1907, the Bank could act without endangering macroeconomic equilbria as it was sitting on a much larger metal reserve than required by law, but circumstances could not be expected to be as favourable all the time in the future. This led to the loosening of limits on circulation with a sequence of laws in 1907, 1912 and 1914.[17]

The 1907 crisis also highlighted for the first time the pro-cyclical nature of the universal bank, the financial innovation of the time. Furthermore, it enshrined the Bank of Italy as the institution responsible for the stability of the banking sector. Moral hazard also came to the forefront. In 1907 the largest banks had been reluctant to cooperate with the Bank of Italy and only too glad to pass on to the latter the task of bolstering credit to the economy (in particular to the large manufacturing companies). Moral hazard issues would characterize the following decades with requests and political pressures for last resort lending, not only to banks but also to large industrial companies in distress.

It would take another crisis for the "lessons" of 1907 to be translated into regulatory reform. Nevertheless, the general idea that the credit sector should be made more responsible in order to better 'safeguard depositors' began to take hold.[18] In 1908 a member of the Cabinet – Cocco Ortu – initiated legislation aimed at protecting small depositors of commercial and cooperative banks, which was however torpedoed by the prime minister (Bonelli 1991: 39).[19] Stringher indicated that rather than legislation what was needed was self-regulation of the banking sector.[20] In 1913, Nitti, Minister of Agriculture, Industry and Commerce, again proposed legislation for the regulation and supervision of deposit-taking institutions. Provisions for the introduction of liquidity and reserve ratios and supervision were envisaged. If nothing came of these proposals, they nevertheless indicate a shift in the paradigm of bank regulation, hitherto synonymous with bank of issue regulation.

5. The build-up to the first commercial banking regulation: 1921-26

If, as we have seen, a first proposal for bank regulation stemmed from the events of 1907, Italy's first organic piece of regulatory and supervisory legislation originated from the banking crisis of 1921-23. [21]

Wartime expansion of industrial output by heavy industries such as steelmaking, shipbuilding, automotive, arms and ammunitions was financed by credit lines generously opened

[17] These laws were the corner-stone of a policy of deregulation of the banks of issue, started soon after le 1893 law, which included: a) Interest rates: the possibility of applying a rate lower than the official one to prime customers was introduced in 1895; b) Permissible operations: a larger part of reserves could be kept in foreign bills; the holding of consols was allowed in 1928; longer time was conceded to sell non permitted assets; d) Capital requirements: they were dropped altogether; e) Taxation: a shift took place, from a note circulation tax regime (which left the burden of non performing loans entirely on the bank) to a profit tax regime.

[18] This expression became the catch-word of bank regulators for forty years until it was actually introduced in the 1948 Constitution of the Republic as "savings' safeguard".

[19] Banks were required to create two autonomous, fire-walled, sections for the separate management of 'fiduciary' (or 'saving') deposits and 'commercial' deposits; the former – enjoying privileges in case of liquidation – could not be used for long term lending (Bonelli 1991, Doc 34 : 279).

[20] Bank of Italy Report of 30 March 1912 (cited in Bonelli 1991: 39-40).

[21] Royal Decree 7 September 1926, No. 1511 and Royal Decree 6 November 1926, No. 1830.

by the largest universal banks. One such bank, the Banca Italiana di Sconto, was actually created shortly before the outbreak of the hostilities by a group of industrialists who had large stakes in the Ansaldo heavy industry conglomerate (see e.g. Falchero 1990). It acquired the previously mentioned SBI.

As long as the war lasted, a discount window of the central bank ensured that bank liquidity never became an issue. To prepare for worst-scenario situations, the Bank of Italy acquired a panoply of new instruments to guarantee the stability of the system. When Italy was still neutral, in the Autumn of 1914, a general moratorium (or rather strict regulation) on bank-deposit withdrawal pre-emptied runs on the weakest banks and the spread of contagion (Toniolo 1989: 18-25). The Bank also sponsored the creation (December 1914) of a special institution (the CSVI, Consorzio per Sovvenzioni su Valori Industriali) authorized to discount paper not eligible for direct discount at the banks of issue.[22] The original motivation for CSVI was to avoid the dumping of industrial equity on the market by banks or industrial companies in need of liquidity (Guarino and Toniolo 1993: 197-98). As we have mentioned, since at least 1907, the Bank of Italy had understood its duty in guaranteeing the stability of the financial system; the war provided an excellent acid test for its effectiveness in the job. But action was taken on an *ad hoc* basis and with *ad hoc* instruments either already at the Bank's disposal (foremost among these, the exercise of moral suasion) or through legislation initiated by the Bank itself. The post-war banking crisis showed that case-by-case (and often *ex post*) action did not secure financial stability and entailed costly lending of last resort operations, thus paving the way for a crisis-prevention rationale for regulation.

After a brief post-war boom, all European countries bar Germany experienced quite severe, if relatively short, depressions. They were accompanied by financial turmoil and bank failures in Italy, Spain, Portugal, the Netherlands, and Scandinavia (Feinstein *et al.* 2008: 42-45), countries in which corporate finance largely depended on bank lending. Hyperinflation spared Germany (the inventor of bank-centred industrial finance) from a banking crisis (Holtfrerich 1986). In Italy the banking crisis coincided with the crucial months of social and political instability that led Mussolini to power. It was also marked by a fierce struggle among capitalist groups for the control of the largest banks and industrial conglomerates. Both circumstances made emergency lending by the Bank of Italy not only subject to huge pressures, but also liable to accusations of partisanship from all directions.

At the heart of the banking crisis was the interlocking shareholding between the Ansaldo conglomerate and the Banca Italiana di Sconto (from now on Sconto). As a slow post-war restructuring process threatened Ansaldo's solvency, Sconto commissioned as many as ten ships to the sister company. In little over a year's time, the bank, which could not discontinue lending to Ansaldo, became virtually illiquid. As in 1907, the Bank of Italy turned to the two largest banks in order to create a consortium to supply liquidity to Sconto. This time, however, the two banks (in particular Banca Commerciale who had been the target of a hostile takeover by the main shareholders of Sconto) were even more sluggish to act than they had been in 1907. The consortium did not materialize until the end of 1921, too late to stem the withdrawal of foreign deposits from Sconto as well as from other banks in a classic scenario of bank contagion. The Government briefly toyed with the idea of a moratorium, but soon liquidation emerged as the only solution. A partial guarantee of deposits was given by the Bank of Italy through a new entity, a "Special Section" of the afore-mentioned CSVI. Ansaldo was *de facto* taken over by the Government, thus becoming the first State-owned large conglomerate in the history of the Italian Kingdom. Almost at the same time (end of 1921 – spring 1922) another large bank, Banco di Roma, suffered huge deposit losses and became virtually illiquid. It was however provided with

[22] See Appendix 3 for more details.

enough liquidity from the Special Section, with the guarantee of the newly-formed Mussolini Government, to outlive the crisis, even if as a crisis-prone lame-duck.

How did this episode shape the regulatory attitude of the authorities? The crisis brought home the lesson that regulation concerning banks of issue was not sufficient to attain the stability of the whole banking system. Time had come to regulate commercial banks. A first draft of a new Banking Act was prepared in the fall of 1923 (Guarino and Toniolo 1993: 403-15). It took three more years for the law to overcome intense bank lobbying and to land in Parliament, where it was passed in the Autumn 1926 (shortly after a different law had granted the bank of Italy monopoly of note issue). Free bankers and the lobbying association of limited liability companies strongly argued against the desirability of "protecting depositors by law" and the creation of a supervisory authority with inspection powers. A brief act was passed in September, to which a more articulate one followed in November.

The new regulatory regime applied to all banks. A key provision of the act was that an authorization was required for the creation of a new bank or branch, as well as for mergers and acquisitions. This created a power to control over-banking, which was considered one of the main problems of the time. On the other hand, the ability to get a hold on the actual management of the banks rested on two other provisions: the first was minimum capital and reserve requirements; the second was a limit to credit to any individual client, which could not exceed one fifth of the bank's equity. The regulating entity was entrusted with supervisory powers, via information disclosure and on-site inspections. One major problem of this legislation was that different categories of banks were subject to different supervisory authorities.

The bank legislation of 1926 was largely obsolete before even being enacted. It regulated banks as they existed before the war. In fact, its drafters made explicit reference to the 1908 and 1911 proposals. But the war had already changed the banking industry as observed, in 1920, by the Minister of Industry and Commerce who – speaking before the Parliament – had to say: "Our credit institutions have changed their nature from deposit-based commercial bank into investment banks". He argued that the very nature of the credit system was thus changed for two reasons: on the one hand the balance sheet of the banks was linked to the ups and downs of equity prices of the industrial companies they invested in and, on the other hand, "banks aim at taking control of industrial companies and the latter of being the masters of the banks" (Santoro 1927: 44-45).

6. The bank-industry ties as "roots of all evil": 1931-1938

By 1931, when State intervention quelled the liquidity crisis of the two largest Italian banks and shaped the financial and industrial set-up that would then prevail for the following four decades, the main universal banks had undergone a transformation into quasi-holding companies.[23] During and immediately after the war, the bank-industry link, hitherto limited to long term lending and investment bank operations such as IPOs, M&A and advising, had become much tighter due to the acquisition by banks of permanent stakes in manufacturing and utility firms. At the same time industrialists sought, with varying degrees of success, to gain control of the banks.

During the brief, if buoyant, cyclical expansion of 1922-25, a stock market boom, partially fuelled by the banks themselves, allowed the latter to easily extend credit to industrial companies on the security of the firms' equity. When the stock market weakened in 1925, the banks stepped in

[23] Banca commerciale italiana, Credito Italiano and Banco di Roma.

in order to stem the falling value of equities. Unable to reverse the bear market on their own, the main banks resorted to the Bank of Italy which provided them with a billion lire facility for equity purchases on the market. Since this attempt too failed and most equity prices remained lower than they had been in 1925 for the rest of the decade, the banks had no alternative but to hold on to their equity portfolios. These portfolios were actually swollen in the following years as the intertwined fortunes of banks and industrial companies made it impossible for the former to refuse credit to the latter, again taking equity as collateral (Toniolo 1978). By the end of the decade, as it will dramatically appear in 1931, Banca Commerciale and Credito Italiano controlled over 50 per cent of the equity listed on the Milan stock exchange.

Overall, the 1920s were characterized by endemic bank instability. The group of the so called "catholic banks", undercapitalized and poorly managed, was partially bailed out by the state on the eve of the Concordat between Church and State.[24] Another significant, yet isolated, episode of bank hardship was that of the Banca Agricola Italiana, linked by mutual equity holdings to the industrial conglomerate Snia-Viscosa, producer of rayon, which was strongly affected by the drop in exports due to the revaluation of the lira in 1927, which preceded the declaration of convertibility. The Bank of Italy financed an orderly wind-down of the bank.

Like other countries, Italy too was strongly affected by the Great Depression. Industrial output contracted by 25.1 per cent between 1929 and 1932.[25] The real slump had an immediate impact on the banking sector. Confronted with deflation and falling demand, industrial firms could hardly rely on financing out of retained profits, while at the same time they saw the real value of their debts increase. They could thus only turn to banks for further loans, to attempt to defend the integrity of their previous loans and the value of their equity assets. The withdrawal of foreign deposits made this strategy ever more dependent on credit from the Bank of Italy. As a last resort, the two largest banks made an attempt at self-regulation by trying to solve the maturity mismatch between their short term liabilities (deposits) and their long-term assets (stakes and credits to the industry) through the creation of *ad hoc* holding companies to which they shed their industrial stakes.[26] This was a first timid (and voluntary) attempt to create a fire-wall between ordinary short-term lending and industrial long-term credit.[27]

When all the above-mentioned measures failed to solve the liquidity problem of the banks, these had no alternative but to turn to the Government which, on 31 December 1930, issued a secret decree mandating the Istituto di Liquidazioni (the heir of the Special Section: see Appendix 3) to offer loans and advances to a whole list of financial institutions, including Credito Italiano. This then led to a secret deal (*Convenzione*) of 20 February 1931 between the Bank of Italy, the Ministry of Finances and Credito Italiano. The latter accepted a restriction of its activities to "ordinary" (*i.e.* short term) commercial bank operations in exchange for a large liquidity injection. Credito Italiano's industrial stakes were passed on to a financial firm (Sfi) at balance sheet value. This deal is particularly relevant as it represents the first significant step towards the subsequent regulatory legislation, based on the separation between commercial and industrial banking. In fact, Credito Italiano was banned from underwriting shares in industrial or real estate firms and was forbidden speculative trading in securities and real estate.

[24] Guarino and Toniolo (1993).

[25] See Toniolo (1980) on the matter.

[26] Therefore, Banca commerciale increased its already existing financial firm Cisalpina's capital and changed its name to Sofindit, whilst Credito italiano created Banca nazionale di credito.

[27] The attempt failed in that the universal banks had control over their financial firms and could not interrupt credit flows to the industrial sector. The financial firms were, in fact, a clear example of captive finance with respect to the banks that created them (Battilossi 2000: 332).

Next, it was the reluctant Banca Commerciale's turn to unveil its financial difficulties. In July 1931, it turned for help to the Bank of Italy, after the withdrawal of deposits, mainly by Americans, preoccupied by the rampant banking crises in Central Europe. In October 1931, another deal (*Convenzione*) between Banca Commerciale and the Government provided for the acquisition of the totality of the bank's industrial stakes by the financial firm Sofindit, which obtained an *ad hoc* loan from the Istituto di Liquidazioni (*i.e.* ultimately from the central bank). From then on, Banca Commerciale too was allowed only commercial banking activities.

This huge, secret and complex bail-out operation spared Italy the consequences of a banking crisis similar to the Austrian and German ones (Toniolo 1995). The rescue and transformation of the main Italian banks was completed in 1933-34. In 1933, the holding companies were permanently separated from the parent banks; their assets were taken over by the newly-created Istituto di Ricostruzione Industriale (IRI), which also absorbed the Istituto di Liquidazioni. Originally designed as a temporary solution to Italy's industrial problems, it was supposed to restructure and recapitalise the main companies that came under its wing before being newly privatized. When privatization proved to be difficult, IRI became a permanent State holding of utility and manufacturing firms in 1937. To finance its activities, IRI issued bonds, guaranteed by the State.

In 1930-1931, the banks had been saved by turning their short term debt into *de facto* long term exposure toward the Bank of Italy. The matter was finally settled in March 1934 by three deals (*Convenzioni*) between the State and each of the main universal banks.[28] The idea was to free the three banks both from their excessive debt burden towards the Bank of Italy and from their excessive credit exposure towards firms. All the industrial assets of the banks were transferred to IRI, which also took over the control of the banks. The banks, on their side, were banned from acquiring stakes in industrial or commercial firms, directly or indirectly, and from financing firms that later purchased majority stakes in the banks themselves. A clear-cut separation between bank and industry, in both directions, was thus definitively attained in 1934.

The *Convenzioni* of 1934 were a significant milestone in the new re-regulation wave, in that they not only re-organized the banking and financial sector as it had emerged from the crisis, but also contained regulatory prescriptions which inspired the 1936 banking legislation and which were, under this new guise, extended to all deposit-taking institutions, in an explicit intent to prevent further crises. The banking crisis of 1931-1933 brought home to legislators the inadequacy of the 1926 law in guaranteeing financial stability, for two reasons: a) it turned out to be incomplete, not biting and incapable of handling new entities, such as the universal banks turned into holding companies; b) it was not sufficiently enforced, especially due to lax supervision of the major financial institutions, thus resulting in a partially ineffective regulation.[29] On the contrary, the crisis management and crisis resolution measures implemented in the 1930s were effective, due to two main features: a) the secrecy with which the rescues were conducted and the pressure set on depositors not to withdraw their savings, which fended off runs; b) a learning-by-doing process,

[28] Banco di Roma, which had already been re-financed in 1922, had been less affected by the crisis than the other two in the 1930s. However, already in 1930 it had been asking the Bank of Italy for help in its reorganization to catch up with the "big two". See the memorandum of Banco di Roma for the government and for the Bank of Italy of 19 December 1930 on the matter.

[29] Inspections, in fact, mainly targeted small local banks. The reluctance to interfere with the big banks was palpable. Between 1926 and 1932, 2,532 on-site examinations were conducted: 4 in national banks, 72 in interregional ones, 94 in regional banks, 270 in provincial ones and 2,092 in local ones. No inspection took place in the "Big Three". Another example of ineffectiveness of the 1926 law is represented by the number of excess *fidi* granted.

which proved that something had been learned from the previous banking crisis of the 1920s, if not in crisis prevention terms, at least in crisis management ones.

"Permanent" and "intelligent" were the two adjectives used by IRI to describe the needed regulation.[30] The rules and sanctions prescribed were to be more detailed than those of 1926: the idea was that of more regulation, not just of better regulation. So whilst the 1926 legislation was made up of only 19 articles[31], the final 1936 law included 105 articles.[32] If we consider the contribution of the numerous *Convenzioni*, then the regulatory reform took seven years (from 1931 to 1938) to be devised and refined.

The first novelty of the 1936 law was the huge discretionary power attributed to the regulating entity, which could dictate instructions and decide on many regulatory issues case-by-case. The flexibility of the law thus coincided with great power on the regulator's behalf. Another factor was its composition of two parts: one concerning prudential regulation and supervision (crisis prevention), the other concerning crisis management, not at all treated in the 1926 law.

The 1936 law incorporated the idea of one sole regulatory and supervisory authority, thus overcoming the 1926 division of regulatory powers. It hence created a supervisory authority (*Ispettorato per la difesa del risparmio e per l'esercizio del credito*), subordinated to a Committee of Ministers, led by the Prime Minister. Governmental authorities were thus empowered to regulate and to marshal the credit flows in the economy. "The State is not willing to pay for other bank rescues and the control of deposits cannot be left to anonymous shareholders, but must go to the State, which represents the people".[33] The 1930s regulation had a clear allocative aim, as well as a stability purpose: by controlling credit, the Government could direct investment flows. Head of the Inspectorate was, however, the Governor of the Bank of Italy and, *de facto*, the Inspectorate never operated separately from the bank of issue, which therefore built up its supervision experience and know-how. Separation was formally reversed in 1947 when supervisory responsibilities were again assigned directly to the Bank of Italy.[34]

The law also marked the final transition of the Bank of Italy from a bank of issue to a modern central bank, with three functions: control of money supply, last resort lending and bank supervision.[35] Its commercial banking activity was discontinued.

The new perimeter of regulation included two broad categories of institutions, distinguished according to the maturity of their liabilities (short-term vs medium/long-term). A different, and less stringent regulation, was designed for the second category of institutions, thus creating a segmented banking system, in which financial entities were clearly defined by their functions.

---

[30] IRI statement to the Government on 5 December, 1933 (reported in Cassese 1988).

[31] We here refer to the *regolamento* of 6 November 1926.

[32] What is commonly defined as the banking law of 1936 is however actually made up of the law 7 March 1938, with amendments made by the successive 7 April 1938 law. These two laws were the result of the conversion of two legislative decrees respectively of 1936 and of 1937.

[33] Translation from the IRI statement of 27 March 1935 (reported in Cassese 1988).

[34] In 1944 the Inspectorate was abolished and its faculties and powers were transferred to the Treasury. Banking supervision was, however, delegated *ex lege* to the Bank of Italy, even though the Treasury could organize its own inspections when deeming them necessary. In 1947, the ex-Inspectorate's functions were transferred directly to the Bank of Italy.

[35] Statement of the Confederazione Fascista dei Lavoratori delle Aziende del credito e dell'assicurazione, 1935 (reported in Cassese 1988).

The tight inter-relations between banks and industry were pinpointed as the main cause of the 1930s banking crisis, as the "root of all evil".[36] The 1936 legislation confirmed the separation between the two sectors, although in a rather subtle manner, allowing for some flexibility. It stated that the purchase by commercial banks of certain types of assets required the Inspectorate's authorization. The norms on assets were introduced to avoid excessive risk-taking and risk-concentration, but also to ensure the mentioned separation. In the following years, the Inspectorate denied authorization to almost any investment in the industrial sector by any regulated entity. Universal banks, whose extreme evolution had led to the financial innovation at the core of the 1930s crisis, were thus banned from the Italian financial system, as was the relapse into maturity mismatching. On this point, whilst distinguishing financial institutions according to the maturity of their liabilities, the 1936 legislation did not, however, explicitly regulate deposit and credit maturity. Except for the three ex-universal banks (bound by the *Convenzioni*), in theory, other short-term liability institutions could lend long term. However, in order to avoid maturity mismatches between assets and liabilities, which had played a major role in the 1930s bank crisis, *de facto* temporal specialization was imposed by the Inspectorate's instructions, which, in general, blocked long-term investments by institutions with short term funding. Finally, directorate interlocking between banks and firms was also forbidden.[37]

Oddly enough, the issue of bank ownership was not explicitly treated in the 1936 legislation. One reason was that by that time most banks were under public control, making the issue almost irrelevant. In fact, the share of private banks in the credit market dropped from 55.6 per cent of total credits in 1927 to only 17.0 per cent in 1936 (Ferri and Garofalo 1994: 138). In order to avoid the purchase of bank shares by non-financial firms, moral suasion was used by the regulating entity.

The limitation of competition is another predominant feature of the new regulation. Free competition was, in fact, considered as the major source of banking instability. This belief, already present in 1926, was taken to extreme levels in 1936. The Bank of Italy itself believed that cut-throat competition between banks, defined as "bank rivalry" (*rivalità bancaria*), had been responsible for high interest rates on bank deposits, in a struggle to attract depositors in a low-liquidity market.[38] The regulators were concerned that price competition in the market for deposits would induce banks to take eccessive risk in their investments or to engage in activities outside of their core banking business (with negative effects on the stability of the banking sector).[39] In 1933 a blanket bank cartel (*Cartello Bancario*) was created by the Government fixing mandatory interest rates on deposits. The 1936 legislation not only imposed price caps, killing interest rate competition, but denied banks other competitive tools such as free branching. Compulsory mergers and liquidations were part of further "structural regulation", aimed at defining and modelling the banking sector, leading to the emergence of "an administrated oligarchy" of banks (Costi 2007:

---

[36] Statement of IRI's board of directors dated 31 December 1936 (reported in Cassese 1988).

[37] The analogy with the US Glass-Steagall Act immediately comes to mind. However, the two acts had different rationales and focused on partially different matters. In the US, commercial banks were accused of having contributed to the stock market crash via questionable securities dealings and were thus banned from underwriting and dealing in securities for their own account while, on the other hand, investment banks were denied the possibility of collecting deposits of any kind. In Italy, the (under-developed) financial market was not an issue: given the nature of the crisis, the main priorities were a complete separation between bank and industry and maturity alignment.

[38] Bank of Italy note of 1932.

[39] See also IRI note of February 1937 on the "Proposal to allow ordinary credit institutions to extend medium-term credit" (reported in Cassese 1988), which states that the increase in bank profits, consequent to limits on branching and price regulation, limits the need for risk-taking and thus contributes to the stability of the system.

59). The emphasis set on other regulatory instruments, such as on capital adequacy, was thus markedly inferior to the one attributed to the anti-competition measures.

Finally, information disclosure, on-site examinations and enforcement were made more effective. As well as disclosure to the authorities, some form of disclosure to the public was also required. In all forms of communication and publicity, in fact, the intermediaries had to list the capital and reserves held, according to the latest balance sheet. The Bank of Italy, on its behalf, was still attempting to educate the public to become more "responsible": "Notwithstanding regulation, depositors must check the solidity of the banks they entrust their savings with."[40] However, transparency in the 1936 legislation was basically intended as transparency towards the supervisory authorities, rather than towards the market. In commenting the 1934 *Convenzioni*, the IRI management stated: "(…) another myth had fallen: the myth of bank secrecy, that secrecy that had cost the State millions and millions and which had allowed the bank directors to prevent the State from looking into banking issues",[41] confirming that transparency was intended toward the State. A shift in this attitude would have to wait another 40 years to be translated into a law.

7. Conclusions

To sum up, loosely regulated banks of issue engaged in overtrading and risky loans to the construction industry were perceived to be responsible of the early 1890s crisis. They were therefore merged, downsized in their commercial business and tightly regulated by the Banking Law of 1893, with the belief that financial stability would follow sound circulation and macroeconomic equilibrium. While the latter was remarkably attained in the years up to 1914, financial instability re-emerged in 1907, since part of the credit market previously served by the banks of issue was now conquered by pro-cyclical intermediaries such as the German-type universal banks. However, it took another crisis in the wake of the war for a new banking law to regulate commercial banks in 1926. This new regulatory wave did not *per se* induce the birth of new financial instruments; by then, in fact, the war and the stock market boom and bust of 1922-25 had largely transformed the universal banks into holding companies with extensive permanent stakes in the manufacturing and utilities industry. It was this new type of banks which became illiquid in 1929-30 threatening the stability of both the financial system and the real economy. The ensuing regulatory wave originated from the need to prevent the recurrence of episodes of bank illiquidity which spread to the real economy due to the close interlock between banks and industry. It then went beyond bank-industry relations in regulating the system and providing regulators with wide-ranging, largely discretional, powers.

The regulation that emerged in the wake of the crisis of the early 1930s was long-lasting. It contributed to nearly half a century of financial stability and held steady until 1993. Stability, however, was bought at a price. In guaranteeing financial stability, the bank law of 1936 sacrificed competition, thus leading to inefficiency, compounded by the extensive public ownership of the banks, with negative spillovers on consumers. The straight-jacket imposed on the banking system probably contributed to the underdevelopment of the Italian financial system, by stifling financial innovation.

[40] Translation from Bank of Italy Annual Report, 1931. This statement recalls a previous one made by the Governor Stringher to the general assembly of the Bank of Italy on 31 May 1928, in which he states that depositors must only turn to trustworthy institutions with a prudent and cautious management.

[41] Free translation from IRI statement of 27 March 1935 (reported in Cassese 1988).

Given the previous pattern of regulation leading to financial innovation, one obvious question is: why did it take so long, after the Second World War, for new unregulated financial instruments to develop in the Italian context? Answering this question goes beyond the limited aims of the present paper. A plausible hypothesis however is that post-war financial repression was made possible by three concurring causes: tight regulation, state ownership of the main financial intermediaries and limited international capital mobility. Moreover, the unprecedented high rate of growth of the real economy coupled with extraordinary macroeconomic stability hid the costs of "financial repression". It was only in the 1970s, marked by the collapse of the Bretton Woods system, the spreading of the eurodollar and the reappearance of episodes of bank failures, that the soundness of the 1936 arrangements began to be questioned. It took another decade for financial innovation and liberalization to emerge: this new phase led to bank privatizations and to a new banking law.

APPENDIX 1

THE MAIN BANKING REGULATORY REFORMS IN ITALY

Year	Regulating entities	Regulated entities	Main regulatory instruments*
Post-1861 (year of Italy's unification)	Commercial banks were subject to the Code of Commerce, similarly to industrial firms; there was, however, a fragmentary plethora of laws concerning specific financial institutions. Issuing banks were regulated according to their statutes.		
Law No. 1920 of 30 April **1874** (Minghetti Law)	Ministry of Finance	The six banks of issue	Limits on competition; limits on note issuance; restrictions on activities and asset holdings; information disclosure to Ministry of Finance
Law No. 449 of 10 August **1893**	Ministry of Agriculture, Industry and Commerce, together with the Treasury Ministry	The banks of issue (Bank of Italy, Banco di Napoli, Banco di Sicilia), reduced in number from six to three	Upper limit on issuance; list of permissible activities; reserve requirements; regulation on corporate governance; on-site examinations; disclosure to Parliament; suspension or annulment of issuing right in case of violation of law
Royal decree No. 442 of 12 October **1894**	Treasury Ministry	Unvaried	Unvaried
Law No. 804 of 31 December **1907**	Unvaried	The three banks of issue	Less stringent limits on circulation
Royal decree No. 812 of 6 May **1926**	Unification of note issuance, attributed solely to the Bank of Italy		
Royal decrees No. 1511 of 7 September **1926** and No. 1830 of 6 November **1926**	Ministry of Finance, Ministry of the National Economy and Bank of Italy, both in subordinated positions	Deposit-taking credit institutions, defined as *aziende di credito* (except for the two ex-issuing banks, Banco di Napoli and Banco di Sicilia, subject to a specific regulation)	Restrictions on entry and mergers; information disclosure to the Bank of Italy; capital and reserve requirements; restrictions on assets; fines and repeal of bank charters in case of violation of law
Royal decrees No. 375 of 12 March **1936** and No.1400 of 17 July 1937	Inspectorate (*Ispettorato per la difesa del risparmio e per l'esercizio del credito*), under a Committee of Ministers; head of the Inspectorate is the Governor of the Bank of Italy; *de facto*, the	Two obligatory categories according to the maturity (short term and long term) of their liabilities; the long-term liability institutions had a less stringent regulation	Restrictions on entry and on dimensions; form of banks; caps on interest rates; capital and liability requirements; regulation on corporate governance; obligation for directors to lodge deposits to be used in case of losses caused to the institutions; disclosure to authorities

	Inspectorate never operated separately from the Bank of Italy		and on-site examinations; some form of disclosure to public; replacement of directors with state officials and repeal of the bank charter in case of violation of the law
Legislative decree No. 691 of 17 July **1947**	Bank of Italy (the Inspectorate was eliminated in 1944 with a temporary transition of powers to the Treasury Ministry)	Unvaried	Unvaried
Law No. 287 of 10 October **1990**	Anti-trust authority over banks assigned to the Bank of Italy.		
Legislative decree No. 385 of 1 September **1993** (Banking Consolidated Act)	Bank of Italy, in harmony with the European Union	Banks, banking groups and financial intermediaries (defined by the law and which abandons the previous categorization)	Controls on entry and on dimensions; regulation on bond issuance and on subordinated debt; regulation on bank stakes; capital requirements; regulation on corporate governance; information disclosure to Bank of Italy and on-site examinations ; information disclosure to the public; enforcement procedures
Law No. 262 of 28 December **2005**	Bank of Italy, whose Governor's appointment is limited to six years (renewable), except for anti-trust matters handed over to Anti-trust Authority	Unvaried	Greater transparency of banking contracts; restrictions on ownership; regulation on corporate governance; greater information disclosure to public

* The categorization used refers to Giordano (2009).

APPENDIX 2

A FOCUS ON THE THREE REGULATORY LAWS (1893, 1926, 1936)

The contents of the three regulatory responses to the financial crises described are here briefly recalled, by breaking up each law into the different crisis-prevention tools it prescribed.

A. Law 10 August 1893, No. 449

1. Regulating entity

The regulatory and supervisory authority was the Ministry of Agriculture, Industry and Commerce, together with the Treasury Ministry.

2. Perimeter of regulation

Only the three banks of issue were regulated. The Bank of Italy, a joint stock company like its predecessors, was founded as the result of the merger of Banca Nazionale nel Regno d'Italia, Banca Nazionale Toscana and Banca Toscana di credito. It also absorbed the assets and liabilities of Banca Romana. The other two banks of issue, Banco di Napoli and Banco di Sicilia, continued operating.

3. Restrictions on undertakings

Each bank of issue was allotted an upper limit to its banknote issuance (800 million lire for the Bank of Italy, 242 million for Banco di Napoli and 55 million for Banco di Sicilia, for a total of 1.097 million, about 10 per cent of 1893 GNP), which could be exceeded only if the banknotes in excess were backed up by an equal amount of gold/silver in the bank's possession. The upper bound was not binding also in the case of ordinary and extraordinary advances to the Treasury. However, these advances were restricted (by a previous law of 1891) to 172 million for the three banks put together.

The range of activities permitted to banks of issue was listed: discounting of bills, Treasury bills, warrants not earlier than 4 months from expiration; advances on government bonds and other safe assets[42]; purchase or sale in currency of foreign drafts and cheques with an expiration date no later than three months. The banks of issue could also retain deposits on demand. However, if the deposits exceeded specified amounts, the bank involved had to reduce the circulation by three quarters of the exceeding amount. Any other operation was forbidden and if the banks were found to be engaging in forbidden activities, they were forced to pay a sanction which was three times the discount rate applied to the amount of the illegal pursuits.

4. Price regulation

The discount rate could not be changed without the assent of the Government and was the same for all banks.

5. Capital and liability requirements

The reserve in gold, silver and foreign bills was brought to a minimum of 40 per cent of the banks' paper circulation. The composition of such a reserve was also regulated (silver and foreign bills had to be a very minor part of the total). Other liabilities, such as promissory notes, also had to be counterbalanced by a 40 per cent reserve. Any circulation in excess was

[42] Bonds guaranteed by the State, certificates issued by land credit institutions (*istituti di credito fondiario*), bonds payable in gold, issued or guaranteed by foreign States, gold and silver currency and gold, raw and processed silk and silver, certificates of credit, certificates of deposit of spirits and cognac, not earlier than six months from expiration.

taxed at twice the discount rate. The paid-up capital of the banks ought to be no less than 25 per cent of paper circulation.

6. **Regulation on corporate governance**
The law prescribed by: a) collegiality of the executive board; b) approval of the director general and two vices by the government; c) prohibition of MPs to work, even without remuneration, in the banks of issue.

7. **Disclosure to authorities and on-site examinations**
Every two years an on-site examination had to be organized by the two supervisory authorities, after which the subsequent reports had to be presented in Parliament within three months from the inspection.

8. **Enforcement of the regulation**
Enforcement of the regulation was induced by the fact that any bank of issue which did not conform to the banking law or to its statute would see the suspension or annulment of its issuing right. Any employee of the bank who deliberately deceived the inspectors could be punished with imprisonment. An even longer prison sentence was set for inspectors who covered up for the banks of issue.

B. Royal decrees 7 September 1926, No. 1511 and 6 November 1926, No. 1830

1. **Regulating entity**
The regulators were the Ministry of Finance, the Ministry of the National Economy and the Bank of Italy, the last two of which were in a subordinated position. Specific categories of banks were under the direct supervision of the Ministry of the National Economy.

2. **Perimeter of regulation**
This included all banks and credit institutions which collected deposits, defined as *Aziende di credito*. Exempt from regulation were industrial and commercial firms which retained deposits, as a secondary activity, of their directors or employees. The 1926 law also referred to savings banks, *Monti di Pietà* and rural credit institutions.

3. **Restrictions on entry and dimensions**
The institutions could not start up their activity nor open up offices or branches without the two previously mentioned Ministries' authorization, once the bank of issue has been heard. Mergers too had to be authorized by the Ministry of Finance.

4. **Restrictions on asset holdings**
Loans extended by a bank to the same borrower could not exceed one fifth of the bank's equity. Derogations from the law could be authorized.

5. **Capital and liability requirements**

Minimum start-up capital requirements were stated; they varied according to the type of credit institutions. The regulated entities had to use at least one tenth of annual profits to build up an ordinary reserve, until this became 40 per cent of capital. Total equity could not be lower than one twentieth of the deposits collected. Any excess deposits had to be invested in government bonds or be deposited at the Bank of Italy.

6. **Disclosure to authorities and on-site examinations**
Annual balance sheets were to be sent to the Bank of Italy, as well as two-monthly financial situations. Occasionally on-site inspections were organised and banks were asked to present all documents requested

7. **Enforcement of the regulation**
In case of violation of the norms, pecuniary sanctions were applied. In the case of severe violations, bank charters could be revoked.

C. Royal decrees of 12 March 1936, No. 375 and 17 July 1937, No. 1400

1. **Regulating entity**
The *Ispettorato per la difesa del risparmio e per l'esercizio del credito* was created as the regulatory and supervisory authority. The Inspectorate was subordinated to a Committee of Ministers, led by the Prime Minister (and since 1947 by the Minister of Treasury). The Prime Minister could also adopt urgent measures by decree. Head of the Inspectorate was the Governor of the Bank of Italy. The problem of the Bank of Italy's ownership was also sorted: shareholders of the bank of issue could only be savings banks, public institutions and banks of national interest[43], social security institutions and insurance companies and it was hence defined a public institution (*Istituto di diritto pubblico*). The Bank of Italy was also vetoed direct discounting operations to firms and private individuals.[44]

2. **Perimeter of regulation**
The new perimeter of regulation included two broad categories of institutions, distinguished according to the maturity of their liabilities. The short-term liability institutions included: a) public institutions (*istituti di credito di diritto pubblico*)[45] and banks of national interest (*banche di interesse nazionale*), that is joint-stock companies of national tenure, recognized as such by royal decree, with branches in at least 30 Italian provinces[46]; b) banks and institutions which held demand or short-term deposits; c) branches in Italy of foreign banks; d) savings banks (*Casse di risparmio*) and e) other minor banks.[47] A different, and less stringent regulation, was designed for the institutions which collected medium or long-term funds,[48] thus creating a dichotomy in bank regulation. With respect to the second category of institutions, the 1936 law mainly referred to the specific legislation previously introduced for each type.[49]

3. **Restrictions on entry and dimensions**
Controls on entry and restrictions on branching and mergers by the regulatory authority, introduced by the previous legislation, were confirmed. All possible types of branches were

[43] Banks of national interest are defined in point 2.

[44] Until 16 March 1939, the Bank of Italy could still exceptionally be authorized to discount private agents' notes in order to satisfy urgent and exceptional needs of certain sectors of production.

[45] These were: Banco di Napoli, Banco di Sicilia, Banca Nazionale del Lavoro and Istituto di San Paolo a Torino, plus the newly created Monte dei Paschi di Siena.

[46] These were defined in the first decree as *banche di diritto pubblico,* causing great lexical confusion with the former banks, and included the three ex-universal banks.

[47] These included State pawnshops (*Monti di credito su pegno*) and rural and artisan banks (*Casse rurali e artigianali*).

[48] The definition of short, medium and long-term was left to the credit authorities. Only in a deliberation of 28 January 1963, the CICR stated that short-term meant less than 18 months, medium-term was between 18 and 60 months and long-term greater than 60 months.

[49] Land credit, building credit, agricultural credit, naval credit, Imi, Icipu, Crediop, etc.

enumerated, in order to subject them all to authorization. The Inspectorate could also order the closure of banks and branches.

4. **Regulation on ownership and control**
The form of the private regulated entities had to be that of public limited companies (*società per azioni*) or limited partnerships with share capital (*società in accomandita per azioni*). Their shares had to be registered. The issue of bank ownership was not explicitly treated in the 1936 legislation.

5. **Restrictions on undertakings and asset holdings**
Certain types of assets (e.g. long-term credits, industrial stakes) required the Inspectorate's authorization to be purchased. The regulatory authority also decided on the proportions of different investments that intermediaries could undertake, considering liquidity issues and the different branches of economic activity the investments referred to. Finally, the Inspectorate could also decide upon the procedures to eliminate or reduce any residual long-term investment in the short-term liability banks' portfolios.
The Inspectorate could also dictate instructions on the prudential measures to be undertaken to avoid excessive risk-taking due to an accumulation of *fidi*, on the maximum limit of allowable *fidi*[50], on the procedures to reduce any excess, on the information borrowers had to reveal to be able to demand credit.

6. **Price regulation**
Regulated entities had to comply to instructions on interest rates both on loans and on deposits and on the costs of other banking services, dictated by the Inspectorate.

7. **Capital and liability requirements**
The Inspectorate decided on the minimum amount of capital necessary to open a new financial institution, the minimum percentage of profits to be allocated to reserves, the ratio between equity and liabilities.

8. **Regulation on compensations and insurance schemes**
The 1936 legislation did not regulate directors' remunerations. Instead, insurance schemes were contemplated. Directors of the banks and of their branches had to contribute up to 3 per cent of their compensations to a special deposit which could be liquidated only after one year from the termination of the directors' working contract. This deposit could be employed by the bank in case of losses incurred, due to activities undertaken which exceeded their assignments. This provision was later abolished (Associazione Bancaria Italiana 1972: 325).

9. **Regulation on corporate governance**
State officials were forbidden to work for the regulated entities. On the other hand, banks' directors could not cover similar roles in other firms, if not otherwise authorized. Directors and auditors could not freely contract obligations nor sign purchase or sale contracts with the intermediaries they managed or oversaw. The Inspectorate could also order the convocation of shareholders' and of Board of Directors' meetings or convene the meetings directly if the competent authorities did not act promptly.
With respect to the afore-mentioned *fidi,* financial institutions had to keep a book of credits, in which all the authorized lines of credit were to be written down. The names of the officials that had offered the lines of credit were also registered. Incentives to avoid excessive risk-taking by banks were also accompanied by norms aimed at attaining correct information disclosure by

[50] The fixed proportion of one fifth introduced by the 1926 law was, thus, abandoned.

the borrowers, also concerning *fidi* obtained by other banks. In fact, any erroneous or misleading information given was to be punished with a fine or by imprisonment.[51]

10. Disclosure to authorities and on-site examinations

The regulated entities had to periodically transmit their balance sheets and any other information required to the Inspectorate. The contents and the form of the balance sheets were decided by the Inspectorate, as was their means of publication. Furthermore, the minutes of the shareholders' meetings had to be submitted to the Inspectorate, together with any proposals, assessments or objections made by the auditors.

Periodic and unannounced on-site examinations were also undertaken by officials who could ask for any type of document or act deemed useful.

11. Disclosure to the public

As well as disclosure to the authorities, some form of disclosure to the public was also required. In all forms of communication and publicity, in fact, the intermediaries had to list the capital and reserves held, according to the latest balance sheet.

12. Enforcement of the regulation

To enforce the regulation, the Inspectorate could turn to the Prime Minister, who could break up the Board of Directors in the case of serious irregularities or violations of the law. Situations of extreme urgency could lead to bank directors being replaced by an official of the Inspectorate, but for no more than 2 months. The liquidation procedures were also regulated. Finally, in the case of extreme irregularities or law violations, the bank authorization could be revoked.

[51] In 1962 the Bank of Italy created the *Centrale dei rischi bancari*, a centralized centre of risk monitoring, following the example of other countries, to better oversee the concession of lines of credit.

APPENDIX 3

INSTITUTIONS INVOLVED IN CRISIS MANAGEMENT AND RESOLUTION IN ITALY

Prudential regulation is a tool used for crisis prevention, in order to make the financial system robust to crises. However, in the case of the actual occurrence of a financial crisis, crisis management and resolution becomes the relevant issue. In this appendix, we have recalled the *ad hoc* institutions that were founded in Italy in the period under analysis in order to resolve financial crises.

Consorzio per Sovvenzioni su Valori Industriali. Founded in 1914, it became active in 1915, just before Italy's entrance in the First World War. It was designed as a temporary institution in order to avoid fire sales of troubled industrial firms' assets. The Consorzio, in fact, extended credit to the industrial sector, accepting the firms' shares as collateral, an activity which was forbidden by law to the Bank of Italy. The Consorzio was financed by the banks of issue and the Bank of Italy guided its management. The Consorzio's "Special Section" was created in 1922 to guarantee a safety net for banks: it aided the liquidation of the Banca Italiana di Sconto and it was used to rescue the Banco di Roma.

Istituto di Liquidazioni. It was created in November 1926 to wind down the Special Section's undertakings, when the latter was closed down. In particular, it was to sell the previous institution's assets on the market, in order to deflate the economy, in view of the return to the gold standard. However, due to the outbreak of the new crisis starting in 1930, it was involved in new rescue operations. The Istituto was financed, in part, by the Bank of Italy, in part by the State and was guided by a committee nominated by the Ministry of Finance.

Istituto per la Ricostruzione Industriale (IRI). It was created with the legislative decree 23 January 1933, No. 5, as a temporary institution to rescue the banks and firms by them controlled. It then became a State-owned holding company. In particular, it was made up of two sections: *Sezione smobilizzi*, which substituted the previous Istituto delle Liquidazioni, and *Sezione finanziamenti* for the financing of the industrial sector, with up to 20-year loans, since the universal banks had been abolished. The latter section was soon closed down and its functions were transferred to Istituto Mobiliare Italiano (IMI), an institution created in 1931, which made medium-term (maximum ten-year) loans to industrial firms, and financed itself by issuing securities, not being allowed to collect deposits. The *Sezione Smobilizzi* acquired all the industrial stakes in the universal banks' portfolio and the banks themselves. Its funding was not provided via the issuance of money by the Bank of Italy, but it was financed by the market and by the State. In 1933 IRI controlled:[52]

- 100 per cent of the iron and steel war industry, of the artillery industry and of the coal-extraction industry
- 90 per cent of the naval industry
- 80 per cent of naval companies and of the locomotive industry
- 40 per cent of the iron and steel industry
- 30 per cent of the electricity industry
- 20 per cent of the rayon industry
- 13 per cent of the cotton industry

[52] See Toniolo (1980: 250).

It also controlled the mechanical and armaments' industries, telephone services and the three biggest banks. In all, IRI owned over 40 per cent of the Italian shareholders' capital, hence resulting the greatest holding company of the country. In 1937, the institution became permanent.

REFERENCES

Associazione Bancaria Italiana (1972), *La legge bancaria e le altre norme essenziali in materia creditizia*, Bancaria: Rome.

Banca d'Italia, *Annual Report*, various years, Banca d'Italia: Rome.

————— (1986), *Donato Menichella. Scritti e discorsi scelti, 1933-1966*, Banca d'Italia: Rome

Barucci, P. and Pavarin, A. (2008), "Gli economisti italiani e la banca", in *Storia d'Italia, Annali 23. La Banca*, Einaudi: Turin.

Battilossi, S. (2000), "Banche miste, gruppi di imprese e società finanziarie (1914-1933)", in Conti, G. and La Francesca, S. (eds.), *Banche e reti di banche nell'Italia postunitaria. Vol I. Persistenze e cambiamenti nel sistema finanziario e creditizio*, Il Mulino: Bologna.

Bonelli, F. (1971), *La Crisi del 1907*, Fondazione Einaudi: Turin.

————— (1991), *La Banca d'Italia dal 1894 al 1913*, Editori Laterza: Rome-Bari.

Bonelli, F. and Cerrito, E. (2003), "Momenti della formazione di una banca centrale in Italia. 1894-1913", in Cotula, F., De Cecco, M. and Toniolo, G., *La Banca d'Italia. Sintesi della ricerca storica. 1893-1960*, Editori Laterza: Rome-Bari.

Borio, C. (2004), "The Search for the Elusive Twin Goals of Monetary and Financial Stability", BIS Working Paper, August.

Borio, C. and Toniolo, G. (2006), "One hundred and thirty years of central bank cooperation: a BIS perspective", BIS Working paper, No. 197.

Carriero, G., Ciocca, P. and Marcucci, M. (2003), "Diritto e risultanze dell'economia nell'Italia unita", in Ciocca, P. and Toniolo, G., *Storia Economica d'Italia. 3. Industrie, mercati, istituzioni. 2. I vincoli e le opportunità*, Editori Laterza: Rome-Bari.

Caranza, C., Frasca, F. and Toniolo, G. (1986), "Cinquant'anni di legge bancaria. Alcune considerazioni economiche", Temi di discussione del Servizio Studi della Banca d'Italia, No. 70.

Cardarelli, S. (2006), "Il tramonto del free banking in Italia. I tentativi di riforma bancaria di Majorana Calatabiano (1877-1879)", Quaderni dell'Ufficio Ricerche Storiche, Banca d'Italia, December, No. 14.

Cassese, S. (1974), "La preparazione della riforma bancaria del 1936 in Italia", *Storia contemporanea*, V (1), pp. 3-46.

————— (1988), *Come è nata la legge bancaria del 1936*, BNL.

Ciocca, P. and Ulizzi, A. (1990), "I tassi di cambio nominali e "reali" dell'Italia dall'Unità Nazionale al sistema monetario europeo (1861-1979)" in *Ricerche per la storia della Banca d'Italia*, Vol.1, Editori Laterza: Rome-Bari.

Costi, R. (2007), *L'ordinamento bancario*, Il Mulino: Bologna.

Cotula, F. and Spaventa, L.(1993), *La politica monetaria tra le due guerre*, Editori Laterza: Rome-Bari.

De Cecco, M. (1990), *L'Italia e il sistema finanziario internazionale 1861-1914*, Editori Laterza: Rome-Bari.

————— (2003), "L'Italia e il sistema finanziario internazionale 1860-1936" in *La Banca d'Italia. Sintesi della ricerca storica. 1893-1960*, Editori Laterza: Rome-Bari.

Falchero, A.M. (1990), *La Banca Italiana di Sconto (1914-1921). Sette anni di guerra*, Angeli Editori: Milan.

Feinstein H., Temin P. and Toniolo G. (2008), *The World Economy Between the Wars*, Oxford University Press: Oxford-New York.

Fenoaltea, S. (2006), *L'economia italiana dall'unità alla Grande Guerra*, Editori Laterza: Rome-Bari.

Ferri, G. and Garofalo, P. (1994), "La crisi finanziaria nella Grande Depressione in Italia", in *Ricerche per la storia della Banca d'Italia*, Vol. V, Editori Laterza: Rome-Bari.

Garrone, N. (1930), "Il controllo delle banche di depositi", *Giornale degli economisti*, February, pp. 105-126.

Giordano, C. (2009), "Prudential Regulation and Supervision Instruments and Aims: A General Framework", in this volume.

Goldsmith, R.W. and Zecchini, S. (1999), "The National Balance Sheet of Italy (1861-1973)", *Rivista di Storia Economica*, 1, pp. 3-19.

Guarino, G. and Toniolo, G. (1993), La Banca d'Italia e il Sistema Bancario 1919-1936, Editori Laterza: Rome-Bari.

Holtfrerich, C-L. (1986), *The German Inflation 1914-1923*, de Gruyter: Berlin.

Issing, O. (2003), "Monetary and Financial Stability: Is There a Trade-Off?", Conference on "Monetary Stability, Financial Stability and the Business Cycle", 28-29 March, BIS, Basle.

Kane, E.J. (1986), "Technology and the Regulation of Financial Markets", in Saunders, A. and White, L.J. (eds.), *Technology and the Regulation of Financial Markets: Securities, Futures and Banking*, Salomon Brothers Center Series, Lexington Books: Lexington, MA.

Kindleberger, C.P. (1989), *Manias, Panics and Crashes. A History of Financial Crises*, Second Edition, Basic Books: New York.

Messedaglia, A. 1876 (1921), "Il credito", in Messedaglia, A., *Opere scelte di economia e altri scritti*, Volume II: Verona.

Miller, M.H. (1986), "Financial Innovation: The Last Twenty Years and the Next", *The Journal of Financial and Quantitative Analysis*, 21 (4), pp. 459-471.

Mori, G. (1977), "Nuovi documenti sulle origini dello Stato industriale in Italia. Di un episodio ignorato (e forse non irrilevante) nello smobilizzo pubblico delle banche miste (1930-1931)", in Mori, G. (ed.), *Il capitalismo industriale in Italia*, Editori Riuniti: Rome.

Negri, G. (1989), *Giolitti e la nascita della Banca d'Italia nel 1893*, Editori Laterza, Rome-Bari.

Onado, M. (2003), "La lunga rincorsa: la costruzione del sistema finanziario", in Ciocca, P. and Toniolo, G., *Storia Economica d'Italia. 3. Industrie, mercati, istituzioni. 2. I vincoli e le opportunità*, Editori Laterza: Rome-Bari.

Pantaleoni, M. 1895 (1998), *La caduta della Società generale di credito mobiliare italiano*, Utet: Turin.

Pareto, V. (1893a), Untitled column, *Giornale degli Economisti*, April, pp. 313-319.

————— (1893b), Untitled column, *Giornale degli Economisti*, May, pp. 398-404.

Polsi, A. (2001), *Stato e Banca Centrale in Italia. Il governo della moneta e del sistema bancario dall'Ottocento a oggi*, Editori Laterza: Rome-Bari.

Santoro, R. (1927), *La difesa del risparmio*, Società editrice Dante Alighieri: Milan-Rome-Naples.

Sraffa, P. (1922), "The Bank Crisis in Italy", *The Economic Journal*, 32 (126), pp.178-197.

Toniolo, G. (1978), *L'economia italiana (1861-1940)*, Editori Laterza: Rome-Bari.

————— (1980), *L'economia dell'Italia fascista*, Editori Laterza: Rome-Bari.

————— (1989), *La Banca d'Italia e l'economia di guerra, 1914-1919*, Laterza: Rome-Bari.

————— (1990), *An Economic History of Liberal Italy, 1850-1918*, Routledge: London.

————— (1995), "Italian banking, 1919 – 1939", in Feinstein, C. (ed.), *Banking, Currency and Finance in Europe between the Wars*, Clarendon Press: Oxford, pp. 296 - 314.

————— (2003), "La Banca d'Italia e il sistema bancario: 1919-1936", in Cotula, F., De Cecco, M. and Toniolo, G., *La Banca d'Italia. Sintesi della ricerca storica 1893-1960*, Editori Laterza: Rome-Bari.

Toniolo, G., Conte, L. and Vecchi, G. (2003) "Monetary Union, institutions and financial market integration: Italy 1862 – 1905", *Explorations in Economic History*, 40(4), pp. 443-461.

Vivante, C. (1895), *Relazione sulla riforma delle società commerciali*, F.lli Bocca: Turin.

FINANCIAL REGULATION IN FINLAND FROM THE 1950S UNTIL THE 1980S STABILITY AT WHAT PRICE?

Juha Tarkka[*]

This paper provides an account of the origins and structure of the Finnish system of financial regulations which was prevalent in the post-war decades until the deregulation of the 1980s. Despite considerable macroeconomic volatility, the banking sector in Finland was remarkably stable. There were no significant bank failures over this period of more than 40 years, and credit losses were of no real importance either. It is conjectured that the stability of banks in the period was a product of the suppression of competition in the financial sector, instead of supervision or prudential regulation in the "modern" sense. Lending rates and capital movements were controlled. Cartel agreements between banks were actively supported by the authorities, e.g. by making the tax exemption of bank deposits conditional on the terms agreed by the banks' deposit rate cartel. The Finnish prudential regulations gradually weakened in the course of the decades of regulation. The first capital adequacy regulations had been included in the banking law of 1933, where it had been stipulated that in commercial banks, capital and reserves should measure up to 10 per cent of the bank's liabilities. In 1946, this was reduced to 6.7 per cent, and in 1969, to 4 per cent. Also in 1969, universal banking rights were granted to savings and cooperative banks, from which only 2 per cent of capital and reserves were required (also in relation to their liabilities). The banking practices, low capital ratios and high costs of banks, which became the norm in the decades of regulation, made the banks very vulnerable in the competitive and deregulated environment which they had to face after the deregulation that took place in the mid-1980s. It is concluded that the incompatibility of prudential regulation with the more competitive environment of the late 1980 was a reason for the fragility of the banks which was revealed in the Finnish banking crisis of the early 1990s.
JEL: N24, G28.

1. Introduction

This paper provides an account of the origins and structure of the Finnish system of financial regulations which was prevalent in the post-war decades until the deregulation of the 1980s. One of the interesting features of this period was that despite considerable macroeconomic volatility, the banking sector in Finland was remarkably stable. There were no significant bank failures over this period of more than 40 years, and credit losses were of no real importance either.

However, the review of banking regulation in place at the time suggests that the stability which was achieved was probably not due to efficient prudential regulation. In particular, it is apparent that banks' risk taking was not much constrained and that capital requirements in particular were quite lax. If anything, prudential regulation and banking supervision in this period of financial stability was weaker than later, in the early 1990s, when a severe banking crisis developed and erupted in Finland.

On the other hand, apart from the weakness of prudential rules, the banking sector and the financial markets were subject to very extensive regulation of conduct. Much of domestic financial

[*] Bank of Finland, Helsinki. Email: juha.tarkka@bof.fi

intermediation took place at administratively fixed prices, because of interest rate controls and discrimination of securities markets in taxation. Foreign capital movements were also under rather comprehensive controls until the beginning of the 1980s. Moreover, as a large share of capital formation occurred as forced saving in the government budget and in the mandatory pensions system, the roles of competition and price mechanism in the financial system were limited.

It is conjectured in this paper that in the four post-war decades, it was the suppression of competition in banking which caused the stability of the sector, instead of supervision or prudential regulation in the “modern” sense. Not only was competition not promoted, but cartel agreements between banks were actively supported by the government and by the Bank of Finland, e.g. by making the tax exemption of bank deposits conditional on the terms agreed by the banks’ deposit rate cartel.

We show how the system of financial controls emerged as a result of the political difficulty of using standard monetary policy instruments to control inflationary pressures in the 1950s (and later), and how the system of regulated financial intermediation fitted in the general growth policy framework which prevailed in Finland from the early 1950s until the late 1970s, and how the attempt to reform the prudential rules at the time of general deregulation of financial markets in the 1980s ultimately failed. The analysis emphasizes interdependence of prudential regulation, conduct regulation (including competition policy) and the general economic policy regime of the country.

2. The Finnish financial system in 1930-1990

In order to understand the structure and development of financial regulation in Finland, it is necessary to begin with a brief overview of the financial system which was the object of regulation. The institutional structure of the Finnish financial system was remarkably stable from the years of the Great Depression until the severe Nordic banking crisis of the early 1990s. The financial sector was very bank-centred, with only a minor role (quantitatively, at least) left to the securities market. The domestic capital market consisted mainly of the stock exchange, with relatively small capitalization and turnover, and a small market for government bonds, which was mainly targeted to the household sector. Corporate bond issues were rare exceptions. An organized short-term money market did not really exist until the mid-1980’s (see e.g. Financial Markets in Finland, 1972 and 1986).

At the centre of the banking system the Bank of Finland, the central bank, was (and still is) subordinated to the parliament of the country. This model was adopted in 1867 following the Swedish example. The parliament appoints a supervisory council, which has almost exclusively consisted of senior members of parliament, representing all major parties – irrespective of the composition of government. Before Finland joined the EU, the parliamentary supervisory council had some important policy powers, including the setting of the interest rates applied by the Bank of Finland. Otherwise, the day-to-day management of the bank is the responsibility of the full-time board of management, chaired by the governor of the bank. In the period of interest for this study, an important part of the policy prerogatives of the board of management included most decisions pertaining to foreign exchange control and the influential guidelines and recommendations which the central bank issued to the commercial banks. The President of the Republic appoints the board members, and could, before Finland joined the EMU, also relieved them of their duties without notice “when public interest so requires” (Kuusterä 1994: 161-167).

The private banking sector included the commercial banks, two of which, Yhdyspankki (The Union Bank) and Kansallis-Osake-Pankki, dominated this segment. The commercial banks were, however, challenged especially in the household and SME markets by two strong networks of mutual, local banking groups: the savings banks network and the cooperative bank network. Both networks consisted of a large number of local institutions which cooperated extensively in marketing, technology, and the like. In the period from 1950s until the mid-1980s, there were more than 250 savings banks and more than 370 cooperative banks. Both mutual banking groups had a central institution (Skopbank for the savings banks, and OKO for the cooperative banks), which were organized as commercial banks. These central institutions acted as clearing centres for their respective networks, and also handled the financial relations of the savings bank and cooperative bank networks with the Bank of Finland, the central bank of the country.

In addition to the private banks, there was also a state-owned post office bank (Postisäästöpankki, from 1970 Postipankki), which was, however, transformed in 1988 into a commercial bank. Other financial institutions besides banks, such as mortgage institutions and insurance companies had only a relatively small share in financial intermediation. However, in 1961, a mandatory and partly funded occupational pensions system was established, the operation of which was delegated to a number of specialized private pension institutions (Kopra 1981). Gradually, these occupational pension institutions cumulated a considerable amount of funds, and obtained a significant market share as lenders and investors in the Finnish financial market.

The market shares of different categories of credit institutions in lending to the non-financial private sector during the decades of regulation in Finland are presented in the table 1.

Table 1
Sources of Credit to the Nonfinancial Private Sector, % of total

	1959	**1969**	**1979**
Commercial Banks	26	29	25
Savings banks	16	15	11
Cooperative banks	10	11	9
Post Office Bank	4	4	6
Mortgage Banks	4	5	4
Insurance Companies	8	12	16
Bank of Finland	2	1	2
The State	30	17	16
Others	0	6	11
Total	**100**	**100**	**100**

Source: Statistics Finland, Outstanding Credit (Luottokantatilasto).
Insurance companies include the occupational pension funds. National Pension fund is included in the State.

3. The development of prudential regulation in Finland

Prudential regulation of financial institutions, in the sense of norms whose main purpose is to ensure the stability of financial institutions, was quite weak in Finland until the Basel accord and the prospect of joining the EU forced a radical tightening of the rules – just before the banking crisis which erupted in 1991. Looking at the development of prudential regulation from the 1930s until the banking crisis, one cannot escape the impression that prudential rules were not felt to be very important for the stability of the system, and when banking interests or the growth objectives of economic policy so required, prudential considerations increasingly had to yield.

The first capital adequacy regulations concerning Finnish commercial banks were given in the commercial bank law of 1933, which stipulated that in commercial banks, capital and reserves should measure up to 10 per cent of the bank's liabilities. The bank law of 1933 was occasioned by the worldwide financial difficulties of the early 1930s, even though there was no general banking crisis in Finland during the Great Depression: only two very small banks failed, both in 1931, so that depositors lost some of their money, and the combined market share of these failed banks was less than 0.5 per cent of the total market.[1] All other difficulties in the banking sector were handled by mergers without losses to depositors. Compared to many other countries, the banking problems were very moderate: the largest bank to get into difficulty in the crisis year of 1931 and which was forced to merge with a larger commercial bank had a market share of only about 5 per cent.[2]

In the decades following World War II, the capital adequacy regulations were gradually relaxed. The first major step to this direction was taken in 1946, when the required capital/liabilities ratio of commercial banks was reduced to 6.7 per cent (temporary exceptions to the previous rule of 10 per cent had already been granted during the war). The change was made mostly in order to accommodate the erosion of the capital base of banks because of the rapid inflation of that time. In the 1950s and 1960s, the capital regulations of commercial banks were relaxed even further by giving the Banking Inspectorate the power to temporarily reduce the capital requirement of individual banks (down to 5 per cent of total liabilities).

Turning to the mutually owned institutions, which were very important in the Finnish market, the solvency of the cooperative and savings banks was not effectively regulated before 1970. The law on savings banks, which had been enacted in 1931, required that the savings banks had to maintain own funds corresponding to at least 10 per cent of exceptionally risky lending, meaning bills of exchange or loans against personal guarantee. However, no capital requirements at all had been set on saving banks' other assets or lending, such as housing loans, etc. These lending categories without any capital charge whatsoever constituted an overwhelming share of savings banks' assets. In practice, the reported amount of own funds (capital and reserves) of the savings banks varied around 2 - 3 per cent of their balance sheet. This almost non-existent capital regulation of the savings banks before 1970 was counterbalanced by some restrictions on their investment policy, however. In particular, investment in industrial or other shares was forbidden, as was all investment in real estate with the exception of bank buildings (Kuusterä 1995).

Cooperative banks, for their part, originally had no definite minimum capital requirement at all. In theory at least, there was a substitute to own capital, however: the law on cooperative societies stipulated that cooperative banks could only lend to their members, thus defining cooperative banks as associations of borrowers. This is significant, because until 1955, the ministry of finance required that the articles of incorporation of each cooperative bank should stipulate unlimited liability of the members. As a result, the borrowers were in effect ultimately jointly responsible for any losses incurred. This stringent rule was relaxed somewhat in 1955, when the ministry of finance started to approve articles of incorporation for cooperative banks which capped

[1] The two small banks which went bankrupt were Suomen Vienti-Pankki and Etelä-Pohjanmaan Pankki. In these bankruptcies, depositors lost 65,9 % and 23,8%, respectively.

[2] The shareholders of this bank (Maakuntain Pankki) lost 87,9% of their investment in the merger.

the joint obligation of members to pay additional capital up to 20 per cent of the total liabilities of the bank. Under such regulatory regime, the cooperative banks reported capital/asset ratios of about 1-2 per cent on average in the 1950s and the 1960s (OKL 1979).

The unequal conditions which these laws created for different types of credit institutions were subject to a lot of criticism, and in 1961 a government committee was set up to review and unify the banking laws. The committee work and the subsequent legislative process took a very long time, and new laws for all banking groups were promulgated only in 1969 and came into force in 1970. The new laws gave all banks practically equal rights to do universal banking business. In particular, the rights of all banks to own shares in industrial or commercial companies was set to 10 per cent of their own capital. This kind of investment had previously been forbidden to the savings banks. Another new extension was that savings banks were given the right to guarantee third parties' obligations (Puntila 1970).

The bank law committee rationalized the extension of universal banking to savings and cooperative banks by appealing to the need to improve prerequisites for economic development (Pankkilakikomitea 1967: 9).

By investing funds in shares of new or expanding enterprises, financial institutions can take an active part in developing productive activities, for which widening markets and the restructuring of industries pose increasing challenges. At the same time, financial institutions can strengthen the capital structure of such enterprises, vital for economic growth, which in our country has been too much debt-based, because of the shortage of risk capital.

On these grounds, universal banking rights were granted to savings and cooperative banks. The capital requirements for these mutually owned institutions were now for the first time precisely defined, but set at quite low levels, at 2 per cent (in relation to total liabilities). The committee had proposed 3 per cent, but intensive lobbying by the cooperative and savings banks resulted in the lower requirement. To make the capital regulations even lighter, the banks were allowed to deduct from the liability base of the capital charges all claims on the central and local government, as well as claims on other banks. On the other hand, bank guarantees were now added to the liability base for 50 per cent of their value. It was also enacted that the Banking Inspectorate could, "taking into account the solvency of the bank", reduce the capital requirement temporarily, but not below one per cent of total liabilities.

Although the capital requirements of the savings and cooperative banks were set at such low levels in the new law, the banks were allowed ten years' transition period to adapt to the new regulations. Later, in 1978, the transition period was further extended to last until 1983.

While the bank law reform of 1969 gave mutual institutions an indisputable legal license to engage in universal banking, the commercial banks also got something, namely lighter capital requirements. The minimum capital requirement of commercial banks was reduced to 4 per cent of total liabilities (from the previous 6.7 per cent). The method of calculation of the capital charges was similar to the savings and cooperative banks, so that interbank borrowing, in particular, was not subject to capital charges. Moreover, the Bank Inspectorate could, upon application and taking into account the solvency of the commercial bank, allow a temporary reduction of the capital/liabilities ratio, but not below three per cent.

In retrospect at least, the bank law reform of 1969 must be seen as a dangerous weakening of capital regulations of commercial banks, and perpetuated the extremely weak capital ratios of the mutual institutions while giving official approval to increasing their risk-taking. This constituted no doubt an extreme instance of regulatory capture, even though some of the easing of capital rules was made only in the legislative process, over and above the recommendations made by the committee which had prepared the draft law.

On the other hand, the case for stiffer capital requirements would have been hard to justify convincingly in the environment of the time, where credit losses were insignificantly small and no bank failures had occurred during the entire post-war period. The banking lobby could cite these facts in support of its demand for easier capital requirements. Moreover, the reasons mentioned by the committee, *i.e.* the need to accelerate economic development, and the shortage of risk capital, were seen as real and were not mere excuses. So, the high priority of growth helped override conservative banking principles when the law of 1969 was made.

The laxity of solvency rules gives rise to the question why the banking system was, nevertheless, very stable in the first four post-war decades. The reason cannot be found in general macroeconomic stability, since the volatility of the growth rate in Finland was quite high. The most likely reason for the (apparent) stability is in the lack of competition between banks, an anticompetitive system which was not only tolerated but actually upheld by the authorities. We now turn to an analysis of that system.

4. The system of financial controls emerges

In the decades following the Second World War, and until the mid-1980s, the Finnish financial system was characterized by extensive public intervention. The role of public sector saving and lending was significant. In the private sector, most of financial intermediation took place in markets where regulation prevented the price mechanism from playing any significant role. Free segments of the financial markets, like the securities market, remained almost insignificantly small. The term "simple financial markets" was coined by Finnish economists to distinguish the Finnish conditions from "developed" markets, operating on the basis of free price formation.

Finnish financial markets had developed mostly along liberalist principles from the latter half of the 19th century until the outbreak of the Second World War. However, the Great Depression of the 1930s and the war caused in most countries a transition towards more extensive financial regulations, and this happened in Finland as well. The first steps towards limiting the role of competition and the price mechanism in financial intermediation were taken in Finland already in 1931, when the Finnish banks made an official agreement on their deposit rates. The initiative to the formation of a general deposit rate cartel of all banks was made by the central bank with the purpose of lowering deposit rates and so to create the prerequisites for the simultaneous reduction of loan rates and improvement of bank profitability (Kalliala 1950).

The background for the interest rate agreement of 1931 was created by the debt problems created by the Great Depression. Especially the farming sector was heavily indebted, and when the prices of agricultural and forestry products collapsed at the start of the worldwide slump, and when nominal interest rates remained quite high, the debt service of the farming sector became increasingly difficult. Frequent bankruptcies and foreclosures led to the emergence of a populist anti-depression movement which demanded lower interest rates and easier credit.

The Bank of Finland's monetary policy of the early 1930's was sharply criticized also in the parliament, where "legislative action" was demanded to force lower interest rates. The interest rate agreement of banks, sponsored by the central bank, was a reaction to these political pressures, which did not entirely ebb, however, until about two years later when the money markets became clearly much easier. Still in 1932, the government of Prime Minister Sunila fell because of the interest rate question, when President Svinhufvud refused to submit to the parliament a legislative proposal on interest rate controls which Sunila's government had drafted (Rossi 1951).

The Finnish interest rate agreement of 1931 was a formally voluntary deposit rate cartel. A special cartel committee, Rahalaitosten yhteislautakunta (literally "the joint committee of financial institutions"), was set up to supervise the compliance to the agreement and to decide on subsequent interest rate changes. In this body, the management of all major banking groups was represented. This body, in slightly different forms, existed until the 1980s to facilitate price cooperation between banks. The deposit rate agreement was formally terminated in 1938, probably because commercial banks were dissatisfied by the preferential conditions which the deposit rate agreement gave to savings banks. The end of the formal agreement did not cause any changes in actually applied deposit rates however (Autio 1996).

The next step towards setting up comprehensive financial controls was the introduction of exchange controls. Until the war, Finland was one of the most liberal countries with regard to the foreign exchange markets (with the exception of a short period of exchange controls in October-December 1931 after the collapse of the gold standard). In the 1930s, Finland, like Norway and Sweden, shadowed the sterling bloc in its foreign exchange policy, and abstained from any generic controls of foreign currency transactions (see League of Nations 1939).

The control of foreign capital movements was started in the summer of 1939 with a law limiting the share of foreign ownership in Finnish companies to 20 per cent unless special license from the government was given (this law would remain in force until the 1980s). After the war broke out in Europe, comprehensive capital controls were introduced and the Bank of Finland was entrusted with the responsibility of implementing the controls in practice. Buying and selling of foreign exchange was made subject to Bank of Finland licenses, and all foreign exchange assets and export revenues had to be repatriated and sold to the Bank of Finland. The objectives of the wartime currency controls are obvious. The government wanted to cope with the acute shortage of foreign exchange, and make sure that the scarce foreign exchange resources were used for the priority needs of the war effort, in conditions where the usual monetary and fiscal policy methods could not be used (Lehto-Sinisalo 1992).

Also the domestic credit markets were brought under administrative controls during the war years. In 1941, a formally voluntary agreement on freezing of lending rates was concluded between the different credit institutions, including insurance institutions as well as banks. The Bank of Finland started to issue (rather general) guidelines to banks and other credit institutions on the allocation of lending. Other measures taken during the war years included the regulation of private sector bond issues (1942), which gave the State a privileged position in the capital market, and tax exemptions on savings in bank deposits and government bonds (1943). Both the issue control of bonds and the tax exemptions of interest earned on bank deposits and government bonds were continued for decades after the war, and came to constitute important building blocks of the post-war anticompetitive system of regulations (Tarkka 1988).

5. Regulation is institutionalized after the War

After the war, there were at first some attempts to return to the more liberal pre-war conditions. Thus, during the late 1940s, when inflation accelerated to unprecedented levels, the Bank of Finland attempted to control it by modestly reactivating its interest rate policy, which had been completely passive since the 1934. Another step to the liberal direction was that the lending guidelines, which the Bank of Finland had given banks in its circulars, were first streamlined and then mostly lifted by the circular sent in 1949. The detailed regulation of banks' credit allocation decisions was thereby discontinued, even though the central bank also later occasionally sent banks some recommendations about which lending categories should be preferred or avoided, or how much the banks could expand their overall lending (Rossi 1951).

So, at the turn of the 1950s, it briefly seemed that monetary policy would start to be conducted by the conventional, market-based means. However, the Korean boom years of the early 1950s constituted a watershed after which extensive peacetime financial regulations increasingly replaced competition and market forces in Finnish monetary policy and financial intermediation.

The Korean boom started in the second half of 1950, as the prices of Finnish export products increased sharply: in 1951, export prices were, on average, 87 per cent higher than in the previous year, and that in dollar terms. Together with the two devaluations which had been carried out in 1949, this export price hike led to a sharp acceleration of inflation also in the domestic market.

In September 1950, banks agreed in their joint committee to a coordinated increase of loan rates by two percentage points. The Bank of Finland tried to follow suit: two weeks after the decision of the private banks, the Board of Management of the Bank of Finland proposed to the parliamentary supervisory council a similar increase in the discount rate, but this motion was shelved by the council with the explanation that "in the prevailing conditions of cost-push inflation", a high interest rate would not reduce inflationary pressure, but would instead increase it. A month later, however, the council let itself to be persuaded and agreed to an increase of 2 percentage points in the Bank of Finland discount rate.

This episode is significant in two ways: it illustrates the private cartel-type nature of the interest rate regulation which prevailed after the war. The banks were not formally compelled to follow the Bank of Finland policy, and could also act on their own. The episode also shows how politicians took a negative attitude towards the efforts of the management of the Bank of Finland to pursue a more flexible and market-oriented interest rate policy.

The next year, 1951, marked the decisive politicization of the interest rate policy. In the spring months inflation (measured by wholesale prices) accelerated to more than 40 per cent (year-on-year) and real growth increased (later it turned out that the real GDP grew by about 8.5 per cent). In this situation, the government and the employers' and labour organizations concluded a "truce" including a temporary price and wage freeze. The truce agreement also included the formation of a special committee, called "Economic Policy Planning Council" which included representatives from the government and various special interest groups. This committee was to prepare a stabilization programme to rebalance the economy.

In its report, the committee recommended the curbing of investment expenditure by various administrative means. It believed that this would make it possible to reduce interest rates (!). In its report, the committee stated: "The present disproportionately high interest rate tends to increase production costs. Especially it increases housing costs." The Bank of Finland discount rate was 7.5 per cent and the most common rate applied by commercial banks on their lending was 10 per cent. The council proposed that interest rates should be cut by 2 percentage points, as well as introducinh tight credit controls to curb investment (Vakauttamisohjelma 1951: 19).

In December 1951, the Bank of Finland actually reduced its official rates by 2 percentage points according to the programme of the committee, and the cartel of the credit institutions followed suit. However, after only few weeks, in January 1952, commercial banks decided to break the cartel and not implement the interest rate cut. A so-called "interest rate war" ensued, which only ended when the government proposed to the parliament a law on interest rate controls. Faced with the threat of government-controlled lending rates, the commercial banks backed down and the interest rate cartel was restored.

As normal interest rate policy had thus become very difficult politically, the Bank of Finland had to develop new instruments for its monetary policy. The main such instrument were quotas and penalty rates for banks' refinancing at the central bank. The balance sheet structure of the Bank of Finland was such that the commercial banks usually had a sizable liquidity deficit, and consequently they had to resort to refinancing at the central bank. In 1951, bank-specific quotas were set for this borrowing, and penalty interest rates (over and above the official discount rate) were applied for any borrowing in excess of the quota. The adjustment of the refinancing quotas and the penalty rate schedules subsequently became the normal way for the Bank of Finland to implement its policy stance – under the conditions of low and almost frozen general interest rates (Oksanen 1977).

Under such system, the marginal cost of central bank credit could occasionally be very high, 5 percentage points higher than the official discount rate was not exceptional (Saarinen, 1986). To prevent the often high marginal cost of funds from being passed to lending rates, the Bank of Finland from 1953 implemented a ceiling on the lending rates of banks: the right to refinance at the central bank was made conditional on complying with the regulation that no bank should charge higher rate in their lending than the official rediscount rate of the Bank of Finland. Formal lending rate control was thereby instituted. It became standard practice for the central bank to intervene in the behaviour of the deposit rate cartel as well, by recommendations which asked the banks to pass any changes in the official discount rate policy of the Bank of Finland to their deposit rates, and generally to maintain stable interest rate margins between the lending and deposit rates.

6. Financial implications of a State-financed growth policy

In the beginning of the 1950s, the Finnish economic policy faced enormous structural problems. The country was still only half-industrialized, with a very high part of the labour force still employed in the primary sector (agriculture and forestry). In 1952, for example, the share of the primary sector in total employment was as high as 37 per cent. Productivity and living standards were much lower than in the neighbouring Nordic countries. In these circumstances, growth and industrialization had a very high priority in economic policy.

Thus, investment needs were enormous, but the controlled and artificially low interest rates which prevailed in Finland in the 1950s could by no means bring about equilibrium between saving and investment. The benefits to the industry of low and stable interest rates were felt to be greater and more certain than the additional saving which a high interest rate policy might have produced. Some loans from the World Bank were obtained, but the pressing question was how to finance the industrialization and structural transformation phase which lied ahead (Dahmén 1963; Tarkka 2006).

In this situation, economic policy resorted to forced saving in the public sector. In the 1950s, 1960s and even the 1970s, a large share of investment, even private investment was financed by public sector saving. This was part of a conscious growth and industrialization policy. Two important documents which illuminate the thinking behind this policy are the report of the Industrialization Committee (1951) and the 1952 book "Onko maallamme malttia vaurastua" (literally “Does our country have the patience to get wealthy”) by Urho Kekkonen, then prime minister and later president of the republic.

The Industrialization Committee demanded that “industrialization should be included as an essential part in economic policy, and consequently taken into account in all decisions”. Regarding financing, the committee proposed that ”saving and capital formation should be promoted by the means of general economic policy, and the resulting capital should be channelled to serve the industrialization effort”. The committee considered the Finnish interest rate level (of 1950) exceptionally high by international standards and “considered it important that the interest rate be significantly lowered and kept at a level where it does not hamper the progress of industrialization of our country” (Teollistamiskomitea 1951: 107 and 111).

In his book, Prime Minister Kekkonen agreed with the Industrialization Committee in that the economic growth “commensurate with the natural potentials of Finland” required an enormous increase in industrial investment. But “if we strive for the rapid expansion of industry (...) we cannot resort to the means by which our industries have survived so far”. He proposed that the financing of the investment programme should be realized by forced saving in the government budget: “briefly and heartlessly put, this means that the resources for the implementation of the industrialization programme must be acquired by the state by taxation”, and further, “we propose that our consumption should be reduced by 2 or 3 per cent from the level to which it would otherwise increase, and savings so generated should be used to expand productive activity.” The political occasion for such a proposal was created by the end of the large war reparations which Finland had had to pay to the Soviet Union in 1945-1952. Kekkonen’s idea was to use the resources freed by the end of reparations for investment purposes, instead of additional private consumption (Kekkonen 1952: 72 and 114).

The Finnish financial policy of especially the 1950s but also of the 1960s and the 1970s can be seen as fulfilling Kekkonen’s prescriptions. According to the national accounts, the share of the government sector saving in the gross capital formation of the entire economy fluctuated between 45 and 55 per cent in the decade of the 1950s, which is a very high share indeed. Later the share of public saving in the total decreased somewhat, but if we include the mandatory pensions system (which was started in 1961), the share of public saving remained around 30 to 35 per cent until the mid-1970s.

Finland did not become a socialist economy, however: part of the enormous amount of forced saving was used for government investment, part was used for investment in the equity capital of government-owned companies, but a very large part was lent to the private sector. For the purposes of the present study, the significance of the government as a lender is especially important. The share of the government sector in total credits to the private non-financial sector was over 39 per cent in 1953, reached 41 per cent in 1960, and was still in 1986, on the eve of deregulation, as high as 23 per cent (Tarkka 1988).

The high priority of growth policy, and the high investment rate which was mainly financed with debt and only a minimum of equity capital, are important explanations for the particular features of the Finnish financial controls and regulation in the post-war decades. The industrial enterprises (and the agricultural sector) were guaranteed low and stable interest rates on their debt in order to enable them to operate with very little equity. At the same time, banks were guaranteed stable interest margins and an environment without price competition – which made it possible for also them to operate with very low capital buffers.

From the point of view of this study, it is important to note that stability of the banks under competition was not the main rationale or the purpose of the Finnish system of banking regulation. Even though the banks were stabilized by the system, the primary concern was only to create stable prerequisites for the quantitative growth of industry, by sacrificing competition if needed. In the course of several decades, these predominantly macroeconomic objectives of Finnish financial policy (including the government surpluses and the comprehensive regulation of interest rates) obscured the connection of regulation with financial stability to policymakers and bankers alike.

7. Financial controls as a system of economic policy

After the tightening of the interest rate controls in the 1950s, a monetary policy system developed in which the whole interest rate structure of the banking system was administratively linked to the discount rate of the Bank of Finland. The discount rate was kept low and almost constant, and monetary policy resorted to regulation of banks' refinancing from the central bank by rediscount quotas and penalty rates. Occasionally, in times of monetary tightening, the marginal cost of borrowing funds from the central banks was very high. Because of regulation of lending rates, banks could not pass their marginal cost of funds to their borrowers, and the availability of loans was restricted instead (Puntila 1972; Oksanen 1977).

Occasionally, the board of management of the Bank of Finland attempted to use "the interest rate weapon" as the changes in the general level of interest rates was called, but the changes were small and infrequent, thus emphasizing the role of the refinancing quotas and credit rationing. After the forced cut in 1951, the official discount rate was changed only 3 times in the 1950s; in the 1960s 3 times and in the 1970s 6 times. An episode in 1962 illustrates the circumstances. In march 1962, the board of management of the Bank of Finland proposed to the parliamentary supervisory council an increase in the discount rate from 6,75 to 8 per cent. This was at first granted by the council, but four weeks later, in their next meeting and after a change in government, the council revised the decision and the interest rate was returned to 7 per cent against the recommendation of the management of the Bank of Finland. After that, it took 9 years before the next discount rate increase was proposed.

A feature of the regulated financial system, in which banks' refinancing at the central bank was subject to quotas, and which did not have interbank money market, was that banks could not easily compete for market shares in the loan market. Practically the only way to influence the market shares in those conditions was to succeed in the deposit market, but market shares in deposits could change only slowly in the absence of interest rate competition. Additional funding from an interbank money market became available only much later towards the end of the 1970's – and, at that time, only at a very high price.

In the system of administratively set interest rates which emerged in Finland in the beginning of the 1950s, there might have been a danger that a free deposit/loan market would have grown outside the regulated sector. This possibility was checked by granting the official market (consisting of banks and government bonds) a preferential tax treatment. The first tax exemptions to bank deposits and government bonds had been granted already in 1943, but they were at first limited to a fixed quota per person. In 1956, however, interest income from bank deposits and government bonds was made entirely tax free in personal income taxation. The tax rules were very significant for the system of controlled interest rates, because it was stipulated that the tax exemption was granted only on deposits which complied with the banks' interest rate cartel. This proviso was in effect from 1956 until the end of 1988, meaning that the tax laws effectively protected the price collusion of banks in the deposit market. At the same time, they effectively prevented the development of any alternative to bank deposits as an outlet for household savings (Valvanne and Lassila 1965; Korkman 1986).

As a digression, we must note another way to encourage saving while keeping household funds within the regulated sector. From 1956, banks were allowed to take index-linked time deposits (and pass the costs of inflation compensation on these special deposit accounts to the borrowers). Two types of index-linked deposit accounts were allowed, one with full index compensation according to the increase in the cost of living index, and another account with 50-per cent compensation. Some index-linked government bonds were also issued. The popularity of the index-linked deposits varied, of course, with inflation. In some periods the index-linked deposit accounts constituted a significant share of the private sector bank deposits. The system of index account was discontinued in 1968 (Ranki 1981).

By the mid-1950s, then, at the latest, the Finnish financial controls constituted a more or less comprehensive system, a policy regime in which the various components supported each other and made the overall structure surprisingly enduring. All in all, the system was made up of the following components:

- an administrative interest rate system consisting of regulations and recommendations by the authorities, and government-sponsored agreements between banks;
- exchange control in the form of regulation of most international capital flows;
  control over the issue of private bonds;
- a tax system favouring the regulated segment of the financial markets;
- forced saving in the public sector and large-scale government lending to the private sector;
- a monetary policy which operated by rediscount quotas set to the refinancing of banks at the central bank, and which was transmitted to the private sector through the availability of credit.

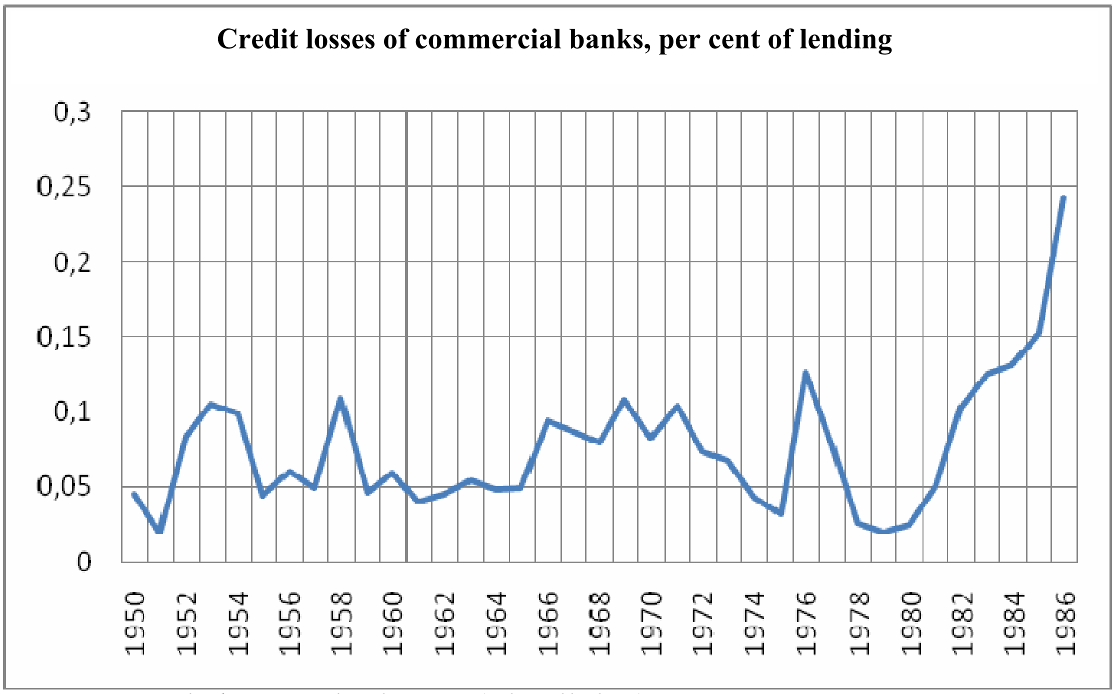
The structure of the administrative interest rate system avoided almost all interest rate risk to the banks. Loan contracts allowed were variable rates, and whenever the Bank of Finland changed its discount rate (later renamed the base rate), it was accepted that this change was passed immediately to all loan rates. Moreover, in the event of a change in its discount rate, the Bank of Finland always let it be known that it "expected" the cartel of the banks to change all deposit rates by a corresponding amount. As a result, the interest margins of banks were very stable and predictable.

An important change to the control system of the lending rates was made by the Bank of Finland in 1960. The maximum interest rate which the banks were allowed to apply in their lending was significantly increased, but at the same time it was required that the banks should not increase their average lending rate. From 1960, the regulation of the average, not the maximum, lending rate became the effective form of interest rate regulation in the bank loan market.

Average interest regulation allowed the banks more leeway to differentiate their lending rates according to the riskiness of their customers. This was, indeed, the reason given by the Bank of Finland for adopting this new regime of lending rate regulation. Average interest rate regulation had other interesting properties as well, however: as long as there was excess demand for loans at the regulated rate of interest, it made the so-called evergreening of problem loans completely costless to the banks. If a client could not pay interest on his or her loan, the bank could simply convert the nonperforming loan to an interest-free one. Under the average interest regulation, this created leeway for the bank to increase the interest rates charged to other borrowers, who were ready to pay because of the prevailing excess demand for loans at the regulated interest rates. As a result, the cost of giving a customer an interest-free loan was paid by other customers (Haavisto and Tarkka 1985).

The system of interest free loans which emerged under the average interest rate regulation in effect transferred the burden of any problem loans to other borrowers, without an effect on the profitability of the bank. This was of some significance in periods of recession. In the late 1977, for example, the share of interest free loans in the banks' balance sheet was 2, and a significant share of loans were granted at low, clearly subsidized interest rates. In any case, recorded credit losses remained completely insignificant in Finland throughout the period of interest rate controls. This can be seen in Figure 1.

Figure 1



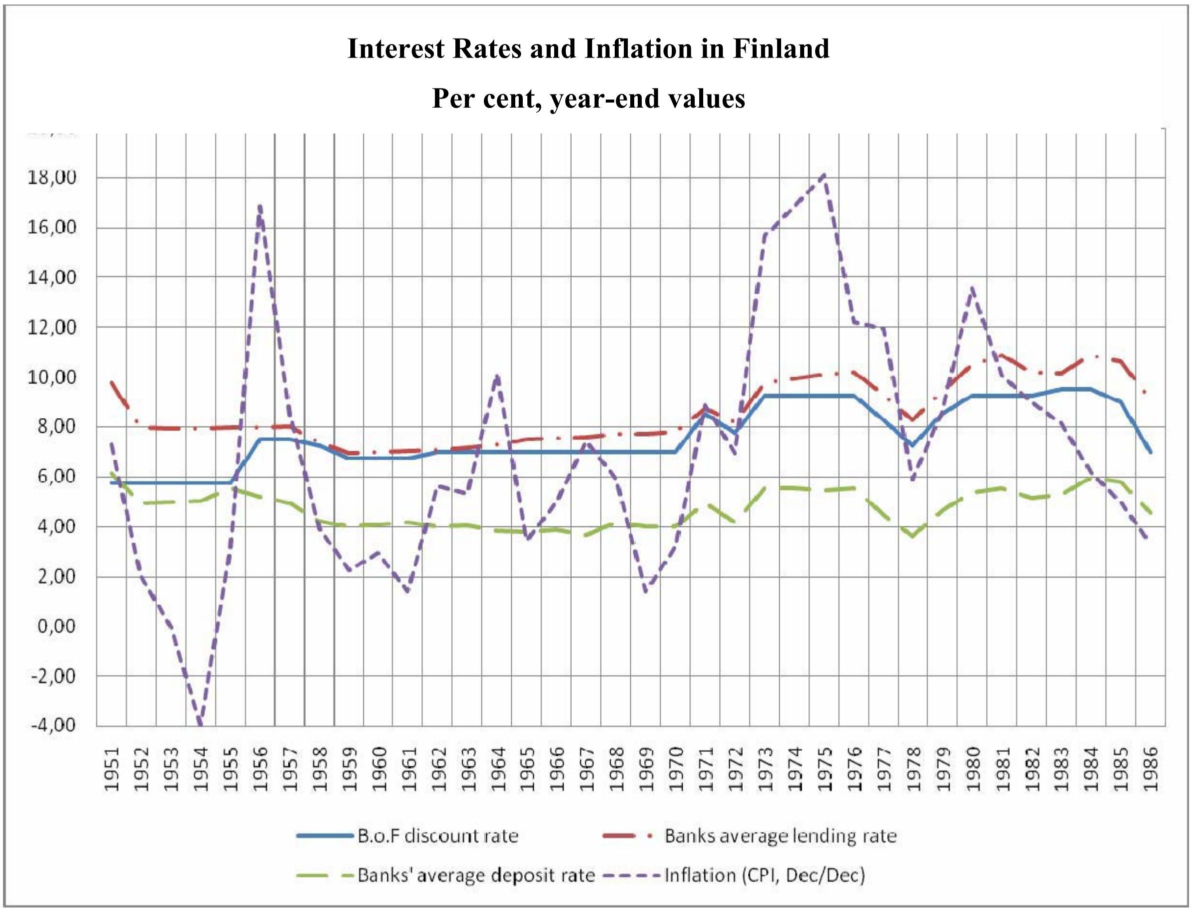
Source: Statistics Finland, Commercial Bank Statistics (Liikepankkitilasto).

Among the most important challenges which the system had to face were the persistent balance of payments problems which followed the reinstitution of the external convertibility of the Finnish markka in 1958 (after almost 20 years) and the liberalization of imports. After this, monetary policy had to bear a bigger role in safeguarding the external equilibrium of the economy. On several occasions, the marginal cost of central bank credit to the commercial banks climbed to very high levels (over 19 per cent in 1966 and over 22 per cent in 1975). Despite the frequent tightening of monetary policy, several devaluations of the currency were required in 1967 and 1977-1978 and again in 1982 to restore the external equilibrium of the economy.

Another challenge was periods of high inflation, which made the controlled interest rates sometimes strongly negative. The most important such period was experienced in 1973-1977 following the first oil crisis (see Fig. 2). In order to make its monetary policy more effective, when the regulated interest rates had become patently unrealistic, the Bank of Finland in 1975 established an interbank call money market, in which it could intervene by supplying or withdrawing funds.

Gradually, the central bank operations on that call money market replaced the terms of the rediscount quotas as the most important instrument of monetary policy. This change, by introducing a new market price to the Finnish banking system, augured the coming changes to the regulated interest rate environment which had then prevailed for about three decades already.

Figure 2



Source: Bank of Finland.

8. The end of financial controls and the response in prudential rules

The possibilities for competition between banks were radically expanded by the financial deregulation which started in the beginning of the 1980s. As a result of this deregulation, new markets emerged which enabled the banks to compete for market shares by borrowing funds from an open money market. The process of deregulation also first undermined and finally scrapped the system of controlled lending and deposit rates which had protected Finnish banks from price competition for several decades. All these development led to higher risks for banks and thus tested the system of prudential regulation – a test which the prudential rules ultimately failed.

The deregulation of the Finnish financial markets started from short-term capital movements. In 1980, the commercial banks were allowed to borrow from abroad to cover their forward transactions with Finnish export companies. Before that, the Bank of Finland had acted as the counterpart in all forward contracts, private banks acting only as intermediaries, but now the central bank wanted to withdraw from this market and allow banks to take care of it. The forward market and the associated foreign borrowing by the commercial banks effectively established a surrogate money market, in terms of covered foreign currency deposits, and soon banks' short-term foreign borrowing constituted a very high share in their total funding (more than 30 per cent). Later, other capital import categories were gradually deregulated, until foreign borrowing was generally allowed to industrial companies in 1986 and finally to all firms in 1987 (Lehto-Sinisalo1992).

The increased liquidity thus imported to the country eventually gave rise to a real domestic short term money market. For the first time, the larger Finnish companies had surplus liquidity, and a growing market of short-term "grey" deposits emerged at the beginning of the 1980s as banks started to compete for these funds ("grey" referring to wholesale deposits taken outside the banks' traditional deposit rate cartel). The share of market-based funding in banks' balance sheets, which had previously been negligible, grew rapidly, and the money market was finally organized in 1987, after the Bank of Finland had started to use market operations in bank CD's as its main monetary policy instrument. After that, standardized CD's and commercial paper rapidly replaced the informal short-term transactions which had previously dominated the new money market. Market interest rates ("Helibor" CD rates) were begun to be quoted daily (Alho *et al.* 1985; Financial Markets in Finland 1990, 1991).

The parallel existence of a wholesale market based on free interest rate determination and the regulated segment of financial intermediation was clearly not sustainable, and the authorities accepted the necessity of the general deregulation of interest rates applied by banks. This was implemented at the same time (in 1986) when long-term capital imports were also liberalized.

This triggered an extremely rapid expansion in bank lending, as banks tried to increase their market share and to expand their operations in order to justify the high cost structure they had developed in the period of suppressed competition. Eventually, the credit boom which ensued led to a collapse and a banking crisis in 1991, when the Finnish economy faced some important external shocks (such as the drop in exports due to the breakdown of the Soviet Union. See Vihriälä 1997; Tarkka 1994).

It was clear that the deregulation of banking and international capital movements had important implications for prudential rules. The prudential regulation of banks had to be modified, because the laws from 1969 did not fit the new more international and market-based conditions. In 1984, a committee was set up to unify and modernize the banking legislation, but again, the preparatory work and the legislative process after that took a very long time. In November 1987, just when the committee work was supposed to be close to completion, news arrived about the probable content of the capital accord which the Basel committee was preparing. It was clear that the Basel recommendations had to be taken into account, and the adaptation of the draft laws to this end caused an additional delay in the reform (Halme 1999).

The new laws were finally promulgated in 1990. For the first time, the same prudential rules were now imposed on all categories of banks (commercial, savings and cooperative banks). The new regulations mainly followed the Basel Committee recommendations, the main difference being that the definition of own capital was more generous. Despite that, the new law meant a significant tightening of capital requirements, especially for savings banks and cooperative banks. The banks with international activities were given time until the end of 1992 to satisfy the new law, others were given adjustment time until the end of 1995.

The law of 1990 turned out to be short-lived, however. The Cold War had ended in 1989 and in 1990 Finland entered negotiations about joining the European Economic area. In this situation, yet another working group was set up by the ministry of finance in December 1990 to prepare for a complete harmonization of the prudential rules with the European directives. The new law, which fully implemented the European Union directives, came into force from the beginning of 1994 on the day Finland joined the EEA. As a result of this harmonization, Finland's accession in to the EU exactly one year later required no further immediate changes in banking regulation.

In retrospect it must be concluded that the tightening of prudential rules for banks happened at least a decade too late. The authorities and the political system could not keep the prudential regulation of banks in step with the erosion and dismantling of the regulation of interest rates and capital movements, which had previously protected banks form competition and risks. This fatal delay was in part due to incompetence on the part of the authorities, but also to the tenacious resistance of the banking lobby to any tightening of regulation. The result was, anyway, that the Finnish banking sector faced the deregulation of foreign capital movements, the emergence of the money market, and the abolition on interest controls with too small a capital base and with weak and outdated supervision.

It would be outside the scope of this study to provide a detailed review of the course of the Finnish banking crisis which erupted in 1991, after several years of exceptionally rapid growth of bank lending and increasing foreign indebtedness of the economy. In the run-up to the crisis, banks (especially the savings bank network) engaged in sharp competition for market shares. The savings banks especially acquired significant stakes in industrial enterprises and real estate development projects, which the laws could not stop due to deficient regulations about consolidation of subsidiary investment companies of banks. The real estate and construction sectors clearly overheated and exposed banks and their debtors to very high risks. The situation finally came to an end when exports to the Soviet Union collapsed in 1991 (they had accounted for about 18 per cent of Finnish exports in 1986-1990). The crisis and its reasons have been discussed, e.g. in Bordes (1993) and Tarkka (1994).

The banking crisis which lasted until 1994, resulted in a complete overhaul of the Finnish banking system. Almost the entire savings bank network, starting with Skopbank, its central institution, fell into the hands of the government and was closed or sold to competitor banks. The bad assets were acquired by the government to an asset management company which gradually liquidated these assets in a very painful and expensive process. Other banks received capital injections and Government guarantees. The two largest commercial banks first merged with each other and then with a Swedish commercial bank. Depositors or creditors of banks did not lose, but the fiscal cost to the government of the crisis management process was very high. It is now estimated to have been about 6 billion euro in net terms, excluding interest. This is equivalent to about 7 per cent of the GDP of the year 1993. The total macroeconomic cost of the crisis is difficult even to define, but is certainly much higher. From its peak in 1990 to the trough in 1993, the real GDP contracted by about 11 per cent (Vihriälä and Nyberg 1994; Valtiovarain-ministeriö 1996).

9. Conclusions

The history of Finnish financial regulation after the Second World War and until the accession of Finland to the EU illustrates how prudential regulation of banks interacts with the regulation of competition and conduct of banks, and how both of these must be viewed in the context of the general economic policy of the country. In order to form a coherent and enduring whole, these three must be in some sort of conformity with each other. Each of them cannot be changed without implications for the other components. In Finland, the stability of the financial system (in the sense of lack of bank failures or major credit losses) before the 1990s was more due to conduct regulation and limitation of competition (implemented for reasons of growth policy and of politics) than the kind of regulations which are expressly aimed at ensuring the solvency of banks and their ability to withstand risk.

The record of the Finnish regulated financial system is mixed. On the positive side, the system did support a high investment rate and a very high average growth rate from the 1950s and until the 1980s. In the four decades after the war, Finland caught up with its Nordic neighbours in terms of productivity, and, in the process, achieved a major transformation from an inefficient and largely rural society to an urbanized and industrialized economy.

On the other hand, there were recurrent balance of payments problems, and persistent inflation, which gave rise to a stop-go cycle in economic growth, and led to several large devaluations of the currency. This is evidence of the difficulty of demand management when interest rates are administratively frozen, as well as of the (probably inefficiently) high propensity to invest under the conditions created by the regulations.

It is also clear that the lack of price competition in banking led to various kinds of structural inefficiencies. Almost the only way banks could compete for funding was by expanding their branch networks, which resulted in a very high level of real resource costs in the sector. Also, the particular system of lending rate regulation, which set a ceiling on the average lending rate applied by each bank, made it possible, and even seemingly costless for banks to practice so-called evergreening of some inefficient industrial clients.

Finally, the banking practices, low capital ratios and high costs of banks which became the norm in the decades of regulation made the banks very vulnerable in the competitive and deregulated environment which they had to face after the deregulation which took place in the mid-1980's. In that sense, the "hothouse" stability of the earlier period is one of the causes of the severe Finnish banking crisis of the early 1990s. It is impossible to escape the conclusion that the weakness of prudential regulation and the political difficulty of improving it are important reasons why the Finnish banking system could not withstand the combined effect of the deregulation of interest rates and capital movements, and the macroeconomic shock of 1991.

REFERENCES

Alho, K., Mustonen J., Raatikainen, J., Salo, S., Turkkila, J. and Valkonen, T. (1985), Markkinaraha ja rahamarkkinoiden muutos, ETLA: Helsinki.

Autio, J. (1996), “Korot Suomessa 1862-1952”, Bank of Finland Discussion Papers No. 7/96.

Bordes, C., Currie, D. and Tson Söderström, H. (1993), “Three assessments of Finland's economic crisis and economic policy”, Bank of Finland Studies, C:9.

Dahmén, E. (1963), “Ekonomisk utveckling och ekonomisk politik i Finland”, Bank of Finland Studies, C:4.

Eskelinen, J. (1991), Vakavaraisuusvaatimusten pankeille aiheuttamat kustannukset, Bank of Finland Discussion Papers No. 18/91.

Financial Markets in Finland (1972), Bank of Finland Monthly Bulletin, Special Issue.

—————— (1986), Bank of Finland Monthly Bulletin, Special Issue.

—————— (1991), “Financial Markets in Finland 1990. Twelve Articles”, Bank of Finland Studies, A:79.

Haavisto, E. and Tarkka, J. (1985), ”Pankkiluottojen korkoporrastus keskikorkosäännöstelyn vallitessa”, Finnish Journal of Business Economics, 34 (3), pp. 272-83.

Halme, L. (1999), ”Pankkisääntely ja valvonta. Oikeuspoliittinen tutkimus säästöpankkien riskinotosta”, Bank of Finland Studies, E:15.

Ikonen, V., Autio, J. and Elonen, H. (1992), ”Suomen Pankki ja 1930-luvun lama”, Bank of Finland Studies, A:85.

Kalliala, K. (1950), ”Korkosopimukset Suomessa”, in Suviranta, B., Pipping, H. and Waris, K. (eds.), Juhlajulkaisu Rainer von Fieandin kuusikymmenvuotispäivänä, Keskuskirjapaino: Helsinki.

Kekkonen, U. (1952), Onko maallamme malttia vaurastua?, Otava: Helsinki.

Kopra, V. (1981), “Social Insurance in Finland”, Bank of Finland Monthly Bulletin, 55 (11), pp. 24-33.

Korkman, S. (1986), “Taxation of Financial Assets in Finland”, Bank of Finland Monthly Bulletin, 60 (4), pp. 1-2.

Kuusterä, A. (1994), “The Finnish Banking System in Broad Outline from the 1860s to the Mid-1980s”, in Pohl, M. and Freitag, S. (eds.), Handbook on the History of European Banks, Elgar: Aldershot.

—————— (1995), Aate ja raha. Säästöpankit suomalaisessa yhteiskunnassa 1822-1994, Otava: Helsinki.

League of Nations (1939), Statistical Year-Book of the League of Nations 1938/39, League of Nations: Geneva.

Lehto-Sinisalo, P. (1992), "The History of Exchange Control in Finland", Bank of Finland Discussion Papers No. 3/92.

OKL (1979), Jatkuvan kasvun voima. Osuuspankkien keskusliitto r.y. 50 vuotta, Helsinki: Osuuspankkien keskusliitto.

Oksanen, H. (1977), Bank Liquidity and Lending in Finland, Sociatas Scientiarum Fennica: Helsinki.

Pankkilakikomitea (1967), Pankkilakikomitean mietintö, Komiteanmietintö 1967:A8, Helsinki.

Puntila, M. (1970), "New Banking Legislation", Bank of Finland Monthly Bulletin, 44 (1), pp. 20-23.

—————— (1972), Monetary Policy in Finland, Bank of Finland Monthly Bulletin, 46 (8), pp. 20-26.

Ranki, M.(1981), Om indexsystemet, Frenckellska Tryckeri Ab: Helsinki.

Rossi, R. (1951), "Suomen Pankin korkopolitiikka vuosina 1914-1938", Bank of Finland Studies, B:12.

Saarinen, V. (1986), Liikepankkien keskuspankkirahoituksen ehdot, määrä ja kustannukset 1950-1984, Bank of Finland Studies, A:63.

Tarkka, J. (1988), "Kahlitun rahan aika: Suomen rahoitusmarkkinoiden säännöstelyn vuosikymmenet", in Honkapohja, S. and Suvanto, A. (eds.), Raha, inflaatio ja talouspolitiikka, Valtion painatuskeskus: Helsinki.

—————— (1994), "Ulkoisten tekijöiden merkitys Suomen talouskriisissä", Kansantaloudellinen Aikakauskirja, 90 (1), pp. 5-17.

—————— (2006), "Erik Dahmén and Finnish Economic Policy", in Karlson, N. (ed.), Erik Dahmén och det industriella företagandet, Ratio: Stockholm.

Teollistamiskomitea (1951), Teollistamiskomitean mietintö, Komiteanmietintö 12-1951: Helsinki.

Vakauttamisohjelma (1951), Talouspoliittisen suunnitteluneuvoston ehdotukset niihin liittyvine selvityksineen linnarauhan 30.9.1951 päättyessä, Komiteanmietintö 13-1950: Helsinki.

Valvanne, H. and Lassila, J. (1965), "The Taxation of Business Enterprises and the Development of Financial Markets in Finland", Bank of Finland Studies D:4.

Valtiovarainministeriö (1996), Rahoitusjärjestelmän tervehdyttäminen, Edita: Helsinki.

Vihriälä, V. (1997), "Banks and the Finnish Credit Cycle", Bank of Finland Studies E:7.

Vihriälä, V. and Nyberg, P. (1994), "The Finnish Banking Crisis and its Handling. An Update of Developments Through 1993", Bank of Finland Discussion Papers 7/94.

FINANCIAL CRISIS AND REGULATION
AN OVERVIEW OF THE BELGIAN EXPERIENCE

Ivo Maes and Erik Buyst***

This paper provides an overview of the regulation and supervision of the Belgian financial system from the creation of Belgium in 1830 to the early 21st century. After severe crises, the National Bank of Belgium was created in 1850. The Great Depression led to further reforms, increasing the role of the government, especially through the establishment of the Banking Commission. In the post-war period, reforms were driven by changes in the financial landscape, especially an increasing role for market forces. In line with the despecialisation process, the responsibilities of the Banking Commission were gradually extended, becoming, in 2004, the Banking, Finance and Insurance Commission. Moreover, at the turn of the millennium, the role of the NBB in financial stability matters was enhanced.
JEL: G18, N23, N44.

1. Introduction[1]

Banking crises are of all times, but their origin has changed considerably through the years. In the 19th century, the breakthrough of banknotes into a hitherto metallic monetary system raised the issue of the convertibility of paper money into specie. In the 1830s and 1840s, Belgium was shaken by severe convertibility panics. The government reacted with the creation of the National Bank of Belgium. From the second half of the 19th century, banking crises took the form of liquidity and/or solvency shocks. Although Belgium was hit by financial panics in the 1870s and 1880s, no structural reforms were elaborated. During the Great Depression of the 1930s, new institutional arrangements for the regulation and supervision of the Belgian financial system were adopted. In the post-war period, reforms were necessary to deal with the changing financial landscape, where market forces were gaining in importance. In line with the despecialisation process, the responsibilities of the Banking Commission were gradually extended, becoming, in 2004, the Banking, Finance and Insurance Commission. Moreover, at the turn of the millennium, the role of the NBB in financial stability matters was enhanced.

The paper starts with a short exploration of the concept of financial stability. Thereafter, we follow a chronological approach, focusing on the institutional reforms of the 1840s, the 1930s and the last decades of the 20th century.

---

* National Bank of Belgium, Robert Triffin Chair, Université catholique de Louvain, and ICHEC Brussels Management School. E-mail: Ivo.Maes@nbb.be

** University of Leuven. E-mail: Erik.Buyst.@econ.kuleuven.be

1 The authors would like to thank all those who contributed to this project, especially J-P. Abraham, O. Feiertag, G. Gobbi, S. Lazaretou, Ph. Lefèvre, M. Margairaz and the participants of the Banque de France conference "Banks between risks and stability", of the SEEMHN conference at the Bank of Greece and of the Banca d'Italia conference "Financial market regulation after financial crisis: the historical experience". The usual caveats apply.

2. An exploration of the concept of financial stability

There is a broad consensus that financial stability is one of the more difficult and elusive concepts in economics (Oosterloo and de Haan 2004). However, there is also general agreement that there are reasons for caring more about stability in the financial sector, especially banking, than in any other industry (Lamfalussy 1988). First, banks are highly leveraged institutions, with long-term assets and short-term liabilities, making them more vulnerable. Second, the failure of individual financial institutions can lead to chain reactions within the system because of the strong links tying institutions to each other. The speed at which funds can be shifted and the role of expectations are important elements here. Third, owing to the central place of financial institutions in the mechanism of credit allocation and in the payments system, whatever happens in the financial system can have far-reaching consequences for the real economy.

It is generally accepted that monetary stability is a necessary condition for financial stability. However, financial crises can also occur in periods when money is stable. Special attention has therefore been paid to banking crises. Banks can run into trouble both because of liquidity and solvency problems. Liquidity shocks tend to have their origin in the withdrawal of deposits by customers, while solvency shocks arise from losses on banks' (long-term) investments.

Naturally, financial stability is an important concern for policy-makers (Maes and Périlleux 1993). In the modern day literature, two main objectives can be distinguished: the protection of small depositors and the avoidance of a systemic crisis. Defining a systemic crisis is by no means simple. Broadly speaking, one could characterise it as a situation where a crisis in the financial sector has a large-scale impact on the real economy (Lamfalussy 2004). For safeguarding financial stability, two types of policy are crucial: (a) *ex ante* preventive actions, especially regulation and supervision, which make it less likely that crises will occur, strongly focused on the solvency of financial institutions, and (b) crisis management, especially the identification and resolution of crises (Economic and Financial Committee 2001; Mayes 2004; Vaillant and Amouriaux 1996).

3. The 19th century: the creation of the NBB

In the early 1830s, Belgium stood at the cradle of universal banking. By that time, the Société Générale not only issued paper money, provided discount credit for commercial purposes and operated a savings bank, but also invested intensively in the share capital of manufacturing firms (Laureyssens 1975; Kindleberger 1993). The new formula proved very successful and soon a similar rival was established, the Banque de Belgique. In the second half of the 1830s, both universal banks dominated the Belgian financial landscape and competed fiercely. The two banks soon found themselves running serious risks as their working capital became increasingly tied up in claims that were difficult to realise in crisis periods, such as shares and camouflaged long-term loans to industry. In 1838 and 1848, severe financial panics broke out: the public demanded repayment of deposits and the conversion of banknotes into gold and silver coins. In both crises, at least one of the two big universal banks was no longer able to redeem its banknotes and the government had to intervene as a *de facto* lender of last resort (Chlepner 1926).

Tired of the structural weaknesses of Belgium's banking system, Finance Minister Walthère Frère-Orban pushed through major reforms. In the 1850-1865 period, he gradually split up the various activities of the universal banks and assigned them to separate, specialised financial institutions. The centrepiece of the reforms was the setting up in 1850 of a national discounting and issuing institute along the lines of the Banque de France. The Société Générale and the Banque de

Belgique therefore had to surrender their right of issue and most of their discount activities to a new institution, named Banque Nationale.[2] In 1860, the Finance Minister founded the Crédit Communal to provide loans to local authorities. Moreover, in 1865, Frère-Orban pushed through the establishment of a specialised public savings bank, the Caisse Générale d'Epargne et de Retraite (CGER). The CGER soon became the largest player in this segment (Van der Wee and Verbreyt 1997). As a result, the Société Générale and Banque de Belgique had to confine themselves to industrial investment activities and became *banques d'affaires.*

The law of 5 May 1850 and the statutes define the principal tasks and structure of the National Bank of Belgium (NBB). In view of the 1838 and 1848 crises, it comes as no surprise that the NBB's main task was to maintain convertibility of its banknotes in specie. So the legislator confined the NBB's activities largely to discount operations linked to commercial transactions. The bills of exchange normally had to bear three solvent signatures and reach maturity within 100 days. The NBB was also authorised to discount foreign bills of exchange.

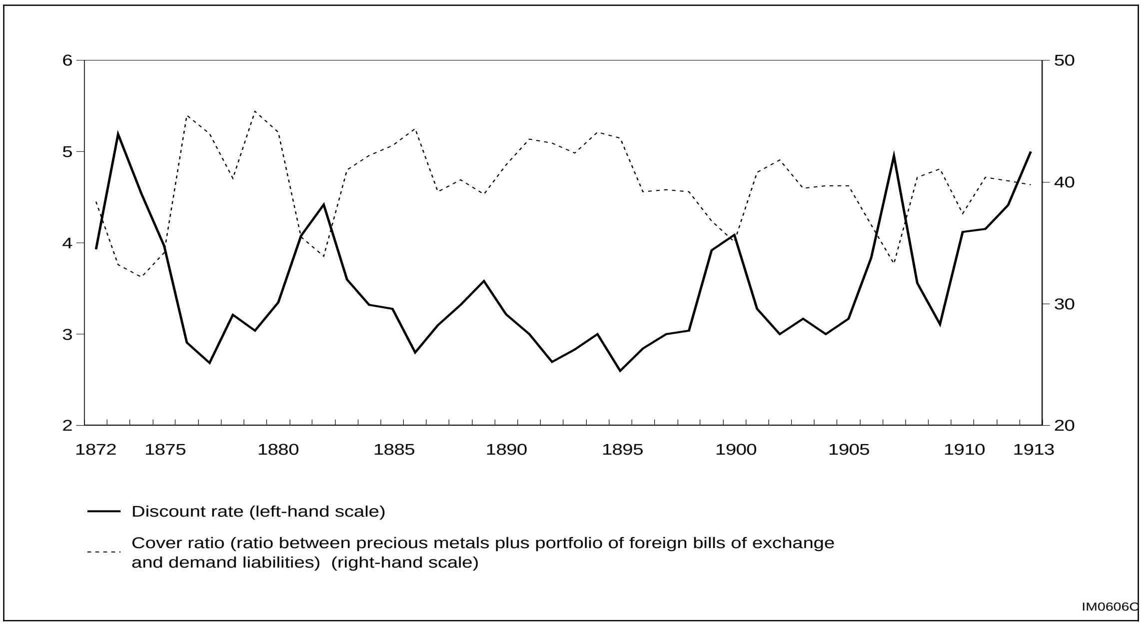
The legislator clearly feared that the government could use the NBB to finance public spending. Therefore, the NBB was allowed to invest in government bonds, but only to an amount not exceeding its own capital and reserves. In addition, there were strict limits on the discount of Treasury notes. Government securities were admitted as collateral but only for an amount not exceeding 80 percent of their market value. Finally, the NBB was not permitted to grant loans against the collateral of shares or mortgages. Nor could it acquire property – except for its own use – or invest in industrial corporations (*Moniteur belge*, 16 May 1850 and 5 September 1850).

Frère-Orban's reforms restricted the leverage of the Belgian banking sector and the effects were clearly visible on the convertibility front. The NBB managed to maintain the conversion of banknotes in specie during most international monetary-financial crises of the second half of the 19th century (see Figure 1).[3]

2 In 1900, the name was officially changed into Banque Nationale de Belgique/Nationale Bank van België. As the institution today still carries that name, we use the term National Bank of Belgium or NBB for the 19th century too.

3 For a more detailed discussion, see Buyst, Maes and Pluym (2005).

Figure 1
Discount rate and cover ratio of the National Bank, 1872-1913 (annual averages, percentages)



Source: NBB, Bulletin d'information et de documentation, 25, No. II-3, 1950, pp. 126 and 160-64.

However, Frère-Orban's ambitions went further than just promoting monetary stability. During debates in Parliament, he nurtured the hope that, in times of financial turmoil, the NBB would maintain its discount activities in order to alleviate the impact of any future crisis: "Elles [discounting and issuing institutes] doivent enfin être organisées de manière à pouvoir venir au secours du pays dans les moments difficiles, atténuer les effets des crises, en escomptant à des taux raisonnables quand les capitaux deviennent rares. Loin d'être une cause d'embarras, elles doivent contribuer à diminuer l'intensité des crises"[4]. This pointed to the concept of *lender of last resort,* but neither the law establishing the NBB nor its statutes contain articles that can be read as such.

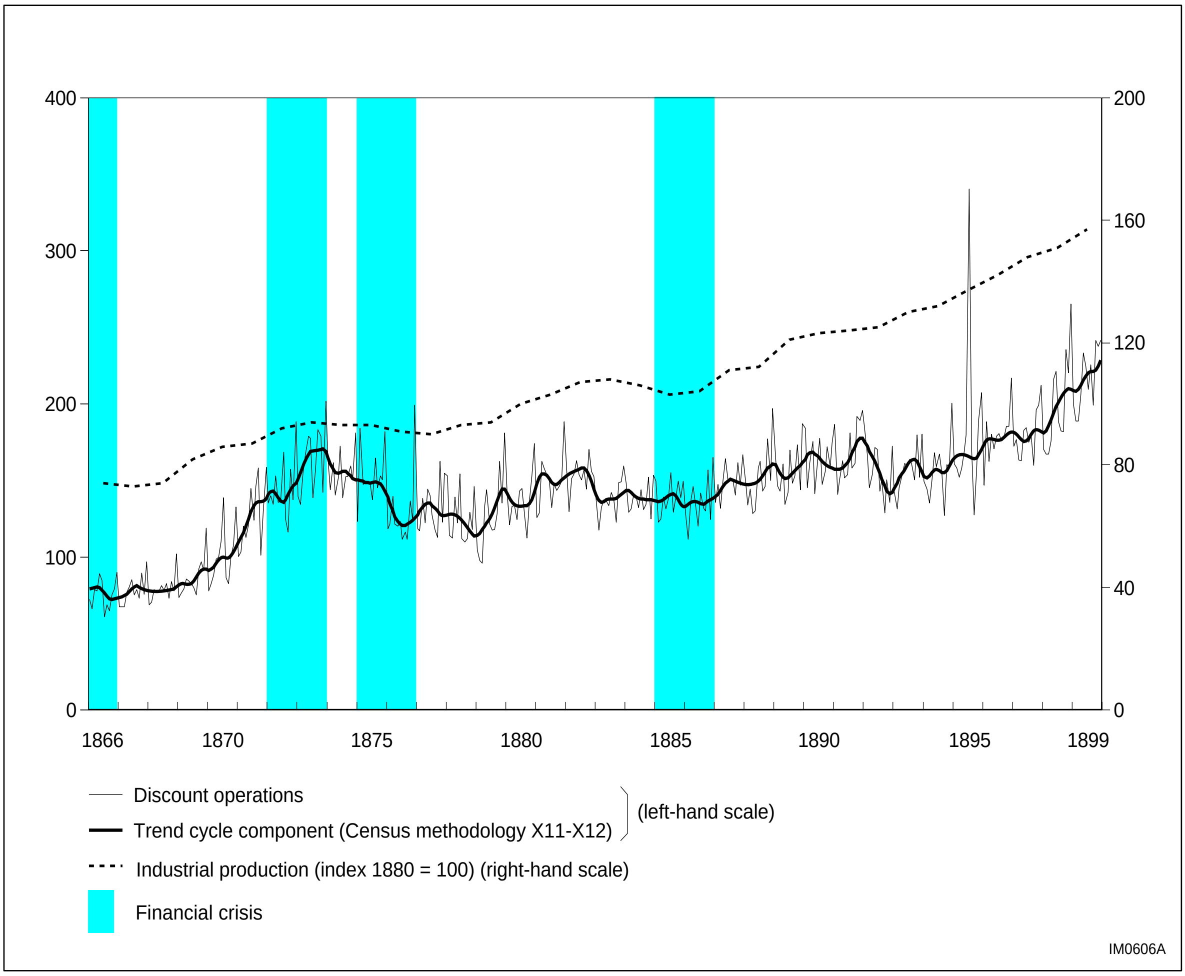
Did the NBB fulfil Frère-Orban's promise in practice? Before looking at the historical facts, we have to mention that the late 1860s and early 1870s were characterised by an important shift in the structure of Belgian banking. Inspired by the English example, the Société Générale introduced interest-bearing current accounts to stimulate the use of demand deposits, giro payment systems and cheques. The success of the demand deposits/advances in current account tandem on top of the Société Générale's traditional investment bank operations marked a spectacular rebirth of universal banking in Belgium. In parallel, there was a reappearance of the risk that a bank's working capital could become largely tied up in claims that were difficult to realise in crisis periods, such as shares and loans to industry, while their liabilities – mainly demand deposits – could be withdrawn at short notice.

4 « Exposé des motifs du projet de loi concernant l'institution d'une Banque Nationale », in Lois organiques, statuts et règlement d'ordre intérieur. Recueil des documents et discussions parlementaires concernant l'institution de la Banque Nationale, Banque Nationale de Belgique (1916 : 51).

When analysing the several banking crises that struck Belgium, especially in the difficult 1870s and 1880s, the following general picture emerges (see also Figure 2). First, whether or not a rescue operation was set up depended very much on the personality of the Finance Minister. A case in point was the severe 1885-1886 panic which was allowed to rage on. Ultimately, more that 20 per cent of total paid-up capital in the Belgian banking sector went up in smoke (Durviaux 1947).

Second, if the Finance Minister decided to intervene, he usually set up a consortium of financial institutions to keep the bank in difficulty afloat. When the ailing bank specialised in supplying discount credit, the Finance Minister usually asked the NBB to join the effort, but the NBB's specific role varied considerably from case to case.

Figure 2
Discount operations of the National Bank and financial crises, 1866-1899



Note: The peak in July 1895 is due to massive discount operations for the Belgian branches of the Banque de Paris et des Pays-Bas and Crédit Lyonnais on 19 July 1895 (Archives of the NBB, Conseil d'administration, 21 July 1895).
Sources: Discount operations: NBB, Rapports annuels, 1867-1899; industrial production: Gadisseur 1973.

When a crisis hit universal or investment banks, the Finance Minister did not ask the NBB for help. Most universal banks' collateral consisted of shares and industrial loans, while bills of exchange and government securities made up only a modest part of their total assets (Durviaux 1947). As indicated earlier, the NBB was only allowed to provide liquidity against the last category of collateral. Moreover, the NBB's first duty was to maintain convertibility of banknotes. So its financial capacity to participate in rescue operations was relatively limited, especially in cases where a banking crisis coincided with monetary unrest. Therefore, the Finance Minister usually asked the Société Générale, Belgium's most important (universal) bank, to take up a pivotal role in arranging lifeboat operations. The Société Générale often responded in a positive way to such requests. Prestige reasons certainly help to explain this activist stance, but the bank also made sure that the State bore most of the financial risks involved.

For the second half of the 19th century, we have to conclude that the NBB cannot be considered as a lender of last resort, in the sense of taking responsibility for the stability of the financial system. The Finance Minister played a far more important role, while the Société Générale was involved in most rescue consortia (Buyst and Maes 2008).

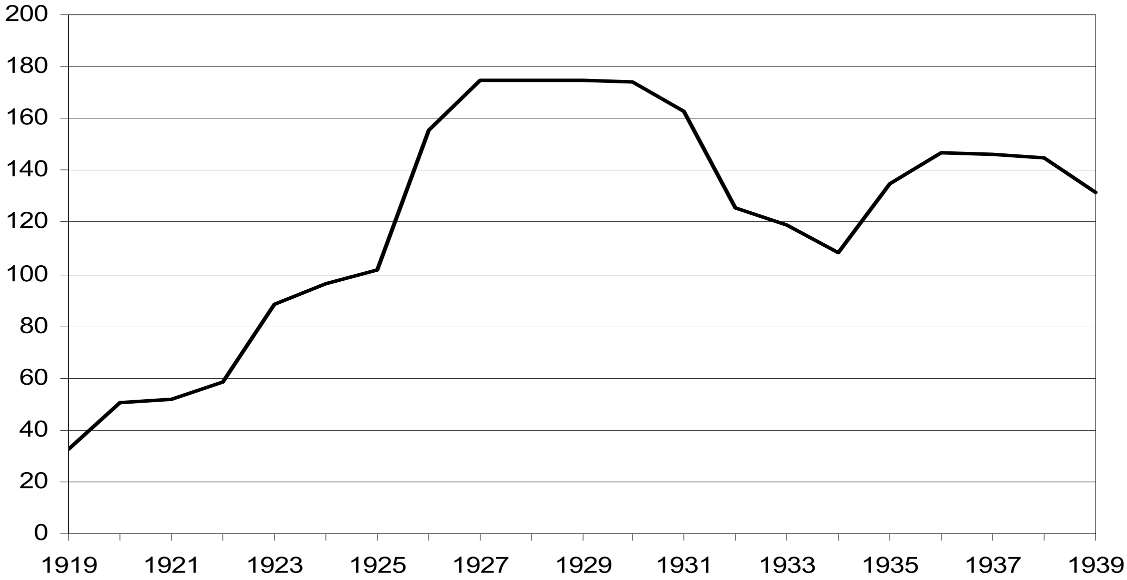
4. The interwar period

Between the last decades of the 19th century and the early 1930s, little changed: Belgium remained a very liberal country with no specific legal controls over private financial institutions. Even a system of standardised accounting practices was missing. Banks – and other limited liability corporations – continued to publish their annual balance sheets in the format they wished. In this way, the effects of possible mismanagement could relatively easily be disguised.

4.1 The Great Depression

Being a small open economy, Belgium was seriously hit by the Great Depression. The general slump in world demand and the spread of various forms of protectionism soon strangled exports. Things became even worse as the Belgian government decided in September 1931 not to follow the British pound's abandonment of gold convertibility. The subsequent steep depreciation of sterling dealt a heavy blow to Belgium's competitive position on world markets, all the more so as two-thirds of Belgian foreign trade was paid for in sterling (Figure 3).

Figure 3
The sterling exchange rate expressed in Belgian francs, 1919-1939 (annual averages)



Source: NBB, Rapports annuels, 1919-1940.

The government responded to these problems by launching a deflation policy. Reducing domestic prices and costs would once again bring them into line with the lower world market level. However, this proved to be much more difficult than anticipated. In the case of public finances, the government did not succeed in pushing through sufficient austerity measures so that substantial budget deficits kept on popping up. The government often resorted to tax increases that, in one way or the other, pushed up production costs. The reduction in nominal wages also encountered fierce resistance, so that the intended alignment of Belgian prices with the world market level made only painfully slow progress. So, in the sectors exposed to international competition, business closures and downscaling of operations continued unabated (Buyst 2004).

For many Belgian banks, this was bad news. They often had substantial shareholdings in export-oriented producers of semi-finished goods – steel, non-ferrous metals, glass – precisely the categories hardest hit by the world depression. To survive, these companies needed additional loans. There was immense pressure on the universal banks to put more money on the table, because if a company which it controlled went bankrupt, the financial institution would lose both the stake in the firm and the loans granted (Van der Wee and Verbreyt 1997). Moreover, no-one could foresee that the economic malaise would drag on for so long. The outcome was inevitable: soon the companies could no longer repay their additional borrowings either, which in turn undermined further the liquidity position of the universal banks. Nor could the financial institutions cash in their share portfolio without incurring heavy losses, because of the persistently steep fall in share prices.

As early as 1930, Belgium was shaken by a number of bankruptcies in the export industry. The Banque de Bruxelles, which had pursued a policy of aggressive expansion in the late 1920s, was one of those to suffer heavy losses. When a number of medium-sized banks suspended their payments in 1931-1932, the public began to withdraw deposits, causing a further deterioration in the liquidity position of financial institutions.

The NBB repeatedly set up rescue operations to help banks suffering payment difficulties, but its capabilities were constrained by the strict provisions of its statutes. For example, it was not allowed to rediscount industrial loans, often the most important collateral of universal banks. Also, as a private company, the NBB was very concerned about the satisfactory conclusion of the operations financed. Once all acceptable securities owned by a financial institution with liquidity problems had been pledged, the NBB mercilessly turned off the supply of credit (Van der Wee and Tavernier 1975). Moreover, the financial crisis rapidly grew to such proportions that a central bank acting alone could no longer save the system. Yet there were some inconsistencies in the actions taken by the NBB. In a climate of falling prices, it kept the nominal discount rate at a relatively high level, compared with France, for example. Such an interest rate policy was unlikely to alleviate the financial distress of the banking sector.

4.2 The reform of 1934: the separation of deposit banks and holding companies

In March 1934, the financial crisis reached a first peak with the bankruptcy of the Banque Belge du Travail. When it emerged that this institution had used deposits to acquire shares in companies, a storm of indignation erupted among the population. The savings of small depositors had been used to finance very risky operations[5]. Also, the oligopolistic practices of some large financial institutions[6] and their grip on Belgian politics were highly criticised. In such a climate, the socialist demand for nationalisation of the sector found an ever more receptive audience.

A new wave of deposit withdrawals plunged the banks still deeper into the mire, so that urgent action by the government was needed to avoid a collapse of the financial system. However, the government realised that public opinion would only accept a large-scale rescue operation for the banks if the sector underwent an accompanying and radical structural reform. So on 22 August 1934, two important Royal Decrees were passed simultaneously (*Moniteur belge*, 24 August 1934).

The first Decree authorised the banks to exchange sound but frozen claims on industry for bonds issued by the Société Nationale de Crédit à l'Industrie (SNCI), up to a maximum of 2 billion francs[7]. Since those bonds were backed by State guarantee, they could be presented to the NBB for discounting. However, it took several months for all practical problems to be solved and the system to become fully operational. The measure improved the liquidity of banks, but it was a case of "too little, too late". A rough estimate indicates that at least double the amount had to be injected to really get the banking system afloat again. But such an effort was of course not reconcilable with a deflation policy (Van der Wee and Tavernier, 1975).

The second Decree required the universal banks to split into two separate institutions: a pure deposit bank and a holding company. According to the government, the new structure guaranteed protection for small savers. Separating the management of deposits from the acquisition of shares in companies greatly reduced the risk of liquidity problems in the banking sector. Moreover, it

5 In fact, the Banque Belge du Travail was the big exception. Most Belgian universal banks financed portfolio operations with their own capital and reserves.

6 In the early 1930s, the Société Générale alone controlled 100% of the Belgian copper industry, 60 to 75% of the zinc industry, about 50% of the iron and steel sector, 40% of the glass industry, etc. (van der Valk 1932). Société Générale and Banque de Bruxelles together accounted for about 50% of all banking assets in Belgium.

7 The Société Nationale de Crédit à l'Industrie/Nationale Maatschappij voor Krediet aan de Nijverheid (SNCI) was set up in 1919. Its main purpose was to grant industrial credit on medium and occasionally on long term primarily to medium-sized firms. The SNCI financed these operations by issuing bonds and notes backed by State guarantee (Vandeputte 1961).

became more difficult for (deposit) banks to hide losses behind complex portfolio operations. Finally, a system of standardised accounting practices was imposed on the deposit banks. The government hoped that these measures would restore people's confidence in the banking system and that the withdrawal of deposits would automatically cease.

The new legal framework was clearly inspired by the British banking system and its high degree of specialisation. The relative absence of major financial crises in Britain had impressed contemporaries throughout the Western world. Before Belgium, countries such as Italy and the United States had taken similar measures to separate investment and deposit activities (De Barsy 1960; Toniolo 1995).

Remarkably, Belgian bankers did not protest loudly against these radical reforms. Quite to the contrary, detailed archival research has demonstrated that the big universal banks, and especially the Société Générale, had largely developed the whole scenario themselves (Vanthemsche 1997). This, of course, begs the question why? First, the operation appeased public opinion, since splitting the universal banks was perceived as a kind of punishment for big capital. So, the threat of nationalisation disappeared from the political agenda once again. Second, the major restructuring opened opportunities for banks to write off a sizeable part of their losses in an almost unnoticeable way (Baudhuin, 1935; De Barsy, 1960).

4.3 The final crash?

The government's illusions were soon shattered. At the end of 1934, rumours started circulating that the Algemeene Bankvereeniging and the Middenkredietkas – the savings bank of the Belgian Farmers League – were on the point of closing their doors. Again the government launched a large-scale rescue operation (Goossens 2002), but this could not prevent the outbreak of a general crisis of confidence. People not only rushed to financial institutions to withdraw their deposits *en masse*. In addition, the government's deflation policy lost all credibility as it seemed to cause nothing but financial crises and unemployment. The spectre of massive capital flight reared its head, rendering the position of the Belgian banking system still more precarious. On international currency markets, the franc soon came under heavy attack from speculators. If a financial catastrophe was to be avoided, an immediate turnaround was essential.

March 1935 brought a radical upheaval on the Belgian political scene. King Leopold III asked the NBB's vice-governor, Paul van Zeeland, to form a government of national unity. Once van Zeeland was appointed prime minister, he immediately devalued the franc by 28 per cent. In the short run, the devaluation of the franc was certainly beneficial to the Belgian economy. It restored the competitiveness of Belgian firms, so that they were able to take full advantage of the revival in international economic activity which got under way in the mid-1930s. Moreover, large amounts of capital flowed back into the country, immediately solving the banks' liquidity problems.

The near collapse of the financial system in late 1934 and early 1935 had shown that dividing up the universal banks was not sufficient to restore confidence in the sector. Policy-makers had realised that financial institutions fulfilled crucial functions in the public interest: they managed the national savings and credit system, and they created bank money which determined to a considerable degree the performance of the rest of the economy. Therefore, the government decided to regulate the activities of the sector and to bring the private financial institutions under State supervision.[8]

4.4 The structural reforms of the second half of the 1930s

The structural reforms of the second half of the 1930s can be divided into four categories. First, all private financial institutions that received deposits with a maturity of less than two years had to be recognised by the government either as a deposit bank or as a savings bank (see Table 1). The new legal framework clearly favoured a specialised financial system. Savings banks could only develop those activities which were explicitly permitted by law. So they had to invest at least 60 per cent of their deposits in long-term assets, mainly government securities and mortgage loans. On the contrary, deposit banks were – in principle – entitled to engage in any financial activity unless explicitly forbidden. Stakes in non-banking companies, for instance, remained prohibited. From the mid-1930s, deposit banks focused their lending activities on short-term credit to industry in order to maintain their liquidity. This *de facto* specialisation corresponded to the legislator's philosophy. Long-term financing of industrial projects became the field of holding companies and the SNCI (Durviaux 1947).

Second, new institutions were established to organise state supervision. In the case of savings banks, the Office Central de la Petite Epargne (OCPE) was set up. The OCPE was *de facto* a subdivision of the National Bank of Belgium: The governor of the NBB chaired the OCPE and the office was housed in the NBB's premises (Goossens 2002). Much more important, however, was the establishment of the Banking Commission, inspired by the Swiss example (Vanthemsche 1980). Among other things, the institution had the power to require deposit banks to maintain certain ratios: a liquidity ratio – the ratio between assets that can be readily realised and short-term deposits – and a solvency ratio – the ratio between equity capital and the total volume of deposits. The Banking Commission, in consultation with the NBB, could also set maximum interest rates for certain categories of lending. Via a network of independent, certified auditors, the new institution also coordinated the supervision of each individual bank's activities.

Prime Minister van Zeeland had intended the Banking Commission to function under the aegis of the NBB but, in the end, that hope was frustrated. After fierce lobbying by the major deposit banks, fearing an excessive concentration of power, the Banking Commission was set up as an independent public institution. Nevertheless, the government aimed at close cooperation between the two: the NBB would concentrate on credit policy and the Banking Commission would focus on the protection of savers. At first, there was little sign of any such cooperation, but things changed in the late 1930s.

8 Rapport au Roi, Royal Decree No. 185 of 9 July 1935 (*Moniteur belge*, 10 July 1935).

Table 1
Belgium's financial system by the end of the 1930s

	Private financial institutions		**Public credit institutions**
	Savings banks	**Deposit banks**	
Statute	Royal Decree No. 42 of 15 December 1934	Royal Decree No. 185 of 9 July 1935	Law or Royal Decree of their foundation
State supervision	*Office Central de la Petite Epargne (OCPE)*	Banking Commission	Government
Lender of last resort	National Bank of Belgium (NBB) and since 1935 also *Institut de Réescompte et de Garantie (Rediscount and Guarantee Institute, RGI)*		Government

Sources: Moniteur belge, 16 December 1934, 10 July 1935, 11 November 1937 (Royal Decree of 22 October 1937).

Third, the government improved the access of financial institutions to emergency liquidity. As indicated above, the NBB's capabilities to help banks facing payment difficulties during the crises of 1934 and early 1935 had been constrained by the strict provisions of its statutes. Inspired by the German example, the government established the Institut de Réescompte et de Garantie (Rediscount and Guarantee Institute or RGI) that would mobilise at favourable conditions medium-term paper that did not qualify for discounting by the NBB. More specifically, the RGI focused on discounting bank loans to industry. The official justification for setting up a separate institution was that, particularly during financial panics, the NBB should remain the guardian of monetary orthodoxy. Therefore, it should only discount high-quality short-term bills of exchange and government securities (*Moniteur belge*, 14 June 1935; Van der Wee and Tavernier 1975). A more plausible hypothesis, however, is that the socialist coalition partner mistrusted the NBB, *i.e.* because it was a private company. The socialists clearly wished to vest greater powers in public institutions, such as the RGI. Be that as it may, it was not long before the NBB and the RGI were working in close partnership.

Fourth, various initiatives were taken to reinforce the role of public credit institutions (PCI). In 1936, the Office Central de Crédit Hypothécaire was established to mobilise mortgage claims and to put downward pressure on mortgage rates. The following year, the government tightened its grip on the Société Nationale de Crédit à l'Industrie and set up new specialised PCIs to provide credit to small businesses and farmers (see Table 2). Although the role of these newcomers remained limited before the Second World War, their competences often overlapped with those of existing PCIs which soon created tensions. Moreover, many private financial institutions complained bitterly about unfair competition from the public credit institutions as a whole and the CGER in particular (Vanthemsche 1997; Goossens 2002). After the financial panics of the mid-1930s, many depositors felt more at ease being a client of an institution backed by the State.

Table 2
Public credit institutions by the end of the 1930s

Name	Date of establishment
Crédit Communal	Royal Decree of 8 December 1860
Caisse Générale d'Epargne et de Retraite (CGER)	Law of 16 March 1865
Société Nationale de Crédit à l'Industrie (SNCI)	Law of 16 March 1919
Caisse Centrale du Petit Crédit Professionnel	Law of 11 May 1929
Office Central de Crédit Hypothécaire	Royal Decree No. 226 of 7 January 1936
Institut Nationale de Crédit Agricole	Royal Decree of 30 September 1937
Caisse Nationale des Classes Moyennes	Royal Decree of 14 October 1937

Did these measures help to stabilise the Belgian financial system? Between mid-1937 and September 1938, deposits fell by about a quarter because of a new international recession and the growing threat of war (Commission Bancaire 1937-1938). Despite this new onslaught, only a few deposit banks ran into difficulties. In the case of the Crédit Anversois, the RGI tried to arrange a rescue operation, but in vain. After the bank's failure, the RGI provided advances to Crédit Anversois depositors (Baudhuin 1946).

5. The second half of the 20th century

In the post-war period, there were no major banking crises in Belgium. There were a few bankruptcies of small banks, mostly because of fraud. There were also a few other incidents, like significant foreign exchange losses in a major bank in the first half of the 1970s (due to open positions) and problems with the Office Central de Crédit Hypothécaire. So, reforms in the institutional framework for banking supervision were not driven by crises, like in the interwar period, but rather by changes in the financial landscape, characterised by the growing role of market forces.

5.1 The financial sector at the end of the war

After the Second World War, the financial sector was regarded as a special sector, in which the government had an important role. This was to a large extent a legacy of the interwar period, when bank runs, stock market crashes and the Great Depression had led to significant government intervention in the financial system. Crucial objectives of the government were the protection of small savers and the prevention of systemic financial crises (Maes, 2007). The government intervened in a multitude of ways: different forms of regulation, the creation of institutions which were responsible for the supervision of the financial sector (Banking Commission) and government financial institutions providing financial services. The situation was not only typical for Belgium but for most countries in Europe. It was concisely summarised in a Report for the European Commission:

> *Les choix des pouvoirs publics sont pour l'essentiel à l'origine de la répartition de la demande de moyens de financement ... Le volume fixé aux investissements publics, la fonction centrale remplie par les intermédiaires financiers à caractère public, la*

> *position dominante des administrations publiques sur le marché financier ne laissent en définitive subsister qu'un domaine relativement restreint où la répartition des ressources s'effectue à travers les mécanismes de marchés traditionnels* (Commission of the European Communities 1966: XV).

As discussed earlier, there were three important categories of financial institutions which received deposits and granted loans in Belgium: banks, private savings institutions and public credit institutions. The distinction between these three categories was largely based on legal and historical grounds (Belgian Banking Association 1987). However, they were also specialised in different types of business and focused very much on different clients:

- banks: traditionally concentrated on industry and commerce. Their deposits and loans were mostly short-term;
- savings institutions: focused on the market of small savers. Historically, their target group was private individuals and their main product was a savings-book account. They invested their funds mainly in mortgage loans and government securities;
- public credit institutions: they were created to perform specific missions and to fill certain "gaps" left by the market.

5.2 Changes in the financial landscape

In the post-war period, the role of market forces in the Belgian financial system gradually increased. It went hand in hand with a growing despecialisation and internationalisation of the Belgian banking system.[9] In this essay, we will focus mostly on despecialisation, as it went together with an extension of the supervisory responsibilities of the Banking Commission, which was first transformed into the Banking and Finance Commission and later into the Banking, Finance and Insurance Commission. However, there was also a strong internationalisation of the Belgian banking sector, culminating, at the turn of the millennium, in several mergers of Belgian and foreign banks. Moreover, prudential rules came to be determined more and more by European Union directives.

The movement away from specialisation started during the 1950s and gathered momentum in the following decades. Banks, which were less bound by legal restrictions, took the lead. They expanded their activities into new market segments (Cassiers *et al.* 1998). This was clearly reflected in the growth of the banks' market share in areas which had traditionally been the specialisation of public credit institutions and savings banks, like savings accounts and certificates. They also diversified their assets, branching out into loans to private customers, like mortgage credit. On the whole, their market share increased.

9 For an analysis of the changes in the Belgian banking sector, see Abraham (1990).

Table 3
Market shares of the different groups of financial institutions in some important market segments (%)

	End of year	Banks	Savings institutions	Public credit institutions	Total
Sight deposits	1950	87.1	-	12.9	100.0
	1960	86.2	-	13.8	100.0
	1970	77.6	1.7	20.7	100.0
	1980	66.8	4.8	28.4	100.0
	1982	70.0	5.3	24.7	100.0
Time deposits	1950	57.0	10.8	32.2	100.0
	1960	63.1	18.1	18.8	100.0
	1970	60.7	13.7	25.6	100.0
	1980	67.7	10.6	21.7	100.0
	1982	71.5	11.7	16.8	100.0
Savings accounts	1950	13.4	9.7	76.9	100.0
	1960	12.4	15.8	71.8	100.0
	1970	26.7	21.1	52.2	100.0
	1980	34.2	23.6	42.2	100.0
	1982	34.1	23.9	42.0	100.0
Bonds and certificates	1950	0.8	2.2	97.0	100.0
	1960	7.7	4.9	87.4	100.0
	1970	7.3	11.2	81.5	100.0
	1980	15.7	13.7	70.6	100.0
	1982	17.7	14.4	67.9	100.0
Credit	1958	32.5	9.8	57.7	100.0
	1970	37.8	11.8	50.4	100.0
	1980	44.4	13.4	42.1	100.0
	1990	51.0	13.5	35.5	100.0

Source: National Bank of Belgium and Belgian Banking Association.

The savings institutions also jumped on the bandwagon of the despecialisation process and expanded their market share. This was made possible by the gradual relaxation of the restrictions imposed on them. A milestone was the "Mammoth" Law of 30 June 1975, based on preparatory work of a study group, presided by the Vice-Governor of the NBB, De Voghel. As indicated by Willy De Clercq (1975: 5), the then Finance Minister, the main objective of the law was "*permettre la poursuite ordonnée de la tendance à la déspécialisation*". The law provided for an almost total despecialisation of savings institutions. Also, since 1985, they have become entitled to call themselves 'saving banks'.

The public credit institutions took part in the despecialisation process, too. Most of them were able to diversify their activities while remaining within the limits of the existing legal framework. The most significant change was the transformation of the savings division of ASLK-CGER into a full-service public "bank" in 1980. However, public credit institutions mostly lost market share.

From the 1970s onwards, there was a sharp acceleration in the trend towards globalisation of the financial markets. Also, financial innovations started flourishing, especially on the international financial scene, with many of the new products not appearing on the balance sheet of a bank. In particular, there was a breakthrough of derivative products, like currency and interest rate swaps, currency and interest rate options and forward rate agreements.

Furthermore, attitudes towards risk capital were changing. There was a growing feeling that the aversion of savers towards shares was contributing to a weak financial structure of firms, making them much more vulnerable. In France, the July 1978 'Monory law' (named after Finance Minister René Monory) brought in tax incentives for French households acquiring shares, as well as for certain firms when issuing new shares. In Belgium, the so-called Cooreman-De Clerck law introduced similar measures in 1982.

So, in the 1970s, and especially in the 1980s, financial markets gained in importance in most countries. Three elements were important: (1) existing markets expanded and deepened significantly. The government often played a key role, with market reforms and tax incentives, as was the case in Belgium (Lefebvre 1993); (2) new financial markets emerged; and (3) secondary markets sprang up for many instruments.

Stronger competition in the financial sector, which also put pressure on profit margins, further stimulated the despecialisation process. Banks and non-banks were also entering into ancillary services, such as insurance, pension funds, stockbroking and financial advisory services. The trend towards diversification in retail financial services was most apparent in the efforts to provide a “financial supermarket” with a one-stop-shop service for all financial needs. The law of December 1990, which reformed the stock market, further strengthened this process. Stockbrokers were now obliged to set up as stock exchange companies (with stricter rules concerning own funds), while credit and insurance institutions were allowed to acquire stakes in this type of company (Maystadt 1990).

In the post-war period, there was a gradual relaxation of the shareholding restrictions on banks. The law of 3 May 1967 authorised banks to hold bonds of industrial and commercial companies as well as to hold shares temporarily in order to place them in the market. Moreover, this tendency was evident at European level (Maes 2007). The Second Banking Directive, which came into force on 1 January 1993, partly inspired by the German model of universal banking. It allowed the acquisition by banks of insurance and investment firms as well as the creation of financial conglomerates.

In the 1990s, "bancassurance" became very trendy in Belgium. There were several acquisitions between banking and insurance companies, leading to the formation of bancassurance groups. Through these operations, concentration in the financial sector increased significantly. Noteworthy is also the participation of foreign groups (especially Dutch and French) in several of these mergers and acquisitions. Naturally, deregulation was an important factor in the growth of financial conglomerates. It was not until 1993 that credit institutions were allowed to hold stakes in insurance firms. This paved the way for big bancassurance groups to sell insurance and banking products through the same channel. Stiff competition in the sector, which exerted a downward pressure on bank profits, was another key factor. Banks responded by engaging in financial innovations and by developing new lines of business.

Furthermore, from the mid-1990s, the public credit institutions' privatisation process was put in motion. This was based on the law of 22 March 1993, under which public credit institutions became subject to the same legal and regulatory framework as other credit institutions. In the following years, most of the public credit institutions were sold to private financial groups.

5.3 An extension of the role of the Banking Commission

In line with the despecialisation of financial institutions, the responsibilities of the Banking Commission were extended over time.[10] Until April 1976, private savings institutions were supervised by the "Office Central de la Petite Épargne". In that year, the Office was wound up and its tasks transferred to the Banking Commission, in line with the recommendations of the De Voghel report (Commission gouvernementale pour l'étude de propositions de réforme des lois relatives à la banque et à l'épargne 1970).

The public credit institutions had a specific supervisory status. However, in 1980, the ALSK-CGER public bank came also under the supervision of the Banking Commission. With the Law of July 17 1985, micro-economic supervision of all public credit institutions was centralised with the Minister of Finance. A government commissioner was also appointed to each public credit institution. In addition, all public credit institutions, except the ASLK-CGER, were subject to a "specialised" guardian Minister, operating alongside the Minister of Finance. A fundamental change came with the law of 22 March 1993, under which public credit institutions became subject to the same legal and regulatory framework as the other credit institutions.

Throughout the post-war period, the Banking Commission had been gradually entrusted with additional responsibilities concerning the securities markets. In 1957, it became responsible for the supervision of investment and unit trusts and, in 1964, for the supervision of all public emissions of securities. The Law of 4 December 1990 brought a fundamental reform of the way the stock market operated. The powers of the Banking Commission were extended and it was transformed into the Banking and Finance Commission.

The law of 2 August 2002 radically reorganised prudential supervision in Belgium. As part of that process, the Banking and Finance Commission and the Insurance Supervision Office were merged on 1 January 2004 to form a single supervisory body, the Banking, Finance and Insurance Commission (CBFA). Moreover, cooperation with the NBB was significantly reinforced and institutionalised.

5.4 An increasing role for the NBB at the start of the new millennium

Since the 1930s, the responsibilities of the NBB (the monetary authority and the bank of banks) were separate from those of the Banking Commission, which is responsible for traditional banking supervision, also known as micro-prudential supervision. In the last decade, the NBB has acquired an increasing role in prudential matters (Buyst, Maes and Pluym 2005). This mainly reflects the growing importance of “macro-prudential” aspects which relate to the stability of the financial system as a whole.

The NBB has traditionally been involved in the stability of the financial system via its responsibility for payment instruments. It is in fact via the payment systems that a crisis in one

[10] Over time, there were also changes in the way the Banking Commission exercised its supervision, mostly following European directives (e.g. own funds).

institution threatens to affect other institutions, and hence the stability of the whole financial system. Also, as the bank of banks, responsible for providing liquidity to the financial system, the NBB performs a macro-prudential function. In the past few decades, the NBB has also been involved, via its international role, in developing new prudential rules at the European and wider international level.

The liberalisation and globalisation of the financial markets have made the financial system more open and more competitive. The risks within the financial system have also increased. Furthermore, the ever-accelerating pace of financial innovations makes it more difficult to assess and locate the risks. The emergence of very large financial institutions also means that a problem in one large institution could have systemic implications. All these factors are tending to blur the boundaries between macro- and micro-prudential supervision. The central bank, traditionally responsible for macro-financial stability, must not then be denied the information on the conduct of the major players who control the financial landscape, and whose failure could have a critical impact on the system. Similarly, it is vital that the institutions responsible for micro-prudential supervision should be able to tailor their action to the macro-economic context.

With the law of 17 December 1998, the NBB has an explicit legal basis for exercising macro-prudential supervision. On 1 January 1999, it also took over the functions of the RGI. The main prudential function of the RGI was the management of the “Protection Fund for Deposits and Financial Instruments”. The Protection Fund’s task is to give financial compensation to depositors and investors who have suffered damages following the bankruptcy of a credit institution or investment undertaking. The RGI has been involved in these activities since 1975, when a "Security pool" was set up to compensate depositors of a credit institution which went bankrupt (Vandeputte, Abraham and Lempereur 1981).

Stronger links were also established between the NBB and the BFIC, the aim being to ensure closer cooperation and to develop synergies. Thus, three members of the NBB’s Board of Directors are also members of the BFIC's Management Committee. In addition, as foreseen in the law of August 2002, a Financial Stability Committee was established in 2003. It comprises the members of the NBB’s and BFIC's boards, and is chaired by the governor of the NBB. It deals with all matters of common interest, such as the overall stability of the financial system, the coordination of crisis management and the management of synergies between the two institutions. A Financial Services Authority Supervisory Board was also set up in 2004, combining the BFIC supervisory board and the NBB’s Council of Regency. This Board, which is also chaired by the governor of the NBB, has a primarily advisory role concerning the organisation and operation of the financial markets and institutions. However, the BFIC has retained its powers of micro-prudential supervision and autonomy of decision. The Law of 2 August 2002 also obliged both institutions to cooperate and to pool resources in order to realise synergies.

The financial crisis hit Belgium seriously in the Autumn of 2008. The National Bank of Belgium, as some other national central banks, had to take emergency steps to supply additional liquidity to financial institutions facing particularly severe pressure. The crisis also showed deficiencies in the supervisory structure, such as that central banks must have access to all information on individual institutions which could imperil overall financial stability, which is not yet the case in Belgium (Quaden 2009: 6). In December 2008, the Government also created the "High Level Committee for a new Financial Architecture", chaired by Alexandre Lamfalussy, with a mandate to elaborate proposals to strengthen the financial system.

6. Conclusion

After severe crises in 1838 and 1848, the National Bank of Belgium was established in 1850, marking a fundamental reform of the Belgian financial system. It aimed at rendering the financial system more crisis-resistant: the NBB was subject to strict rules and could grant only short-term credit against collateral. However, with the spread of deposit accounts, investments in industry were again financed by short-term financing.

The Great Depression and the bankruptcies of the 1930s brought to the fore the weaknesses of the Belgian financial system. It led to major reforms, while also enhancing the role of the government in the financial sector. A decree adopted in August 1934 required the mixed banks to be split up into two separate institutions: a pure deposit bank and a holding company. Separating deposit taking from the acquisition of shares greatly reduced the risk of liquidity problems and restricted the leverage of the banking sector. A Decree of July 1935 established the Banking Commission. This institution had the power to require the banks to maintain a liquidity ratio and a solvency ratio. Also, via a network of independent, certified auditors the new institution coordinated the supervision of each individual bank's activities. Moreover, the government established, by Decree of June 1935, the Rediscount and Guarantee Institute (RGI), for rediscounting medium- or long-term receivables, something which the NBB was prohibited to do (and which had hampered financial rescue operations).

In the post-war period, there were no major banking crises in Belgium. So, reforms in the institutional framework of banking supervision were not driven by crises, like in the interwar period, but by changes in the financial landscape, especially an increasing role for market forces. This went hand in hand with a process of deregulation, leading also to a greater internationalisation and despecialisation of the financial system. In line with the despecialisation process, the responsibilities of the Banking Commission were gradually extended, covering savings institutions and several aspects of the financial markets, too. In 1990, it was transformed into the Banking and Finance Commission. Around the year 2000, the organisation of prudential control in Belgium underwent significant changes. As a result, the role of the NBB in prudential matters was widened. Since 1 January 1999, the date on which it also took over the functions of the RGI, the NBB has had an explicit legal basis for exercising macro-prudential supervision. Under the law of 2 August 2002, prudential supervision in Belgium was profoundly reorganised. As part of that process, the Banking and Finance Commission and the Insurance Supervision Office were merged into a single supervisory body, the Banking, Finance and Insurance Commission (BFIC). Stronger institutional links were also established between the NBB and the BFIC, to ensure closer cooperation and to develop synergies.

In the Autumn of 2008, the financial crisis hit also Belgium severely. The crisis also showed deficiences in the supervisory structure, such as that central banks must have access to all information on individual institutions which could imperil overall financial stability, which is not yet the case in Belgium. In December 2008, the Government created the "High Level Committee for a new Financial Architecture", chaired by Alexandre Lamfalussy, with a mandate to elaborate proposals to strengthen the financial system.

APPENDIX 1

THE MAIN BANKING REGULATORY REFORMS IN BELGIUM

Year	Regulating entities	Regulated entities	Main regulatory instruments
Law of 5 May 1850	Ministry of Finance	National Bank of Belgium	*De facto* monopoly on note issuance; Restrictions on activities and asset holdings; Government commissioner
Royal Decree of 22 August 1934	Ministry of Finance	Universal banks	Separation in deposit banks and holding companies
Royal Decree of 9 July 1935	Banking Commission	Deposit banks	Possibility to impose liquidity and solvency ratios; disclosure to authorities and on-site examinations
Law of 30 June 1975		Savings banks	
Law of 22 March 1993		Public credit institutions	
Law of 17 December 1998	National Bank of Belgium		Macro-prudential supervision
Law of 2 August 2002	Financial Stability Committee Banking, Finance and Insurance Commission	 Insurance Companies	Strengthen coordination macro- and micro-prudential supervision

APPENDIX 2

MAIN DEVELOPMENTS IN THE POST-WAR PERIOD

1946 Introduction of liquidity and solvency coefficients for banks.
1957 Banking Commission becomes responsible for the supervision of investment and unit trusts.
1964 Banking Commission becomes responsible for the supervision of all public emissions of securities.
1967 Banks allowed to hold shares temporarily, in order to place them on the market.
1970 Report of the "Commission gouvernementale pour l'étude de propositions de réforme des lois relatives à la banque et à l'épargne" (Rapport De Voghel).
1975 Constitution of a "Security pool" at the RGI to compensate depositors in the event of a bankruptcy.
Law of 30 June ("Mammoth" law). The law provided a framework for the despecialisation process.
1976 Tasks of "Office Central de la Petite Épargne" transferred to the Banking Commission.
1980 Banking Commission becomes responsible for the supervision of CGER-public bank.
1985 Micro-economic supervision of all public credit institutions centralised with the Finance Minister (exception CGER-public bank).
1990 Law of 4 December, reforming the stock exchange. The Banking Commission is transformed into the Banking and Finance Commission.
1993 Coming into force of the Second Banking Directive (allowing the German model of universal banking).
Credit institutions allowed to hold participations in insurance firms.
Law of 22 March. Public credit institutions become subject to the same legal and regulatory framework as other credit institutions. Start of privatisation process.
1999 NBB becomes responsible for macro-prudential supervision and takes over the prudential functions of the RGI.
2002 Law of 2 August on the supervision of the financial sector.
2003 Creation of the Financial Stability Committee
2004 Creation of Banking, Finance and Insurance Commission.
Creation of the Financial Services Authority Supervisory Board.
2009 Creation of the High Level Committee for a New Financial Architecture, chaired by Alexandre Lamfalussy.

REFERENCES

Abraham, J.-P. (1990), “The Process of Change in Belgian Banking”, in Gardener, E. (ed.), *The future of financial systems and services,* Macmillan: London, pp. 37-50.

Bank for International Settlements (1986), *Recent Innovations in International Banking*, BIS: Basle.

Baudhuin, F. (1935), “Les finances privées en 1934”, *Bulletin de l'Institut des Sciences économiques*, VI, No. 2, pp. 103-17.

—————— (1946), *Histoire économique de la Belgique 1914-1939*, Bruylant: Brussels.

Belgian Banking Association (1987), *The Belgian Banking System, Aspects & Documents,* August.

Buyst, E. (2004), “Economic Growth in an Era of Severe Macroeconomic Imbalances: Belgium, 1910-1934”, in Heikkinen, S. and van Zanden, J.L. (eds.), *Exploring Economic Growth. Essays in Measurement and Analysis*, Aksant: Amsterdam, pp. 167-81.

Buyst, E. and Maes, I. (2008), “Central banking in nineteenth century Belgium: was the NBB a lender of last resort?”, *Financial History Review*, 15, pp. 153-73.

Buyst, E., Maes, I. and Pluym, W. (2005), *The Bank, the Franc and the Euro, A History of the National Bank of Belgium,* Lannoo: Tielt.

Cassiers, I., De Briey, V., Degavre, F. and Provost, A.C. (1998), “Les banques belges face à l'État: une rétrospective (1935-1993)”, IRES Discussion Paper, No. 7, pp. 75-100.

Chlepner, B.S. (1926), *La Banque en Belgique. Etude historique et économique*, Lamertin: Brussels.

—————— (1943), *Belgian Banking and Banking Theory*, Washington: Brookings.

Commission Bancaire (1937-1938), *Rapports annuels*.

Commission gouvernementale pour l'étude de propositions de réforme des lois relatives à la banque et à l'épargne (1970), *Rapport* (Rapport De Voghel), Bruxelles, 30 novembre.

Commission of the European Communities (1966), *Le développement d'un marché européen des capitaux*, Rapport Segré, Bruxelles.

De Barsy, E.G. (1960), “Introduction”, in *Commission Bancaire 1935-1960*, Bruylant: Brussels, pp. 15-56.

De Clercq, W. (1975), “Loi relative au statut des banques, des caisses d'épargne privées et de certains autres intermédiaires financiers”, *Bulletin de Documentation*, Ministère des Finances, Septembre-Octobre, No. 9-10, pp. 3-11.

—————— (1979), “Projet de loi relatif au statut des banques, des caisses d'épargne privées et de certains autres intermédiaires financiers”, *Réforme du statut des banques et des caisses d'épargne privées*, Documents Parlementaires, Chambre, Doc. 549, No. 5, pp. 441-49.

Durviaux, R. (1947), *La banque mixte. Origine et soutien de l'expansion économique en Belgique* (Collection de l'école des sciences économiques, No. 33), Brussels: Bruylant.

Economic and Financial Committee (2001), “Report on Financial Crisis Management”, European Commission Economic Paper, No. 156.

Gadisseur, J. (1973), “Contribution à l’étude de la production agricole en Belgique de 1846 à 1913”, *Revue belge d’histoire contemporaine*, 4, pp. 1-48.

Goossens, M. (2002), “The Revival of Saving and Lending under the Aegis of the Boerenbond 1935-1967”, in Buyst, E. *et al.* (eds.), *CERA 1892-1998. The Power of Co-operative Solidarity*, Mercatorfonds: Antwerp, pp. 175-315.

Kindleberger, C.P. (1993), *A Financial History of Western Europe*, 2nd edition, Oxford University Press: Oxford.

Lamfalussy, A. (1988), “Globalization of Financial Markets: International Supervisory and Regulatory Issues”, in *Financial Market Volatility,* Federal Reserve Bank of Kansas City, pp. 133-40.

—————— (2004), *Central Banks and Financial Stability*, 2nd Pierre Werner Lecture, Banque Centrale de Luxembourg: Luxembourg.

Laureyssens, J. (1975), “The Société Générale and the origin of industrial investment banking”, *Revue belge d’histoire contemporaine*, 6, pp. 93-115.

Lefebvre, O. (1993), “Les lignes de force des réformes financières en Belgique”, *Reflets et Perspectives de la vie économique*, 32, No. 2, pp. 131-42.

Maes, I. (2007), *Half a century of European financial integration. From the Rome Treaty to the 21st century*, Mercatorfonds: Antwerp.

Maes, I. and Périlleux, V. (1993), “De prudentiële controle van de kredietinstellingen”, *Economisch en Sociaal Tijdschrift,* 4, pp 611-34.

Mayes, D. (2004), “Who pays for bank insolvency?”, *Journal of International Money and finance*, 23, pp. 515-51.

Maystadt, Ph. (1990), “Quel avenir pour la place financière belge?”, *Reflets et Perspectives de la vie économique*, 29, pp. 253-63.

NBB (1927-1950), *Bulletin d’information et de documentation*.

—————— (1867-1940), *Rapports annuels*.

Oosterloo, S. and de Haan, J. (2004), “Central Banks and Financial Stability: a Survey”, *Journal of Financial Stability,* 1, pp. 257-73.

Quaden, G. (2009), “Foreword”, in National Bank of Belgium*, Report 2008*, Brussels.

Toniolo, G. (1995), “Italian Banking, 1919-1936”, in Feinstein, C.H. (ed.), *Banking, Currency, and Finance in Europe Between the Wars*, Clarendon Press: Oxford, pp. 296-314.

Vaillant, I. and Amouriaux, G. (1996), “La gestion des crises bancaires à l'Étranger”, *Revue de la Banque,* 570, pp.62-4.

Vandeputte, R. (1961), *Quelques aspects de l’activité de la Société Nationale de Crédit à l’Industrie*, Institut Belge de Science Politique: Brussels.

Vandeputte, R., Abraham, J.-P. and Lempereur, CL. (1981), *Les institutions financières belges*, *Tome I - Le secteur public*, Éditions Érasme: Namur.

Van der Valk, H. (1932), *De betrekkingen tusschen banken en industrie in België*, Bohn: Haarlem.

Van der Wee, H. and Tavernier, K. (1975), *La Banque Nationale de Belgique et l’histoire monétaire entre les deux guerres mondiales*, Banque Nationale de Belgique: Brussels.

Van der Wee, H. and Verbreyt., M. (1997), *The Generale Bank, 1822-1997. A Continuing Challenge*, Lannoo: Tielt.

Vanthemsche, G. (1980), “L’élaboration de l’Arrêté Royal sur le contrôle bancaire (1935)”, *Revue belge d’histoire contemporaine*, 11, pp. 389-437.

—————— (1997), “The Bank from 1934 to date”, in Buyst, E. *et al.* (eds.), *The Generale Bank 1822-1997*, Lannoo: Tielt, pp. 287-531.

FINANCIAL CRISES AND FINANCIAL REFORMS IN SPAIN WHAT HAVE WE LEARNED?

*Pablo Martín-Aceña**, *Angeles Pons*** *and Concepción Betrán****

Like the rest of the world, Spain has suffered from frequent financial crises and undergone several changes in its regulatory framework. There have been crises that have been followed by reforms of the financial structure, and also troubled financial times with no modification of the regulatory and supervisory regime. In various instances, regulatory changes have predated financial crises, but in others banking crises have occurred without reference to changes in the regulatory regime. Regulation and supervision has been usually absent in the XIXth century, while in the XXth century policy makers have been more active and diligent. Moreover, all major financial crises have been followed by intense financial restructuring, although as elsewhere banking restructuring and interventions not always have been successful (in fact, the cases of failures and mixed results overcome the successful cases). The paper provides a short history of the major financial crises in Spain from 1856 to the present, and also reviews the main financial reforms and the distinctive regulatory regimes that have been in place in this last 150 years time span.

JEL: GO1, G18, N20, N40.

1. Introduction

The current international financial crisis has again raised the specter of a long and profound economic depression. Bank failures, the need for massive liquidity assistance by central banks and the intervention of governments bailing out or partially nationalizing major credit institutions have also unveiled the fragility of the financial structures in many countries. Supervisory authorities have been caught off-guard. Although we have built a highly sophisticated financial monitoring system, the truth is that it has been of no use in preventing our present economic turmoil. The regulatory framework in place has revealed its deficiencies and if we have learnt anything from the crisis it is that financial regulation and supervision need to be tightened and their scope broadened. Hence, bank regulators and supervisors have an important and increasingly difficult job. They must ensure the integrity of the payments mechanism, they have to protect the interests of depositors and they have to promote the efficiency in the banking sector. At present they must carry out these tasks in a complicated and unstable financial environment, with a background of highly variable asset markets, an unprecedented increase in the number and variety of financial instruments and withstanding the complexities created by the growing internationalization of banking and financial markets. Can history help policy makers to design a better regulatory system? Can the past provide guidelines to enhance the effectiveness of prudential regulations?

Mishkin (2001) has explained why to have good banking regulations it is essential to maintain financial stability. Moreover, he has convincingly argued that to ensure the safety and soundness of the banking industry prudential supervision is needed. An instrument such as lender of last resort may serve to contain bank panics, and explicit deposit insurance provides limited protection for depositors. Both are, however, *ex post* mechanisms to reduce the income losses

* Department of Economics, Universidad de Alcalá, Madrid. Email: pablo.martin@uah.es

** Department of Economics, Universidad de Valencia. Email: angeles.pons@uv.es

*** Department of Economics,Universidad de Valencia. Email: concepcion.betran@uv.es

generated by financial crashes. On the contrary, prudential supervision is, like preventive medicine, an *ex ante* policy instrument better suited to avoid financial catastrophes.

Mishkin has listed nine basic forms of prudential supervision of banks: a) restrictions on asset holdings and activities; b) separation of the banking and other financial service industries; c) restrictions on competition; d) capital requirements; e) risk-based deposit insurance premia; f) disclosure requirements; g) bank chartering; h) bank examination, and i) a supervisory versus regulatory approach. He argues that getting prudential supervision right is extremely important for the health of the economy. Hence policies that enhance the effectiveness of these nine basic forms of prudential supervision will contribute to preserve the safety and soundness of the financial system.

But can we really prevent financial crises? Can we design a potent regulatory framework capable to assure the stability of the financial system against all kind of economic events?

There is no full agreement in the literature that regulation and supervision assure financial stability. The repetition of financial crises and the multi-causality of their origins suggest that it has been impossible until now to devise a regulatory framework capable to prevent banking crises. Because as Díaz-Alejandro (1985: 2) put it: “there is no humanly possible way of devising a fail-proof system of finding out the true intentions of borrowers". Benston (1991: 227) has argued that regulation introduced after crisis “has overwhelmingly tended to make the banking system and individual banks less stable”. According to his views, regulations in fact have played an important role, at least in the United States, for making banking significantly less stable by constraining banks from diversifying efficiently. Calomiris and Gorton (1991) suggest that because banking and capital markets are in continuous transformation by technological change, it is extremely complicated to design effective public policy. Since each crisis has taken place in a different historical environment, regulations put in place after a particular crisis has been of no use to prevent the following episode of distress. Barth *et al*. (2001) have shown, for a sample of sixty countries, that there are substantial variations among the national regulatory framework. They too show that some forms of prudential regulation, such as restrictions on mixing banking and commerce or restrictions on security activities of commercial banks are associated with greater financial instability. They argue that, contrary to what is usually sustained, the likelihood of a banking crisis is also greater, on average, the tighter the restrictions placed on bank ownership of non-financial firms.

Perhaps there is no such thing as an optimal regulatory regime, and perhaps crises after all are simply impossible to prevent, because it is not possible to develop a framework to cover all possible events.

What do we know about banking supervision in Spain? Has the Spanish financial system been adequately regulated? Have financial reforms and regulations contributed to banking stability? What, if any, have been the policy instruments used by the Spanish authorities to combat financial instability? Which government agencies have been responsible for banking supervision? Have financial reforms been introduced as a response to financial crises? Have financial crises been followed by financial reforms? What has been the role of the Bank of Spain?

The Spanish experience of the last two centuries illustrates at least five points. First, banking crises have not been uncommon and usually they have produced damaging effects in terms of financial wealth destruction, and also in terms of lower economic growth rates. Although more research is needed, banking crises may have contributed to the retardation of the Spanish economy. Second, the Bank of Spain has not performed its duties as lender of last resort until very recently.

Third, financial crises not always were followed by changes in the regulatory framework. Fourth, a full and effective prudential regulation regime, as defined by the nine basic forms listed by Mishkin, has been introduced in the XXth century. Prudential regulation is an issue of our present days. Fifth, the long XIXth century and the XXth century offer a contrasting picture. Banking regulation was absent during the nineteenth century, dominated by the "laissez-faire, laissez passer" ideology. Not until after the First World War Spanish authorities introduced legislation to regulate the financial system. Much stricter new legislation was adopted in 1939 after the civil war, reversing entirely the relatively liberal framework of the previous periods. Market discipline was substituted by State intervention. Deregulation began in 1962 and accelerated after 1974. Modern prudential supervision rules were introduced after the devastating 1976-85 banking crisis.

Table A in the Appendix includes the main banking reforms in Spain adopted in the last 150 years. Table B also in the Appendix lists the banking regulatory agencies for four relevant periods. Finally, table C summarizes the features of the supervisory regimes for banks and saving banks between 1856 and 1975.

2. 150 years of economic and financial crises

A significant number of scholars have examined the behavior of different macroeconomics variables in the years (or months) before and after a financial crisis to investigate the possible links between the economic and the financial environments. In general, it has been proven that banking crisis tend to erupt when the economy deteriorates as a consequence of the accumulation of imbalances, and particularly when growth is low and inflation is high. Gorton (1988: 221) has forcefully sustained that banking crashes far from being “mysterious events” are in fact systemic events associated to business cycles. Kaminsky and Reinhart (1999) have examined the behavior of a number of macroeconomics variables in an ample sample of countries showing that financial crises occur as the economy enters a recession, following a prolonged boom in economic activity fuelled by credit, capital inflows, and accompanied by an overvalued currency. Demigürc-Kunt and Detragiache (1998) have found that low GDP growth, excessively high real interest rates, high inflation, adverse terms of trade shocks, the size of the fiscal deficit and the rate of depreciation of the exchange significantly increase the likelihood of systemic financial problems. The relationship between macroeconomic fluctuations, financial fragility (excessive competition, asset price increases and high non-financial sector indebtedness) and banking crises has been demonstrated by the influential works of Minsky (1977) and Kindleberger (1978). And more recently Reinhart and Rogoff (2008) have argued that periods of financial distress have been associated with macroeconomic circumstances, such as economic downturns, declines in income, and depressed assets markets, that typically follow waves of domestic and international credit expansion.

In this first section we try to identify the major Spanish economic and financial crises over the approximately 150 years time span covered by our paper. The purpose of the exercise is to find out if banking panics and failures have coincided with boom and busts in economic activity.

To identify major economic crisis we examine two key macroeconomic time series, GDP and industrial production[1]. An economic crisis is associated to a sharp and exceptionally large decline in economic activity, and according to this definition both indicators should capture every major downturn. To look for banking crises we have collected data for stock prices as well as for other typical financial variables.

[1] All data come from Prados de la Escosura (2003).

A cursory inspection of figure 1 (and the complementary figure 2) reveals that the Spanish economy had suffered at least nine severe contractions (defined as a fall in GDP growth rate equal or above 5 per cent). The first declined began in 1864 and ended in 1868, with an overall real GDP drop of 10.6 per cent. Industrial output sank too, although its decline was less pronounced (-4.5 per cent). The contraction was caused by the collapse of a railway boom, a succession of bad harvests and mounting fiscal difficulties. Financial fragility and the repercussions of the Overend and Gurney Company failure in London also contributed to the duration and depth of the crisis.

The mid years of the 1870s, 1880s and 1890s all recorded recessions that exceeded the 5 per cent mark. Particularly intense was the fall in GDP in 1874 (- 8.7 per cent), when the Spanish economy was hit by the international crisis that swept Europe after the Franco-Prussian war. In that same year manufacturing production declined sharply by 11.1 per cent. Again the near-bankruptcy of the Treasury aggravated the downturn. In 1885 through 1887 the rate of growth of GDP was negative, with a total accumulated loss of 6.3 per cent. Since no major international crisis is recorded, the Spanish downturn must be attributed to domestic factors. The last XIXth century economic contraction was linked to the 1890 turmoil generated by the Argentine suspension of payments and the Baring Brothers failure that affected almost all European markets as well as the American economy. Initially the crisis was relatively mild, GDP did not fall and industrial output exhibited a positive growth rate. The depression came a few years after: in 1893 income declined by 3.6 per cent and again in 1894 and 1895, when it fell by an astonishing 8.3 per cent. The interruption of foreign investment, a succession of bad harvests, a marked decline in industrial output, and the beginning of the Cuban war of independence all factors together contributed to the downturn of the cycle.

The following crisis episode in 1930-31 coincided with the world depression. The Spanish contraction includes the same economic and financial factors that caused the international depression and hence it does not need to be explained here. However, it is evident from our data that the crisis was milder in Spain than in other European nations. Industrial output certainly fell as much as a 10.5 per cent in 1931, but overall GDP only dropped by 3.4 per cent in 1930 and 2.6 per cent in 1931. Relative isolation from world markets and the depreciation of the exchange rate account for the softer impact of the Great Depression on the Spanish economy.

The seventh and more destructive economic decline of the XXth century took place during the two initial years of the Civil War. GDP fell as much as by 25 per cent between July 1936 and December 1937. All the components of GDP contributed to the intense recession: private consumption and investment dropped over 50 per cent and the fall in exports and imports was abysmal. Only public consumption and investment increased, partially compensating the negative trend of the other macroeconomic variables. Recovery did not begin until the war was over.

Figure 1 also identifies 1945 as another critical year with GDP growth rate dropping by 7 per cent. Politically isolated and doomed by the adoption of an extreme autarkic and interventionist strategy, the Spanish economy fell into a deep contraction. The crisis was triggered by two successive droughts that caused a sharp decline in agrarian output and led to widespread hunger.

The last and long lasting economic crisis began after the death of Franco in 1975, and did not finish until the early 1980s. Its occurrence was the result of a combination of economic and political factors. In the first place the beginning of the international recession. The 1973 oil price shock and the break-up of the Bretton Woods system cut abruptly the fairly stable economic environment that had existed in Western Europe since the end of the Second World War. The second round of price rises in raw materials and energy in 1979 intensified the recession and forced Western governments to adopt policy measures to fight the crisis back. In Spain, to assure a smooth transition to democracy, politics took priority over economics, and politicians postponed any adjustment to face up the deterioration of the economy. Inflation increased to record levels above 25 per cent, unemployment rose up to more than 20 per cent of total active population and GDP growth slowed down. Industry was particularly hit, more so that the rest of the economy, exhibiting negative growth rates in 1981 and 1982. Recovery was not on solid bases until the middle of the decade.

Having identified nine major economic crises between 1850 and 2000, we shift the focus now to the financial sphere. How many financial crises can be detected in Spain's financial history? Have financial crises coincided with macroeconomic contractions? Have banking difficulties and failures predated or followed macroeconomic fluctuations?

Economists and economic historians have found six major financial episodes, all of them characterized by runs on banks, bank failures and government (or central bank) intervention. The first in 1866 has been studied thoroughly by Sánchez Albornoz (1963, 1967) and Tortella (1973). Research by Tedde de Lorca (1974) too has identified a sequence of troublesome banking episodes during the second part of the XIXth century. The interwar years, with two crises in the twenties and another in the thirties, have been examined in detail by Martín-Aceña (2001). And the last financial crisis, at least for the time being, that began in 1977 and ended in 1985, has been studied by a long list of scholars, and more particularly by Cuervo (1988).[2]

According to this chronology, table 1 shows that all financial crises, except one, coincided with economic crises. The Spanish historical experience seems to be consistent with the literature and the empirical evidence mentioned above. In general declines in real income and industrial production have caused banking crises, although the reverse may be also be true, and it is something that has yet to be studied. However, it is also evident from table 1 that the frequency of economic contractions is higher than the episodes of banking turmoil. Another conclusion is that years or periods classified as economic and financial crises correspond chiefly with international downturns. It seems that, despite her relative economic and political isolation, Spain has been systematically influenced by the international economic and financial environment.

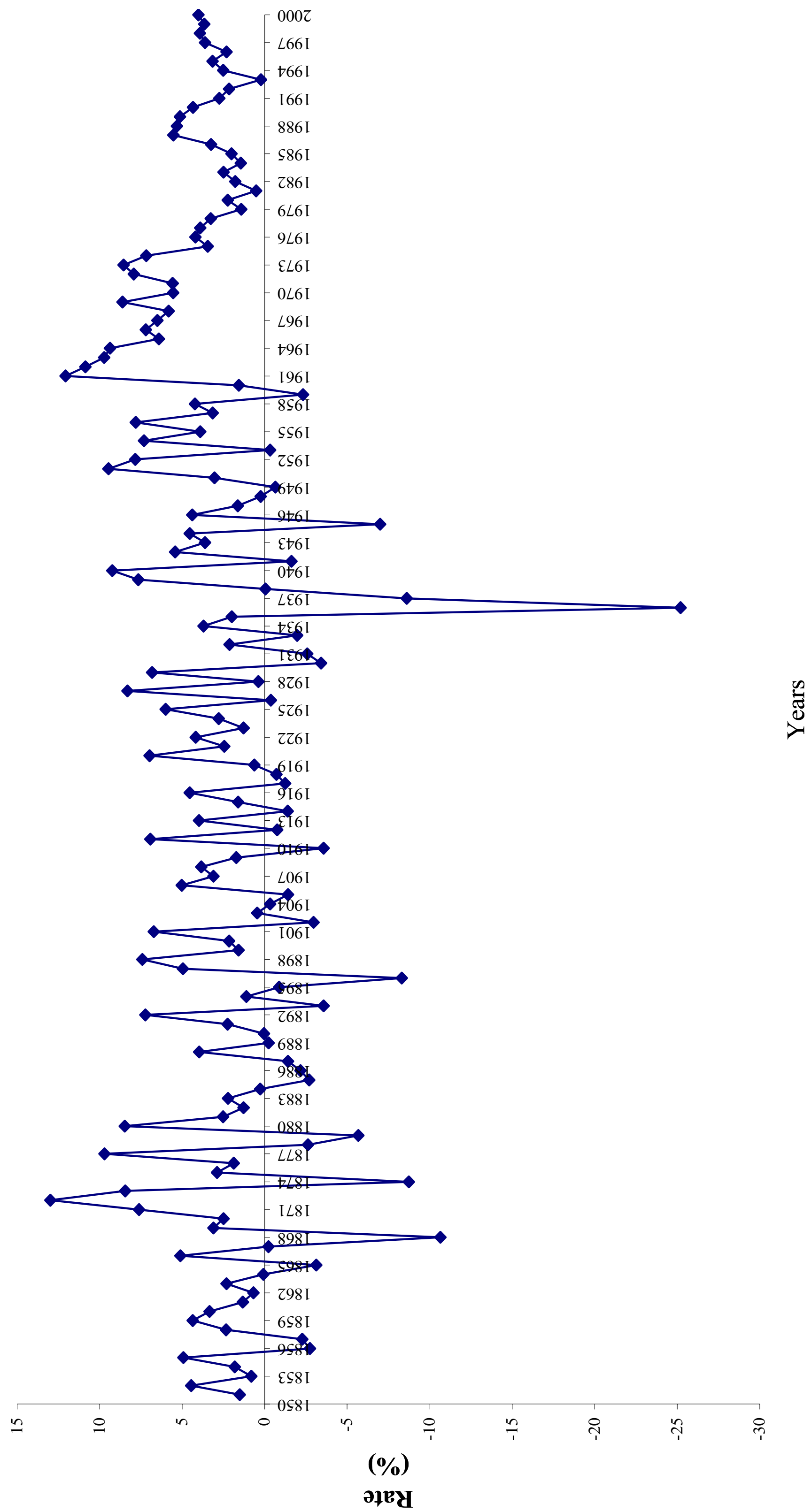
Table 1
Economic crises and financial crises

Economic crises	Financial crises
1864-1868	1866
1873-1874	---
1878-1879	---
1882-1884	1882
1895-1896	1890
---	1920-22
1930-1932	1931
1936-1937	---
1945	---
1975-82	1977-85

[2] The financial data to identify banking crises is presented and examined in each of the following sections of the paper.

Figure 1

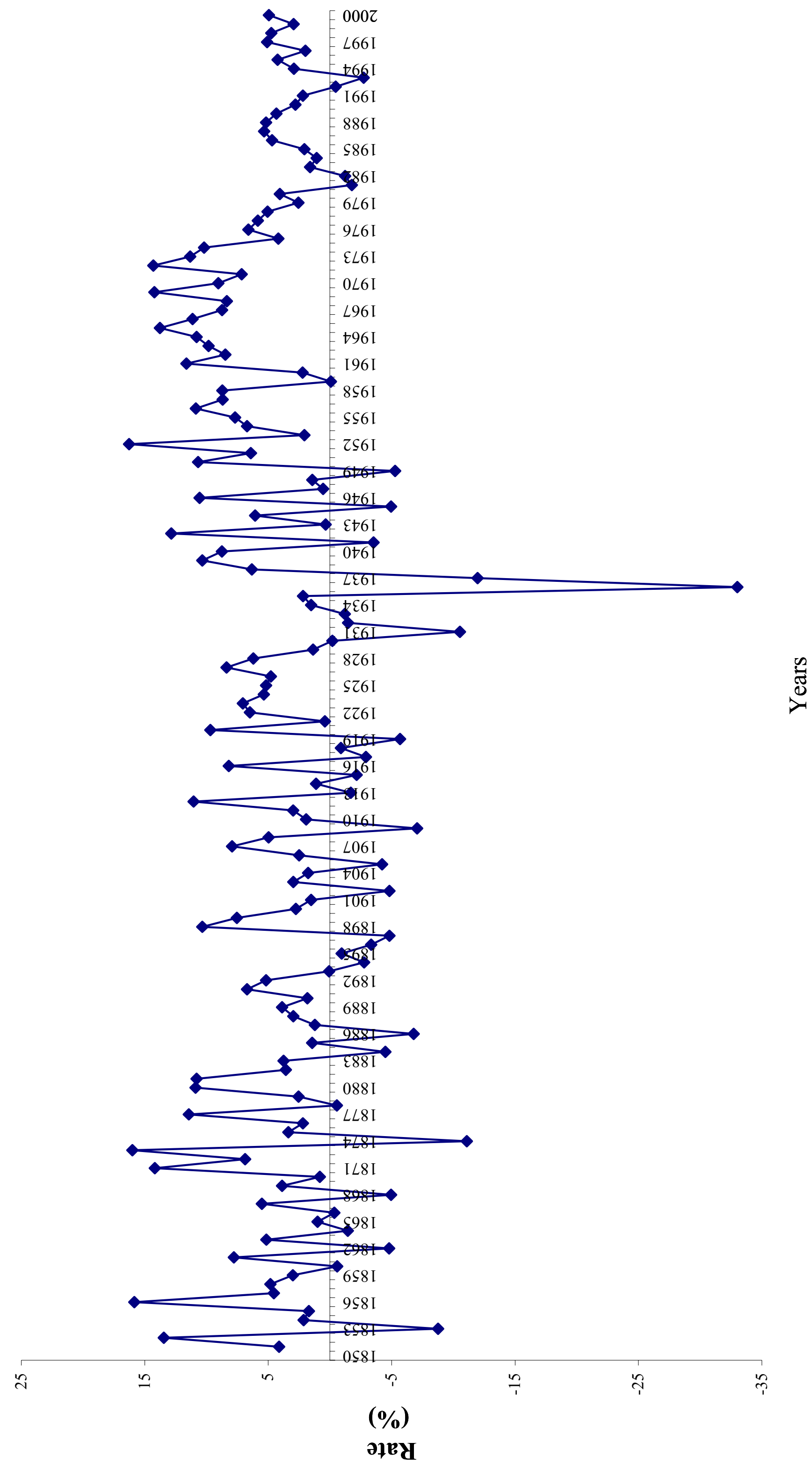
Rate of Growth of real GDP (%)



Source: Prados de la Escosura (2003).

Figure 2

Rate of Growth of Industrial Output (%)



Source: Prados de la Escosura (2003).

3. The unregulated banking era, 1856-1920

The modern history of Spanish banking begins in 1856. In this year the Parliament approved two important acts that favored the creation of joint-stock banks: the Bank of Issue Law and the Credit Company Law. These two acts established a relatively open and liberal financial framework that with minor changes remained in place over the next six decades. Regulation was loose, supervision practically absent, and whatever correction the banking system needed was left to market discipline. [3]

The Bank of Issue Law regulated the establishment and operations of the banks of issue. Incorporation required government authorization, although it was easily obtained by a mere Royal decree.[4] Plurality of issue was permitted, but limited to only one bank per town. Capital had to be paid up entirely at the time of constitution. The maximum volume of currency banks could issue was set equal to three times the amount of paid-up capital. The law imposed a metallic cash ratio of 30 per cent against banknotes in circulation, and a reserve to capital ratio of 10 per cent. Banks were also compelled to publish their balance sheets monthly in the Official government journal adjusted to a model fixed by the Ministry of Finance. To overview and to make sure that the operations of the banks were conducted according to their self-written statutes, the government appointed a Royal Commissioner in each institution. One of his main tasks was to assure that the banks maintained "sufficient cash and liquid assets to cover all liabilities, including banknotes, current accounts and time deposits". On the other hand, banks could engage in all sort financial operations with hardly any restriction. Their primary business, however, was deposit-taking, discounting of bills exchange and commercial short-term loans. The only prohibitions were to be overdrawn, to use their own assets as collateral to making loans, and to deal in public securities.

The Credit Company Law was much less restricted. According to the liberal ideology of the time banks were supposed to operate just as any other non-financial firm. Like in the case of the banks of issue, incorporation required the previous approval of the government. The charter could be obtained too by a simple government decree, so that no parliamentary act was needed. Banking transactions were not subject to any sort of restrictions. The act imposed a minimum capital requirement of 10 per cent, but no cash or liquidity ratios. Although for most of the nineteenth century credit companies and commercial banks were single-officed, no permission was needed to open branches in any region of the country. Banks and credit societies could undertake all kinds of commercial operations, discounting of bills, extending short and long term loans and investing in equities and in private and public securities. They could also promote, invest and own all types of industrial companies. They could accept both current account and time deposits. Although credit companies were obliged to send their balance sheets and income and losses accounts to the Ministry of Finance, there were no uniform accounting and disclosure standard norms. No supervisory agency was created, but the government could at any time order the examination of the accounting books of the companies and verify the state of their metallic holdings.

The following ten years after the approval of these two acts were characterized by a remarkable financial expansion, portrayed in figure 3. Some sixty new banks opened, most of them in Madrid and Barcelona, although there were important banks that were established in other commercial and industrial cities. Of these sixty corporations, about twenty were banks of issue and the rest credit companies. This was certainly a remarkable growth, since in 1855 there were no more than five joint-stock banks. The largest credit companies were founded by French capitalists

[3] For Spanish banking in the XIXth century, see Tortella (1970), Tedde de Lorca (1974) and Martín-Aceña (1987).

[4] The Bank of Issue Law renamed the semi-official Banco San Fernando as Banco de España (Bank of Spain).

and entrepreneurs. Banks of issue and credit societies rapidly increased their commercial activities mobilizing large amounts of capital. The main sphere of action of the credit companies (which in fact operated as investment banks) was the financing of railway companies.

The number of savings banks also increased. A Royal order of 1835 established the bases for the foundation of these "peculiar" institutions. The initiative came from the Ministry of Interior and was aimed to combat usury and to spread the virtues of thrift among the popular classes. Savings banks were organized as mutually held institutions and they were supposed to fulfil a social role collecting and safeguarding "ordinary" people's money, and not involve themselves in risky lending. The first institution was set in 1839 (Caja Madrid, today still in existence). In the following years thrifts institutions were established in different provinces throughout the country and by 1855 there were at least 15, while ten years later the number had risen to 22. The savings banks' structure was rather decentralized with a few large urban units and multitude of small ones scattered all over the country. Although their foundation required the approval of the government, their organization, operations and financial objectives were basically subject to its own statutes. Their main operation was to collect deposits to be invested in loans granted usually by their affiliated "Monti di Pietà". They also extended long-term loans against real state collateral and with personal guarantees. They had no obligation to disclose information or to publish their financial statements. Neither were they under any regulatory or supervisory government body. In 1853 the Ministry of Interior made an attempt to regulate and control the thrifts. The government thought it necessary to regulate in detail their operations, in particular the composition of their portfolio. It also deemed necessary to put the savings banks under the supervision of the provincial and local authorities. Accordingly, new legislation was passed. However, the attempt failed because of the strong opposition raised by the founders and directors of the institutions. The consequence was that the Act approved in 1853 was never enforced and thrifts remained self-regulated until 1880, when a general Law of Saving Banks was approved. [5]

The financial expansion that took place during the 1850s and 1860s was associated to a parallel economic boom. A batch of reforms that affected agriculture, mining, the transport sector, as well as the monetary and the commercial regime provided new opportunities for profit. The construction of the railway system gave the main impetus to the economic expansion. In less than a decade the main lines were completed and opened to traffic. As indicated above, the promoters of the railway companies were the banks and credit societies founded after the banking laws approved in 1856. Banks not only bought stocks and bonds, but also granted loans and advances to the railway companies. Moreover, banks distributed stocks both in the domestic market and in foreign financial markets, particularly in Paris. However, as it happened elsewhere, the expectations raised by the construction of the railways were excessively optimistic. Construction and financial costs were higher than expected and the demand of inland transport was not enough to cover expenses. Income from traffic hardly reached to pay for loan interests, and most firms run into heavy losses. The railways were less profitable than the promoters had promised and the holders of stocks and obligations had expected.

Beginning in 1864 the stocks of the main railway companies plummeted in the Paris Bourse. Mining equity prices and government debt prices also fell. The collapse of the Bank of Spain's shares in the Madrid Stock Exchange was even more dramatic (figure 4, for the overall behavior of the Madrid Stock Exchange). With large portfolios of railways shares, bonds and government debt, the balance sheet of banks deteriorated sharply and many of them suffered substantial losses. By the end of the year a major financial crisis was looming.

[5] For the early history of savings banks, Titos Martínez (1999)

Eventually, the financial crisis erupted in May 1866. In Madrid one of the major French credit societies, the Compañía General de Crédito, declared suspension of payments. The market was shaken and the following weeks panic broke loose with a chain of bankruptcies. The panic was particularly violent in Barcelona. Two big financial firms suspended payments, the Catalana General de Crédito and the Crédito Mobiliario Barcelonés. Moreover, a significant number of industrial and commercial firms unable to repay its loans and obtain fresh accommodation discontinued their operation and went bankrupt, the Stock Market closed and all banks, except the Banco de Barcelona, closed their doors temporarily. Riots threatened Barcelona and in order to avoid disorders, the military authorities declared the "corso forzoso" of banknotes in circulation and of short-term obligations of banks and credit companies. From Madrid and Barcelona the crisis spread to the rest of the peninsula. Valladolid, Seville, Cádiz, and other commercial center saw their banking structures shattered. The scramble for liquidity -conversion of banknotes into metallic cash - that took place in 1866 can be observed in figure 5, that shows too how the lack of confidence on the banking system persisted over the following years. [6]

The 1866 crisis was deep and damaging. Financial and non-financial companies went into liquidation and the stock market crashed in Madrid and Barcelona. The number of joint stock banks fell and many private bankers and merchant houses disappeared (figure 3). Of the 37 financial institutions funded after 1856, only 22 survived the crisis. Of the 82 officially registered bankers and private finance houses in 1866, there were 43 in operation by 1870.[7] Only savings banks, with no risky assets, remained untouched by the financial turmoil.

The crisis had long lasting consequences. The blow was so severe that it took more than a quarter of a century for the banking crisis to recover. As many other cases have proven, even when the panic abates, incompetent management is removed and insolvent firms are liquidated, much work usually remains before depositors' confidence retursn and the crisis can be said to be resolved. Moreover, since the banking collapse contributed to the downturn, partly because of the disruption of financial contracts, including the flow of credit as well as the payment system, economic recovery required some kind of financial restructuring. Moreover, economic growth is unlikely to resume on a secure basis until unproductive assets disappear from the banks' portfolio and new management or new financial institutions enter into the industry.

Despite the fact that the crisis wiped out half of the banking system, the financial authorities did not react to the financial crisis during or after the bankruptcies. No measures were taken and the adjustment was left entirely to market discipline. There was no particular system in place to handle the bank failures other than bankruptcy procedures or privately organized liquidations. The laissez-faire policy was maintained, and both the Treasury and the Bank of Spain let the crisis run its own course. The Treasury overwhelmed by its fiscal difficulties contributed to deepen the crisis and to prolong the ensuing recession for two more years. Moreover, no lender of last resort was available at the time since the Bank of Spain too had its own problems and refused to provide the necessary liquidity. The Bank of Spain not only allowed the failure of many provincial banks of issue but neither did it take any measure to assist credit companies with difficulties. Most likely the Bank's inaction in 1866 was the result of a deliberate policy to eliminate potential note-issuing competitors. This episode thus supports the contention that the absence of lender of last resort allows a panic to produce a crisis with deleterious consequences for the banking system at large.

What is more surprising, however, is the fact that instead of introducing legislation to prevent future similar crises, the Ministry of Finance maintained it liberal stance. The crisis did not

[6] Sánchez-Albornoz (1963 and 1967) and Tortella (1973), for the crises in Madrid and Barcelona.

[7] Tedde de Lorca (1974: 255).

incite the introduction of amendments in the 1856 laws. Well on the contrary, the authorities took further liberalization measures. In 1869 a new Joint Stock Company Law lifted all restrictions on the creation of banks of issue, discount banks, agricultural banks and credit companies. The law permitted new banks to incorporate freely without the need to obtain a special charter from the government. Entry in the sector was thus entirely free and unrestricted, with the exception that only one note-issuing bank could be opened in each town. Moreover, no regulatory or supervisory measures were adopted.

The role of the Royal commissioner appointed by the government to sit on the board of the banks was to assure that they complied with their own statutes. He had veto power, although he rarely exercised it.[8] Royal commissioners were politicians that expected to return again to a post in the government, or relevant members of the business class with close ties with the owners and managers of the banks. Although loyal to the Ministry of Finance, to which they faithfully reported contraventions of the statutes, commissioners tried to avoid disputes with their fellow members of the board and the resolution of conflicts usually implied the resignation of the commissioner.

On the other hand, we know next to nothing about the role of the members of a Credit Company Inspection Agency established in 1865, except that they collected the financial statements of a significant number of banks. These statements were published later in the Official government journal. However, more research in this field is needed to find out the actual working of the agency: which were the examination procedures used by the inspectors and the results of their inspections.

For the last part of the XIXth century and the first two decades of the XXth century Kindleberger (1978) lists five major international financial crises (1873, 1882, 1890, 1893 and 1907), while Schwartz (1986) registers only four (1873, 1890, 1907 and 1914). Neal and Weidenmier (2003) have also examined four: 1873, 1890, 1893 and 1907, and Goodhart and Delargy (1998) list seven stock exchange panics: in 1873, 1880-82, 1887, 1890, 1895, 1907 and 1914.

Spain's economic history and the available empirical evidence shows that the crises record is shorter. Sardá (1948) and Tedde de Lorca (1974) have identified only two, 1881-82, and 1890. Nonetheless, this more stable financial environment cannot be taken as a sign of banking strength. Slow GDP growth, as the recent data compiled by Prados de la Escosura (2003) suggests, and relative economic isolation from the world economic cycles, consequence of high tariff barriers and the non participation of Spain in the gold standard may explain best the shorter number of episodes of financial distress.

The 1881-82 crisis has been associated to the so-called "febre d´or" (gold fever) that erupted first in Barcelona and later in Madrid. The troubles unfolded in parallel with the international crisis that, according to Kindleberger, was centered in Paris and associated to a construction boom in Southeastern Europe. The "febre d´or" was a market bubble that affected all stocks in the Barcelona Bourse. Equity and bond prices of financial and non-financial companies rose and new firms were established with the purpose of obtaining rapid short-term returns speculating in the stock exchange. The boom was short-lived but the ensuing bust was deep and lasted for various years. The speculative bubble had also its counterpart in the Madrid Bourse (figure 4). When it ended it caused the failure of a considerable number of undercapitalized and badly managed banks that had been founded in the previous decade (figure 6). Although other cities were not affected by the crisis as much as Madrid or Barcelona, the fact is that the economic consequences of the "febre d´or"

[8] This was at least the case in the Banco Santander (Martín-Aceña 2007).

were dire. The financial system, not yet recovered from the 1866 collapse and from the disappearance of the provincial banks of issue in 1874 (see below), was severely hit. In addition to the bankruptcies, many of the banks that survived were unable to make a strong recovery and resume their lending activities and ordinary operations until the beginning of the next decade. Moreover, the international crisis left some other important scars. The financial difficulties in Paris interrupted the flows of capital into the Spanish economy and generated an acute current account crisis. Gold flowed out and the Bank of Spain, facing large reserve losses, was forced to suspend temporarily gold convertibility. However, since convertibility was never resumed, Spain remained off the gold standard and detached from the international monetary system throughout all the period (Martín-Aceña 1994).

The crash of 1890 was associated to the international crisis produced by the payment suspension of the Argentine Republic and its repercussions in the Baring Brother finance house, and in the London financial market. Tedde de Lorca and Anes (1974) have argued that the immediate consequences of the Baring crisis produced a retrenchment of foreign capital and a fall in the Spanish stock prices in the Paris Bourse. They also fell in the Madrid Stock Exchange (figure 4). Particularly hit were again the shares of the railway, mining and financial companies. To the sharp downturn in asset prices, banks reacted by rising their liquidity and cash ratios, by cutting loans and reducing investments. The volume of credit granted by the Madrid and Catalan financial institutions declined substantially for two years in a row and although it leveled off thereafter it never regained its pre-crisis high until the end of the decade. There were not as many failures as in the previous crash, although banks with impaired assets were liquidated. Those with substantial losses but sufficient capital survived. However, the overall financial structure was damaged and it did not recover until the turn of the century.

Like in the aftermath of 1866, these two crises did not provoke any official reaction. The Ministry of Finance entangled with its own fiscal difficulties did not have any manoeuvring capacity to contain the crisis, even in the unlikely event it would have had any desire to do it. No changes were introduced to alter the financial framework or to introduce regulatory measures to prevent future troubles. And again no lender of last resort assistance was available, despite the fact that the Bank of Spain had been granted the monopoly of issue in 1874, becoming since then the only supplier of liquidity. The decree by which the Bank of Spain received from the government the privilege of banknote issue for the entire country was not the result of any banking crisis but rather an economic compensation for a large loan the Bank made to a bankrupt Treasury. The monopoly brought about an important restructuring of the financial system. Fifteen banks of issues had to liquidate or merge with the Bank of Spain. Most of them opted for this latter alternative, while the rest (three) chose to continue as commercial institutions, including Santander and BBVA, two of the financial giants of the present Spanish financial system.

The reform of the Commercial Code undertaken in 1885 did not produce either any fundamental change in the financial framework. Consistent with the "laissez faire, laissez passer" philosophy of the times, the liberalization of the system proceeded one more step. In line with the law of 1868 the Code maintained free entry to the industry and it did not impose any limitation on banks' operations and activities. The sole obligation for banks was to publish the balance sheets and the income and losses account in the official government journal and in the official provincial journal. Finally in one if its articles, the Code of Commerce included an enigmatic phrase reminding the business community that the "freedom to issue banknotes continued in suspension". [9]

[9] Faus (2001: 63).

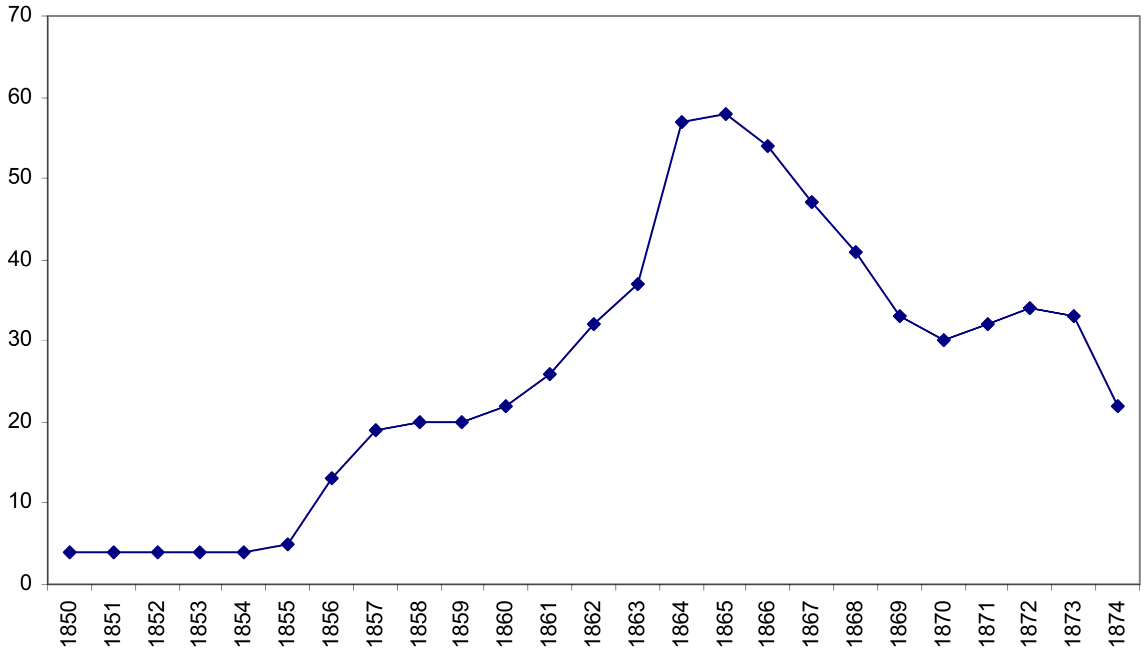
Although thrift institutions weathered the two crises better than the banks, without casualties among its membership, the Ministry of Interior introduced legislation intended to regulate the creation and the scope of saving banks. According to the Saving Banks Law enacted in 1880, the foundation of thrifts remained open to individuals and institutions but their statutes had to be approved by the government. Savings banks de-linked their lending activities from the "Monti di Pietà", and were allowed to operate independently. Thirdly, thrifts were defined as "charitable institutions" and put under the protection of the government. Since no other changes were introduced, savings banks remained unregulated and under the loose supervision of the Ministry of Interior.

To conclude, less than strict regulation is one of the features of the Spanish financial system during this long sixty-five years period. Neither the laws of 1856 nor the institutional reforms introduced thereafter in 1869, 1874 or 1885, imposed strict restrictions on banks' operations or limited their scope or their scale. Saving banks also operated quite unrestrictedly during most part of the XIXth century, subject only to their own statutes. Strong competition among commercial banks, and between banks and saving banks was another central feature of the financial. Fragility was the third salient characteristic of the financial sector. The number of financial institutions varied greatly throughout and, as we have seen, banking failures were not uncommon.

Although more empirical research is required to establish the link between banking crises and the cyclical evolution of the overall economy, the financial fragility that characterized this long period provides a good rationale for the need of regulation and supervision. But as we have seen regulations were kept to a minimum and prudential supervision was circumscribed. Bankers, financiers and the business community at large enjoyed free entry to the industry, and only the issuance of banknotes was limited to one bank per town until 1874, when the Bank of Spain was entrusted with the monopoly of issue. Disclosure requirements were lax and not always respected. Bank examination was conducted by an special body of inspectors created in 1865, although their role was confined to collect financial information. Moreover, there was no agency in charge of banking supervision. Table C in the Appendix shows the main characteristics of the regulatory regime of the period 1856-1920.

Figure 3

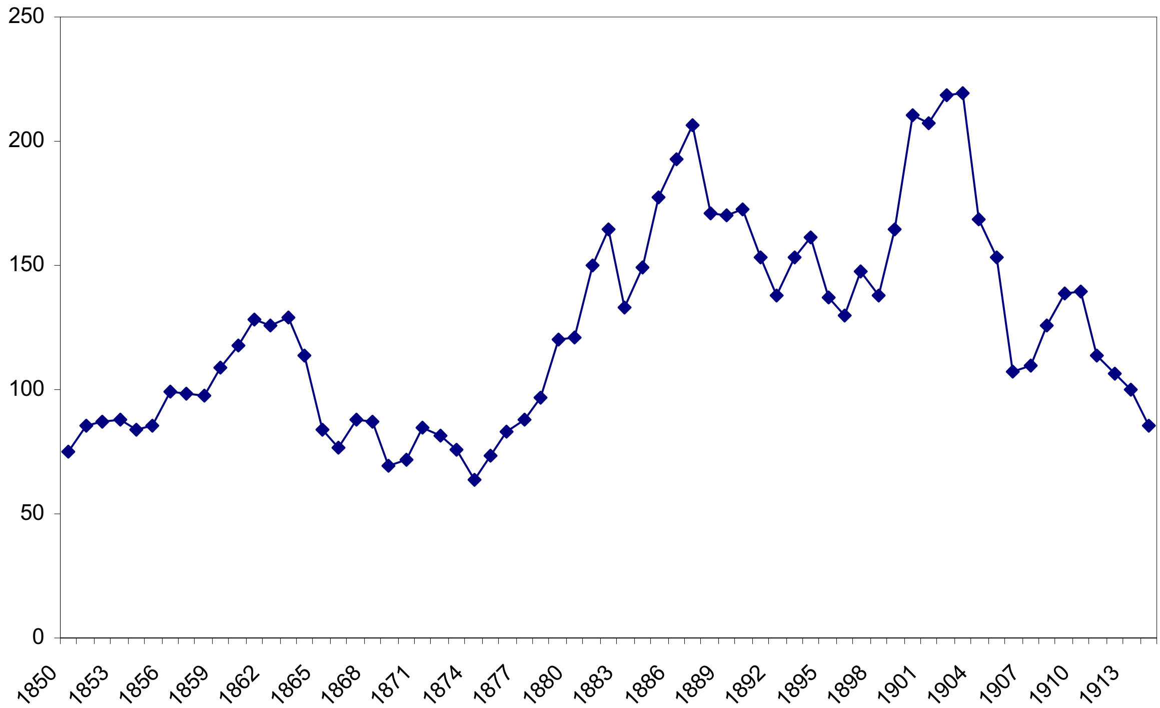
Number of Credit Companies 1850-1874



Source: Tortella Casares (1973).

Figure 4

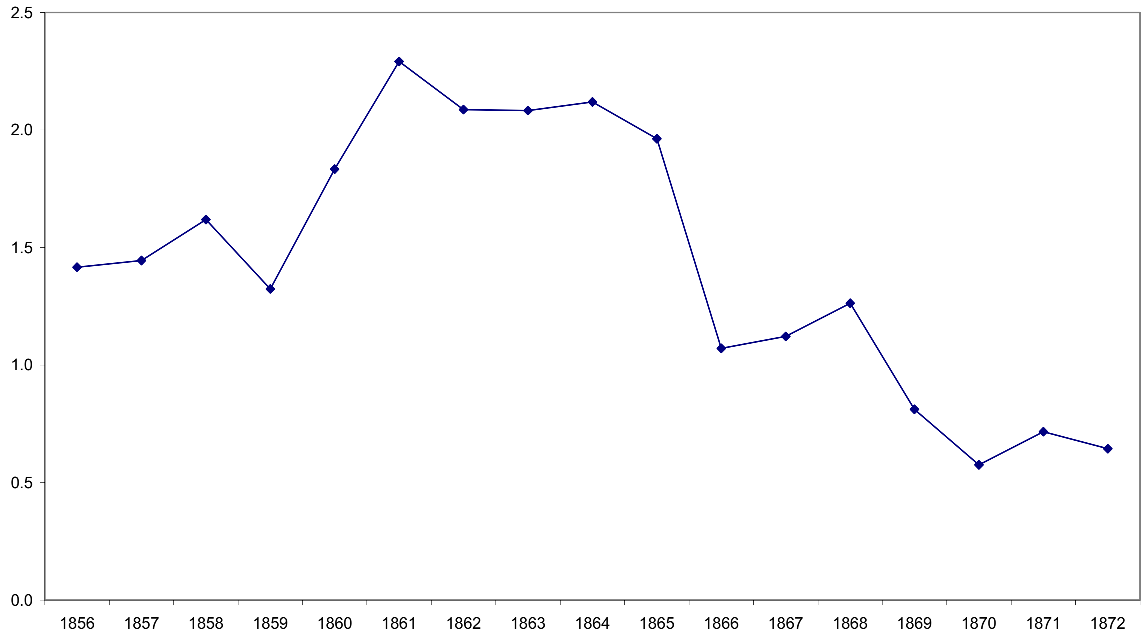
Weighted Index, Madrid Stock Market, 1850-1914



Source: Estadísticas Históricas de España (2005).

Figure 5

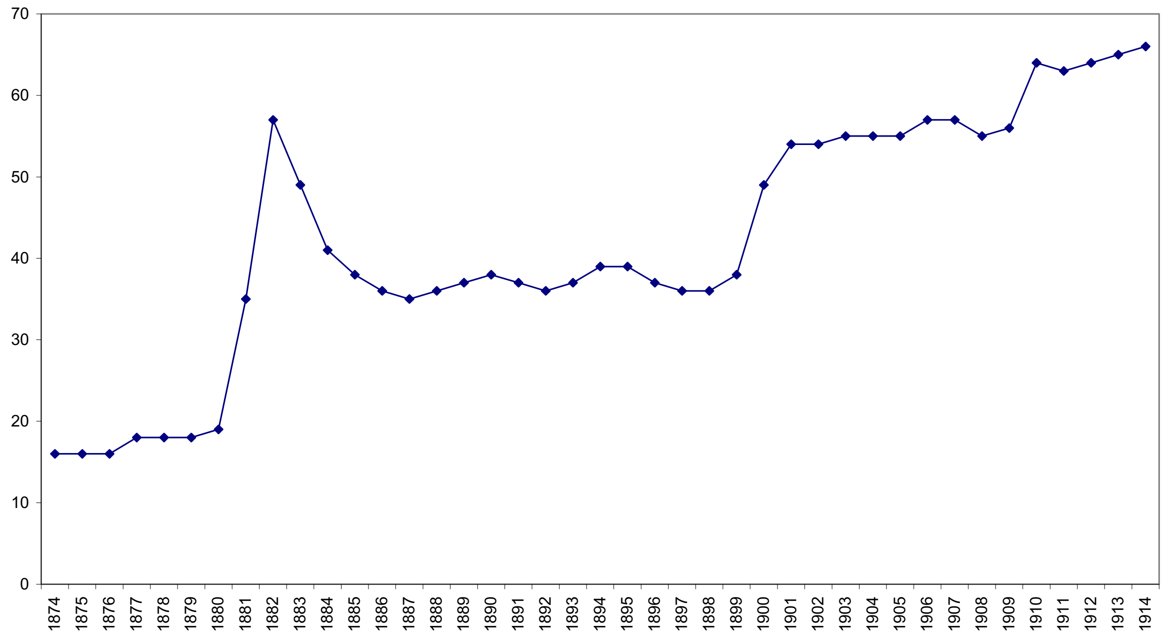
Banknotes / Currency 1856-1872



Source: Estadísticas Históricas de España (2005).

Figure 6

Number of banks 1874-1914



Source: Tortella. and Tedde de Lorca (1974).

4. Banking crises and financial self-regulation in the interwar period, 1921-1936

Financial crises were a prominent feature of the interwar period. Bernanke and James (1991) offer a quite complete chronology of the most salient banking crises from 1921 to 1936. There were over 50 banking crises, with output losses of about 10.5 per cent of GDP. The chronology shows that crises affected all continents. Hardly any European country was safe from bank runs, widespread bankruptcies or at least rumours about the imminent failure of major banks, or suspension of payments. In many instances, bank crises accompanied currency crises, so that the interwar period suffered from what is known as "twin crises".

In the 1920s Spain experienced two periods of financial turmoil, one immediately after the First World War, and the other in 1924-25, when a major bank was near bankruptcy and had to be rescued, and others failed and were liquidated. The crises were caused by unsound lending practices during the war and by excessive speculation in the exchange market thereafter. After a period of relative tranquility, in 1931 the European financial crisis and the collapse of the Monarchy led again to severe banking difficulties, which caused the collapse of various institutions. In both instances the crises were associated with an unstable macroeconomic and political environment. [10]

The outbreak of the war opened a short but intense period of uncertainty. The decline in the market price of domestic commodities, and the collapse in stock and bond prices, threatened to undermine the basis of the entire Spanish financial system. The lack of confidence led to a run on bank deposits, which was directed particularly against the major commercial institutions. They were consequently induced to turn to the bank of issue with extraordinary rediscount requests. But as Spain remained neutral, confidence returned, and the economy experienced a general expansion led by a strong export boom that lasted for the rest of the war period. The expansion was felt both in the consumer and capital goods industries, and the resulting demand for bank accommodation fostered a considerable expansion of banking activities.[11] The number of joint-stock banks increased. Banking operations also expanded, visible in the balance sheets of all banks, particularly that of the "big seven".[12] In current pesetas, paid-up capital increased threefold and deposits multiplied by five.

During the war, the Spanish financial system made a decisive move towards mixed banking, so that by 1919 the involvement of Spanish banks in industry was much higher than ever before. Roldán and García Delgado (1973) have noted that during the war years the participation of banks in the promotion of industrial firms became a common practice. The mixed banks not only engaged in ordinary commercial operations, but also made long-term industrial investments. Financial institutions stayed ready to extend all types of loans to industrial companies and to acquire industrial securities in larger quantities than previously. Industrial credit was secured by shares, bonds, bills, and even real estate or with business mortgages. Besides, they actively participated in the formation of joint-stock companies by underwriting and purchasing securities, and bank directors sat on the boards of companies with which the banks maintained close financial relations. Commercial banks also contributed to finance the public deficits by taking a substantial portion of the debt issued during the war. As the new titles could be used as collateral to obtain automatic

[10] The Spanish financial history during the interwar period is, to a certain extent, similar to that of the Nordic countries (Denmark, Norway and Sweden). All three had severe banking crises in the 1920s, while they were left relatively unscathed by the financial crises of the 1930s. The crisis descriptions in this section are taken from Martín-Aceña (1995)

[11] Roldán and García Delgado (1973), and Sudriá (1990).

[12] The group of the "big seven" was formed by Hispanoamericano, Español de Crédito, Central, Bilbao, Santander, Urquijo and Popular.

credit from the Bank of Spain, banks became extremely liquid, which in turn allowed them to further increase their lending activities.

But the rapid process of growth predicated on mixed banking bore with it significant costs. The involvement of commercial banks in industrial promotion made them vulnerable to fluctuations in the earning potential and in the equity value of the manufacturing firms with which they maintained relations, as if they owned the firms outright. Since banks also made commercial loans against industrial securities deposited as collateral, their loan portfolios also became extremely exposed to variations in stock prices. Furthermore, there were many instances in which commercial loans were used to finance fixed investment; in good times, manufacturing firms would repay such credits by issuing new stocks or bonds on the securities markets; in bad times, however, the banks' commercial portfolios tended to become illiquid. Therefore, the degree of exposure of the mixed banks to a decline in industrial activity ensured that a recession in manufacturing would ripple rapidly through the banking system and the economy as a whole. In short, the bank-lending boom led to increase fragility and systemic risks.

As well-informed contemporary observers anticipated, the war expansion was followed by a crisis that affected the real and the financial sectors alike. The previous industrial boom developed without reference to post-war markets, and much of the new capacity built during and just after the war became idle. Thus the causes of the crisis which followed afterwards unfolded during the war, with high inflation, overlending, and lending on bad collateral. The biggest risks in banks' loans emerged in credits with shares and merchandise as collateral, since it had often been given against a background of highly inflated prices and favorable valuation of the securities.

The banking crisis was especially intense in Catalonia, although other institutions in different places of the country also had difficulties. The first problems appeared in the summer of 1920, when the Banco de Barcelona, one of the oldest and most prominent Spanish credit institutions, announced important losses. The depositors, fearing that the institution could not meet its demand obligations and short-term liabilities, began to withdraw their money. Eventually the bank suspended payments in November of 1920. According to different descriptions, the problems of the bank originated from extensive and continuous speculative operations in the foreign exchange market, and from incautious lending policies; it was known that the bank lent on bad collateral and on overpriced merchandise. The crisis generated panic in Barcelona, and all banks suffered withdrawals of funds; the Catalan politicians pressed the officials in Madrid to convince them of the dangerous financial situation. The Minister of Finance summoned the governor of the Bank of Spain and told him that the central institutions should be ready to provide all the financial assistance that the Catalan bank might ask. However, the Bank of Spain was not forthcoming, and argued that all credit institutions with liquidity problems, including the Banco de Barcelona, were essentially insolvent and should not be rescued. Under pressure, the bank yielded and opened a limited line of credit, which obviously was not enough since in the end the Catalan institution had to close its doors. The effects of the failure of the Banco de Barcelona in Madrid and Bilbao, the other two Spanish financial centers, remained limited. There were runs on the deposits in various institutions, but on the whole they resisted without much difficulty. Banks with good paper, or with government securities, discounted easily in the Bank of Spain and obtained all the cash they needed. In fact, by the beginning of 1921 the crisis was apparently over. However, as we shall see later, the difficulties were far from over. A few years later they would reappear and several other banks faced serious problems.

The collapse of the Banco de Barcelona and the passive stance of the Bank of Spain raised serious concerns in the Treasury as to the adequacy of the legal financial framework. Banks' directors and owners too had expressed since 1910 concerns about the "lack of regulation" of the banking industry. They complained over the unfair competition of the savings banks protected under the umbrella of the Ministry of Labor, and raised voices against the intrusion of unprofessional "second-rated financiers" that could open freely small banks and finance houses without minimum capital bases and guarantees. To defend their interests they promoted the creation of various regional banking associations that eventually merged in 1918 to form a federation under the name of Central Spanish Bank Committee (Comité Central de la banca española). Two years later, the crisis and fears that individual bankruptcies could spread to the whole financial structure prompted the Federation to ask for the adoption of some kind of regulatory regime. Thus, the banking crisis opened an opportunity to introduce significant changes in the financial framework for the first time since 1856.

When Francesc Cambó, a successful Catalan financier, took charge of the Ministry of Finance he immediately prepared an act to regulate and reorganize the banking system. He wanted also to transform the Bank of Spain into a real central bank, forcing its Board to assume its responsibility as lender of last resort. The project, with the name of Banking Inspection Law (Ley de Inspeccion Bancaria), was sent to the banks and to the Bank of Spain for discussion. The former proposed several amendments to the original project, some of which were accepted by the Treasury, while the latter opposed the entire project because, as they said, it curtailed its autonomy as private financial institution. Once the project had been agreed with the banks, it was sent to Parliament where it went through a long and lively debate. In his parliamentary speech Cambó expressed his conviction that, due to their “special nature”, banks and credit companies should be subject to some form of control. The Finance minister told members of Parliament that "the banking industry (…) by its nature cannot be an absolute free industry". Coordination and regulation were needed to avoid excessive competition and individualism, and to defend both the public interest and the stability of the financial structure. Cambó explained that banks’ failures hinged not only on shareholder and depositors but also could spill over onto the rest of the economy with devastating effects. Lack of restraint and imprudent behavior such as excessive risk-taking by individual banks could endanger the functioning of the whole financial structure and undermine the soundness of the banking system. Hence, a prudential regulation policy was needed to ensure the well functioning and stability of the banking system. Finally, in the last part of his speech in defense of the law, the minister of Finance praised the policies that had been undertaken in other European countries, and in particular he expressed his admiration for the American Federal Reserve Act of 1913.

Cambó was a politician and a capable businessmen and most likely he was unaware that his arguments were consistent with all the theoretical and empirical literature that justify the need for supervision and prudential regulation. The asymmetric information problem was implicit in his argument. We also find in his arguments another well-known fact: that in times of turmoil and bank runs the public cannot distinguish between solvent and insolvent institutions. He was not a theoretician, but had learnt from experience the deleterious effects that bank failures can cause on the economy. Experience rather than theory had convinced him of the need to adopt measures to monitor and supervise bank activities. Although the final text of the law did not introduce a complete and sophisticated prudential supervision framework as we think of it today, it was nevertheless a significant step in the right direction.

The Banking Regulation Law (Ley de Ordenación Bancaria) was eventually enacted in December 1921. Inspired by the Federal Reserve Act, it created the legal regime that was to regulate Spanish banking in the next two decades.[13] The new legislation pursued two main objectives. First the restructuring and the regulation of the sector. The authorities wanted to

[13] The law has been examined, among others, by Tortella (1970) and Pons (1999).

establish certain controls on banking operations and a close supervision on the banks' activities. The liberal chartering regime of the previous era persisted, but the new act defined what a institution named bank ought to be, and what rules and conditions a financial company ought to comply with. The act divided the country into three geographical banking zones, and separated the credit institutions into three categories: registered banks, non-registered banks, and foreign banks.

One of the most important provisions of the 1921 law was the establishment of a new institution: the Supreme Banking Council (SBC).[14] The Council was entrusted with broad regulatory and supervisory powers. It could set minimum capital requirements, and set limits on pricing, fixing maximum rates for current accounts and deposits. The Council could also establish the proportionality between different items of the banks' balance sheets such as the ratio between total earning assets and short-term liabilities, and the ratio of total deposits to paid-up capital plus reserves ratio.[15]

The law compelled banks to submit monthly statements of their balance sheets to the SBC and to publish their income statements. Moreover, the SBC was the agency in charge of the collection of all banking statistics. The Council too was responsible for designing the model of the balance sheet and of the income and losses account that had to be submitted by all financial institutions. The new model was ready by the end of 1922 and applied for the first time in 1923. This was a step forward in order to increase banks' transparency and accountability, because until then the financial statements had been rather opaque and published without regularity. The SBC was also empowered to investigate bank operations and accounts and to impose disciplinary sanctions. As a consulting agency, it could advise the government in financial matters.

The president of the SBC was a Royal Commissioner appointed by the government while the rest of the SBC's members were named by the banks, the Bank of Spain and the Chambers of Commerce. An official or public Banking Record Office within the SBC was opened. Registration was free until 1927, but registration was required to gain access to the special discount window in the Bank of Spain open to registered banks. The registration permitted officials to request information on the new banks in order to examine if they fulfilled the minimum requirements to start business; it also allowed the SBC to obtain information on the existing institutions.

A second goal of the 1921 Banking Law was to transform the Bank of Spain into a true central bank and to increase the control of the State over the institution. The authorities believed that the post-war crisis could have been avoided had the bank behaved as a real lender of last resort. They also believed that in the past, the bank had only performed one of the functions predicated of a central institution, that of the Government's banker, but had neglected the other two (lender of last resort and monetary authority). In consequence, the law regulated the relationship between the Government and the bank. It limited the amount of advances that the Treasury could obtain from the bank and fixed the quantity of banknotes in circulation; any change over and above the established limit required government authorization. In order to strengthen the links between the banking community and the Bank of Spain, the law forced the latter to give preferential treatment to the credit institutions; in particular, it established that financial institutions could discount paper at a preferential rate. Finally, the act did not forbid the Bank of Spain to operate with the non-banking private sector, but it set a ceiling to the outstanding amount of private securities in the portfolio of the Bank.

---

[14] Since the model for the Spanish banking law was the American banking framework, we may presume that the Supreme Banking Council was inspired in the Office of the Comptroller of the Currency.

[15] However, no restrictions on asset holdings and asset composition were imposed, so that banks could diversify their portfolio as they wished.

Although we do not have a history of the SBC, Faus (2001) has been able to consult the minutes of the executive board from its first meeting to the Civil war. The SBC began business soon after it was established. In 1922 it had already set minimum capital requirements according to the size of the bank and according to its geographical area of operations (national, regional or local). In 1923 the official model for statement accounts had been designed and sent to the banks. It also had fixed the maximum rate limits for current accounts and time deposits, and the ratios between the different balance sheet items were also in place. In 1925 a Banking Inspection Service was created to control and supervise the compliance of banks to the rules imposed on them. The Service had to annually publish the list of banks and bankers and to make sure that all banks were sending their statements accounts according to the model approved by the SBC. The Service was entrusted as well with supervisory tasks: the examination of financial statements; it could also conduct inspections to assure that banks did not set rates different from those set by the SBC. But actually we do not know how the Banking Inspection Service operated, and how effective it was in conducting its supervisory duties. More research is needed to find out the procedures employed by the inspectors and the sanctions, if any, imposed, on the banks that violated the rules.

Without allowing time for the full implementation of the 1921 law, a new banking crisis exploded (figure 7). As argued above, the financial institutions entered the 1920s with many unsettled problems. A certain number of banks were incapable of liquidating bad loans and getting rid of devalued stocks. For a limited period banks could carry large losses by running down reserves built during earlier years. But as the recession deepened and the price of shares did not rise, industrial recovery was delayed and the financial situation deteriorated. Eventually, the difficulties re-emerged after the summer of 1924. The new crisis appeared as a continuous run on bank deposits, which lasted nearly a year until September 1925, as the deposit to currency ration in figure 8 shows. In the meantime, during these fifteen months the level of deposits decreased by 17 per cent; the run was particularly acute in the last part of 1924, and although it was over by the end of 1925, confidence in the credit institutions was not immediately restored. All in all, during 1924-6 half a dozen salient banks failed and were forced to liquidate. Particularly serious were the situation of the Crédito de la Unión Minera and the Banco Central, one of the biggest and most influential institutions, whose problems threatened to shatter the whole financial structure.[16]

The second part of the 1920s was of relative tranquillity for the banking system. Although there were 20 liquidations and 25 new creations, there was not any major bankruptcy or bank panic. Deposits grew at a moderate pace, universal banking consolidated, big banks opened branches throughout the country, foreign banks expanded and opened new offices and the government promoted the establishment of official or semi-public banks designed to meet the credit demand of special sector. The number of the saving banks also experienced a remarkable increase. At least 50 new institutions were established between 1920 and 1929.

The easy and calm times of the late 1920s came to end in 1929. The Great Depression was, with some exceptions, less severe in Spain than elsewhere in Europe and the financial system left only minor scars with only a major institution, the Banco de Cataluña, and two of its affiliates, going bankrupt. The crisis erupted in April 1931.[17] The demise of the Monarchy, the proclamation of the Second Republic, and the formation of a coalition government with various socialist ministers brought anxiety and fear to the business community and to the public in general. To make things worse, the new minister of Finance, the moderate socialist Indalecio Prieto, threatened financiers and industrialists that he would block all bank accounts if capital flights were detected. Besides, the news of the failure of the Creditanstalt and the difficulties of the

[16] The crises of these two banks are described in Martín-Aceña (1995).

[17] Martín-Aceña (1983) and Tortella and Palafox (1984).

central European institutions also contributed to darkening the atmosphere. The run on banks was intense between April and June. The removal of funds continued during the summer and by the end of September, when the crisis can be said to have been over, the total volume of deposits had declined by 1,300 million pesetas, or 20 per cent of the total outstanding in March 1931 (figure 8 shows the fall in the deposit to currency ratio). Banks did not fail because they were able to obtain all the cash they needed to convert deposits into currency. Two reasons may he1p to understand what made this possible. For the first time the Bank of Spain was ready actually to behave as a lender of last resort; secondly, banks had plenty of liquid assets. When the run started, the government made a swift and surprising move to deter the crisis. Indalecio Prieto summoned the governor and the deputy governor of the central bank and all members of the Supreme Banking Council and pressed them to reach a compromise. All agreed that banks were basically solvent but could run into serious difficulties for lack of liquidity. In consequence the Bank of Spain and the Treasury agreed on a combined action to facilitate all the cash banks might need. The government authorized an increase in the limit of banknotes in circulation, and the directors of the bank agreed to lend freely; this meant that they would discount bills on demand and would accept unhesitatingly eligible paper as collateral for credit. Since the crisis coincided with a flight from the peseta, the government also authorized a rise in interest rates to stop the outflow of capital. Although Prieto and the governor had unlikely read Walter Bagehot, they adopted a "lend freely but at a high interest rate" policy, as the British writer had recommended when facing a simultaneous domestic and foreign financial crisis. The other reason that contributed to prevention of a banking collapse was the fact that Spanish banks were loaded with gilt-edged securities; they simply pledged their unused portion of government paper to obtain cash, and in this way public securities acted as an automatic built-in stabilizer. Hence, a rapid and surprising intervention of the central bank, plus the ability of banks to monetize their holdings of government paper, explains why financial institutions did not collapse in 1931.

Although the Republican minister had the full collaboration of the Bank of Spain in order to resolve the financial crisis, the Bank refused to side with the Treasury to defend the exchange rate of the peseta. The minister, in an inappropriate and untimely attempt to stabilize the peseta and to adopt the gold standard as late as the spring of 1931, believed that the Bank should have assisted the policy of the Treasury. The Bank refused to use its gold reserves to contain the depreciation of the currency because it considered that the defense of the exchange rate was not among its responsibilities. The minister, however, was convinced that the Board of the Bank preferred to safeguard the property of the shareholders (the gold reserves) rather than to co-operate with the center-left Republican government and he firmly believed that the non-compliance of the Bank was politically motivated.

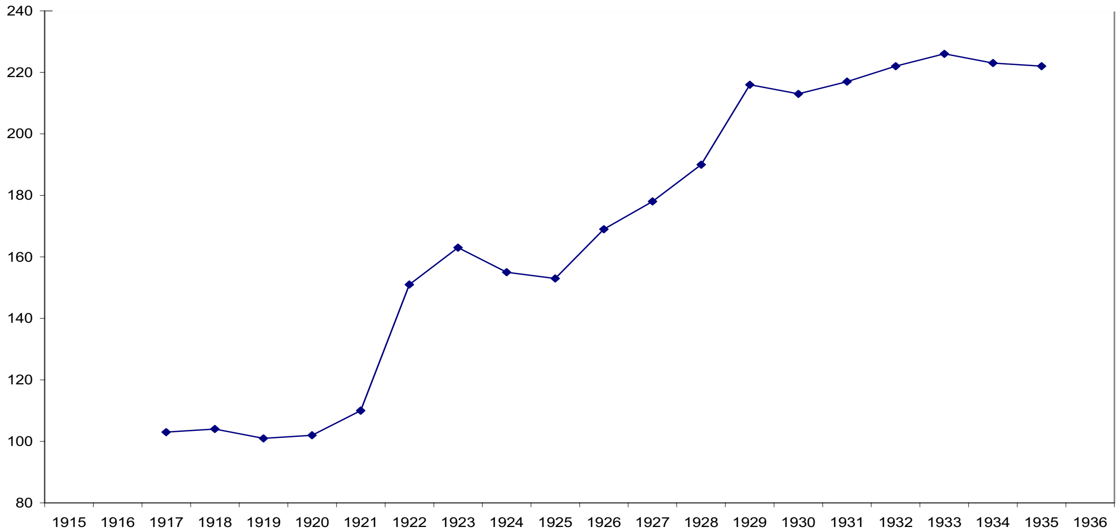
As a consequence, the Ministry of Finance decided to reform the Banking Regulatory Law of 1921. The reform did not affect the banking system and there were no changes in the supervisory framework. The modifications introduced in the law referred exclusively to the role and responsibilities of the Bank of Spain. In essence, what the reform aimed at was to increase the control of the Bank by the government. As a result, the composition of the Board was altered to include three more members named by the Ministry of Finance in representation of the so-called "general national interests". The other significant change was the obligation imposed on the Bank to put its gold reserves at the disposal of the Ministry in case of an official intervention in the foreign exchange market.

To conclude, the reform of 1921 was a reaction to the banking instability of the previous two years that had threatened the public's confidence in banks and, in consequence, in bank deposits, the payments system and the economy. The authorities believed that it was necessary to regulate the banking industry because it was a special industry that could not be left solely to the action of free market forces. The reform of 1921 is thus consistent with the argument made by some scholars that suggest that regulation is forged in response to crisis (Calomiris and Gorton 1991; Mitchener 2006).

A feature of the new legal framework was that the regulatory responsibilities were transferred to the banks through the Supreme Banking Council. Hence, from the unregulated system of the XIXth century, Spanish banking entered an era of financial self-regulation. No regulation was substituted by self-regulation. Although the Supreme Banking Council introduced some "prudential regulation" rules, such as minimum capital, bank registration, and some asset to liability ratios, the regulatory regime remained rather lax. There were only modest changes in the practice of bank supervision. Some improvements with respect to the previous period were the obligation of banks to send their financial statements to the Supreme Banking Council. The design of a common balance sheets for all banks increased transparency. Bank examination, though still limited, experienced a minor advance. The reform of 1931 responded to a different motivation. This time the aim of the Treasury was to increase its control over the Bank of Spain. The purpose was to reduce the autonomy of the Bank and to assure its collaboration with the monetary policy of the government. As in the previous section, Table C in the Appendix summarizes the characteristics of the supervisory regime of the interwar period.

Figure 7

Number of financial firms 1915-1936

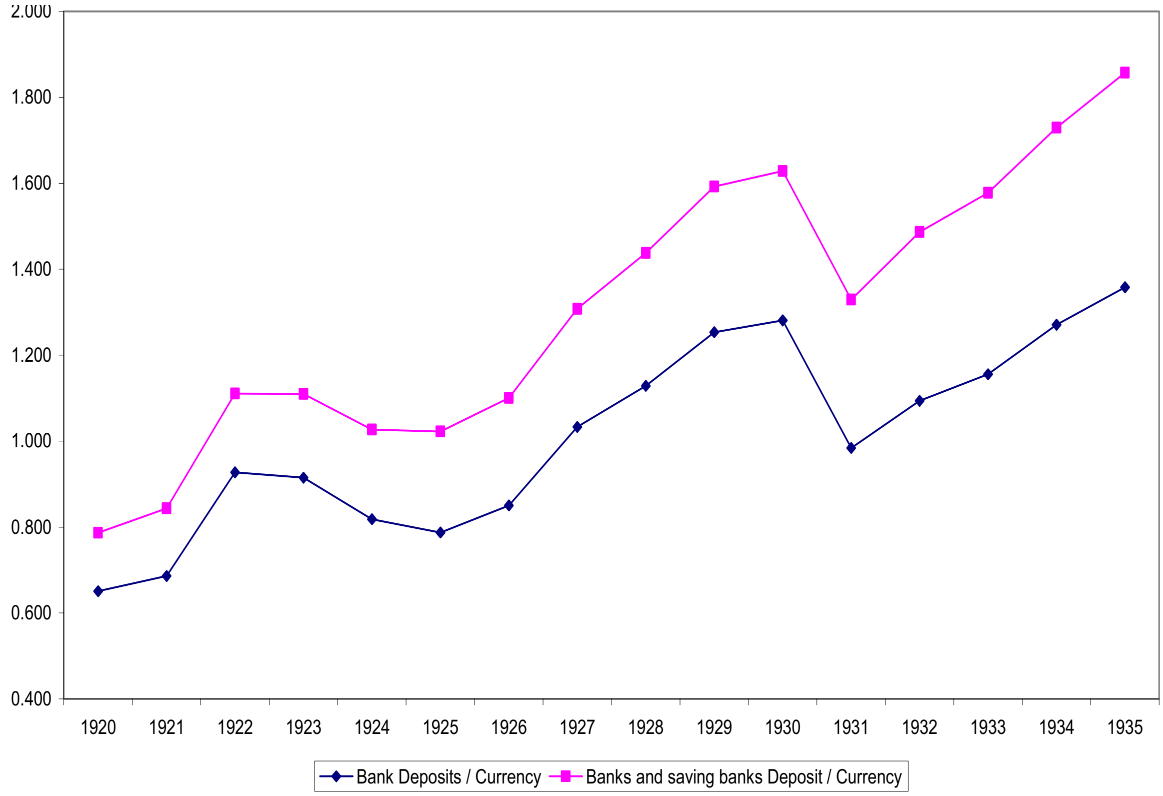


Note: the number of financial institutions includes banks and saving banks.

Source: BBVA (2003).

Figure 8

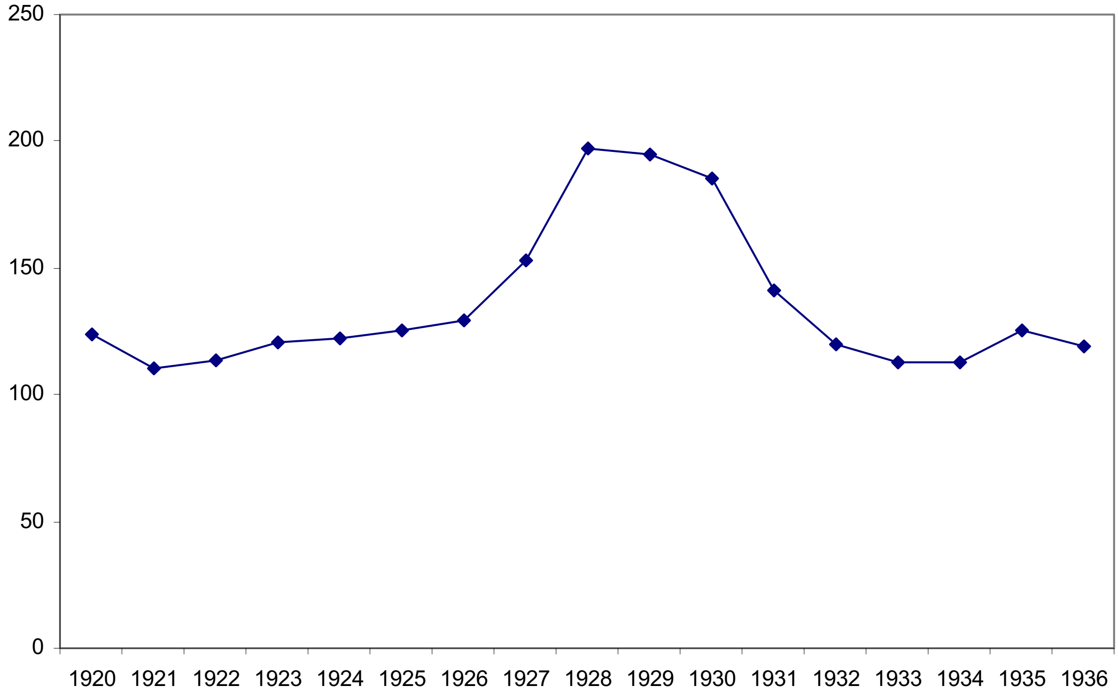
Deposit / Currency ratio 1920-1936



Source: Estadísticas Históricas de España (2005).

Figure 9

Arithmetic Index, Madrid Stock Market 1920-1936



Source: Estadísticas Históricas de España (2005).

5. Interventionism and regulation between 1939-75

One of the noteworthy features of the international financial environment after World War II and until the demise of the Bretton Woods system was the absence of banking crises. An explanation given for this is that banking regulations were so restrictive and capital flows were so low for most part of the period that there were no causes to provoke banking crises. But with the collapse of the Bretton Woods system, financial crises returned with intensity to the world scenario. In many countries the crises had their origin in a previous cycle characterized by excessive real state investment, rapid credit expansion and exceptional increases in asset prices. A permissive factor was the domestic financial liberalization that began in the late 1970s and was completed by the late 1980s. When the booms ended, the busts led to bankruptcies and widespread financial instability. Having dismantled the shelter provided by the postwar structural controls and not having set in place yet the new instruments of prudential, ex ante supervision to control the riskiness of portfolios, the authorities were taken aback and forced to design a new architecture of financial regulation.

Spain was not an exception to this general trend. After the Civil War and up to the 1970s there were relatively few banking failures. As Pons (2002) has argued, banks and saving banks in difficulty were systematically rescued by the Bank of Spain, that now acted as a forced "lender of last resort" and subject to the close surveillance of the Ministry of Finance. Mergers and acquisitions of banks in trouble by sound banks, with the fiscal support and under the auspices of the supervisory authorities, was the other alternative used to avoid bankruptcies. As figure 10 shows, despite the absence of financial crises, the number of banks increased in the second part of the 1940s and then fell steadily until 1962. The decline was the result of a strong consolidation movement whereas big national banks bought small local and provincial banks. The upsurge after 1962 is explained by a change in the regulatory framework that promoted the establishment of investment banks (see below). Thereafter, a wave of financial consolidation led to a new reduction in the number of institutions.

As it has been mentioned above, the "financial stability" (absence of banking crises) of the Bretton Woods era is attributed to the repressed regulatory framework introduced after the Second World War. In Spain it was the civil war that brought about the end of the period of financial self-regulation (Spain did not join the IMF until 1958). The autarkic and interventionist orientation of the early years of the Franco regime prompted the imposition of structural controls and a shift in bank supervision away from market discipline towards government discretion. Financial stability and government-oriented resource allocation rather than competition became the priority of the authorities.[18]

The new regulatory regime was forged by an array of acts approved between 1939 and 1942. The aim of the legislation was to restore and to restructure the broken postwar financial system, and to introduce measures to subject banks and savings banks to strict control. An important decree of 1939 because of its long lasting effects imposed a so-called banking "statu quo" which prohibited the establishment of new financial institutions without prior government scrutiny and approval.

In 1946 when the old 1921 Banking Law expired, it was replaced by a new and more restrictive legislation. Policy makers and regulators were convinced that financial institutions should be subject to strict controls and reoriented to supply whatever funds the “national economy” would require. As elsewhere in Europe, the financial market was suppressed and banks became the

[18] This section is based on Martín-Aceña and Pons (1994), Faus (2001), Pons (2002).

agents of government industrial policy. The myth of economic planning coupled with the idea that banking was a special sector, where the principles of market freedom had somehow to bow to "superior" interests of controlling the economy, explain why legislation empowered authorities (central bank and/or Ministry of Finance) to impose structural controls.

The Banking Regulatory Law of 1946 gave the Ministry of Finance ample discretionary powers to grant or to deny bank charters. Entry was at the discretion of the Ministry of Finance that used its authority rather arbitrarily. The era of easy entry came to an end. A new Banking Record Office was established. Only existing banks were allowed to register and to continue in the industry. Newcomers had to demonstrate the need for banking services in a specific geographic area. The banks' capital structure, its potential earnings, its management and the convenience and needs of the community were elements the new regulators considered before approving the establishment of a new bank. Furthermore, a favorable report of the Supreme Banking Council, also under the control of the government, was needed. Branching expansion depended on the financial density of each region, the existence of unattended financial demand or well proven insufficient financial services. The concession of branches was linked to the volume of capital and reserves of each bank. The larger the bank the higher the likelihood it had to obtain authorization to open a new branch. As a result, financial concentration increased.

The Ministry set maximum and minimum interest rates on deposits and on loans. It also set in preferential rates for the so-called "priority industrial sectors". All banking operations were subject to controls. Portfolio restrictions included that only discounting and short-term commercial loans, with 90 days maturity, were authorized. Long-term credit was severely restricted until 1960. Quantitative credit ceilings were imposed according to the industrial policy of the government. The Ministry of Finance also fixed the minimum capital requirements and the proportionality between assets and liabilities, but no legal cash or liquidity ratios, or capital to asset ratio were established. Variations in nominal or paid-up capital, reserve provisions, dividend distribution and exchanges and acquisitions of shares among financial institutions were all subject to ministerial approval. Disclosure rules too were set in and banks had to permit on-site inspections at the authorities' discretion.

The architecture of financial regulation was simplified. The main supervisory agency for banks was the Ministry of Finance and the Ministry of Labor for savings banks, until 1957 when the former was made also responsible for thrift institutions. The General Directorate of Banks and Stock Exchange, a technical department of the Ministry of Finance, was in fact the entity in charge of all supervisory tasks. This Directorate was responsible for the Banking Record Office. Other assignments included the inspection of banks, so that they fully comply with the official regulatory norms and the credit policy dictated by the government. In 1957 the Directorate was reformed and renamed General Directorate of Banks, Stock Exchange and Investment assuming also responsibilities over insurance companies and savings banks. Hence, Spain opted for a unique supervisory agency, as it was the case of many other European countries, e.g. Italy.

The Supreme Banking Council established in 1921 remained in place, although with reduced supervisory duties and limited autonomy. Its main function was to act as a consulting agency for the Ministry of Finance; other functions were to receive the application for the establishment of new banks and for the opening of new branches and the collection of bank statistics. Although the Supreme Banking Council lacked any supervisory power, it housed a Supervisory Board (Junta de Vigilancia) with the task of enforcing the official policy and banks' compliance with all official regulations.

The Bank of Spain, that maintained its private status, was put under the control of the Ministry of Finance and lost all its remaining autonomy. It was not nationalized but it became an institution entirely dependent on the Ministry of Finance. Furthermore, it was stripped of many of its functions. Monetary policy was transferred entirely to the Ministry of Finance, and the exchange policy to a special institution, the Spanish Exchange Control Institute, which depended from the Ministry of Industry and Commerce.

In 1962 the regulatory framework created after the civil war was partially altered. Changes in the European financial environment and the exhaustion of the domestic expansionary cycle that began in 1951 convinced the government that the autarkic and interventionist strategy ought to be dismantled. The Spanish economy grew fast during most of the 1950s, but at the same time it had accumulated a series of fiscal and monetary imbalances that threatened to abruptly halt the past economic improvements, and even to reverse what had been achieved in terms of income per capita. Protectionism and interventionism also had led to gross industrial inefficiencies and misallocation of resources. In 1959 a Stabilization plan, modeled after a similar French plan, was adopted to correct the inflationary process and the mounting disequilibrium in the balance of payments. The plan was followed by a series of reforms aimed to dismantle the autarkic framework, reduce the role of the State and enhance the role of the market.

In the financial sphere, the 1946 Banking Law was replaced by a new Banking and Credit Regulatory Law. The Bank of Spain was nationalized and old and new monetary instruments were put in place. Monetary policy, however, remained in the hands of the Ministry of Finance. The law established cash and liquidity ratios, a new public-debt ratio, by which banks were required to hold a certain proportion of government securities in their portfolio. Reserve requirements were also introduced for both banks and savings banks. Another relevant change was the separation between commercial and industrial banks. The latter were allowed to make long-term investments and hold all types of firm's securities (bond and equity). On the contrary, commercial banks should specialize in short-term credit and bill discounting of commercial paper with less than 18 months maturity. The changes introduced by the 1962 law intended to enhance the role of the market forces in achieving bank efficiency. Competition was a new goal, and it was no longer seen with suspicious eyes.

The liberalizing winds of the 1962 law took time to materialize. Entry barriers persisted for banks and savings bank. Branching limitations also remained in place. Interest rate ceiling on deposits and loans rested too under strict government control. Since financial institutions were supposed to play an active role promoting industrialization, a so-called “investment coefficient” was introduced, by which banks and savings banks were compelled to maintain a certain proportion of their portfolio in government bonds or in pre-determined industrial securities. In addition, “preferential” interest rates were adopted to favor the development of industrial sectors considered of “national interest”.

The supervisory architecture established in 1946 experienced only minor modifications. The Ministry of Finance maintained its fully comprehensive powers over the financial system. Credit policy and banks’ supervision stayed in the hands of agencies within the structure of the Ministry. The Bank of Spain lacking autonomy continued to implement monetary policy as a mere instrument of the government. A significant improvement, insofar as transparency and disclosure, was the creation of a Risk Information Center within the organization of the Bank. Its role was to receive and centralize in one department all banks’ data concerning risk concentration. The Center provided the Bank with an excellent instrument to monitor the risk level of the financial system. Moreover, two new agencies were created. The Institute of Credit and Savings Banks (Instituto de Crédito de las Cajas de Ahorros) to regulate and supervise the savings banks, and the Institute of

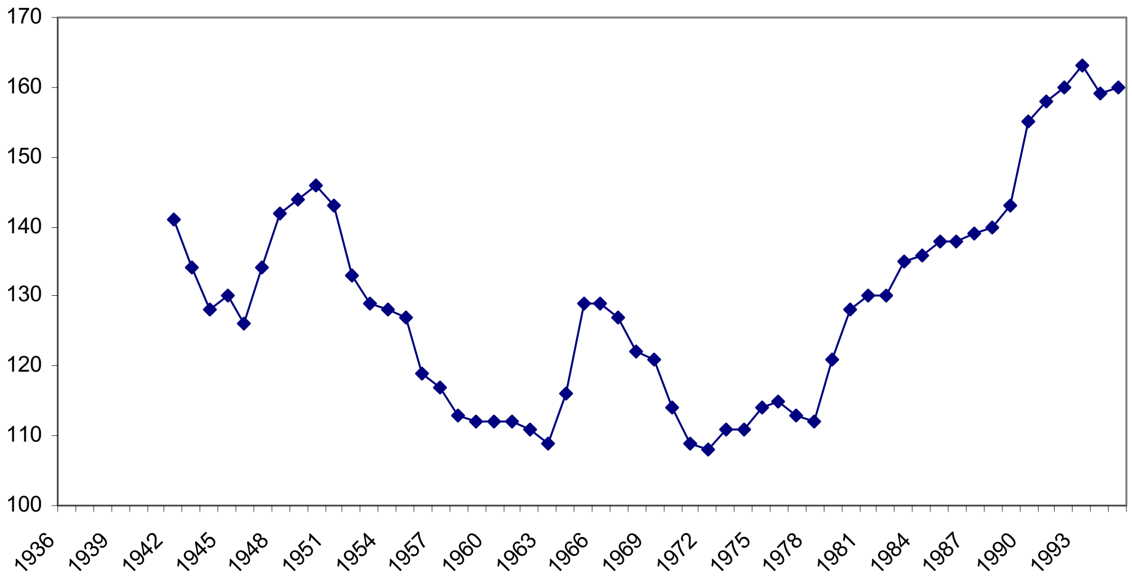
Medium and Long Term Credit, established to coordinate and control the so-called official credit entities.

Cautious deregulation began in 1969. Interest rates restrictions on long-term (two years or more) loans were lifted. Barriers to entry were loosened and branching restrictions were partially removed. These more relaxed chartering and branching policies enhanced competition. After 1974, deregulation speeded up. Discrimination between banks and savings banks were eliminated. Banking operations were liberalized and the obstacles to competition among financial institutions were progressively suppressed. By 1976, when a new crisis was looming, the Spanish financial system had been renovated and partially deregulated. Nevertheless, the old structural controls had not been substituted by prudential non-discretionary rules, or to put it less radically, the shift from structural to prudential control as a means to achieve financial stability has been incomplete. Moreover, by the mid-1970s the Spanish financial system was still non-competitive internationally and poorly diversified. Highly regulated for a long period and sheltered from foreign competition (foreign banks were not allowed to enter the country until 1978), Spanish banks accumulated notable inefficiencies. Individual institutions were small, compared to Western European standards, with weak deposit bases and loans portfolios, and limited economies of scope.

In summary, the Spanish financial regulatory regime built after the civil war, not at all very different from that adopted in other European nations, offers a remarkable contrast with that of the previous two periods. Competition was sacrificed for stability. The government, showing an unmistakable distrust for bankers and no faith in the market, replaced the role of the market in the allocation and distribution of resources. After 1962 deregulation made some inroads. Competition was enhanced in various forms and some financial activities liberalized. At first, the stability of the system was not compromised because still many of the old regulations remained in place. Moreover, the profitability of the banks maintained the levels reached in previous decades. What it is true, however, is that after 1962 the variability of deposits, loans and profits, measured by the coefficient of variation, was higher in 1962-74 than in 1940-62. Hence, as Pons (2002) has suggested, the changes in regulation after the 1962 Banking Law impinged somehow on the stability of the financial system. Some individual banks and savings banks experienced difficulties, but were handled swiftly and discretely by the Bank of Spain. Takeovers and mergers were permitted to avert any possible bank failures. As seen in figure 10 the number of banks declined but it was not the result of bankruptcies or traumatic liquidations. Again table C in the Appendix summarizes the most salient elements of the regulatory regime of this period.

Figure 10

Number of banks 1936-2000



Source: Consejo Superior Bancario, Boletínes.

6. Banking crisis and financial reforms, 1975-2000

The late 1970s and early 1980s saw the largest failures of the Spanish financial system since the crash of 1866. Twenty-four institutions were rescued, four were liquidated, four merged, and twenty small and medium-sized banks were nationalized. These 52 banks out of 110, representing 20 per cent of the deposits of the banking system, were experiencing solvency problems. Because of its depth and the number of institutions affected this crisis has been included in the group of the so-called recent "Big Five Crises", identified by Caprio *et al*. (2005) and Reinhart and Rogoff (2008). This financial episode came unexpectedly, as usually was the case with other crisis and its resolution was complicated and costly in terms of the public resources employed to avoid the collapse of the financial system. Savings banks also went through difficult times, although in this case consolidation was the solution adopted to prevent major bankruptcies. In many instances insolvent small and medium-size saving banks were absorbed by larger and better managed institutions. In other cases, merging was the method used to solve the problems. All in all, between 1977 and 1985 more than a dozen savings banks closed.

The resolution of the banking crisis imposed a high fiscal toll on the economy. The total gross fiscal costs of the rescue operation were approximately 5 per cent of GDP. It has been estimated that the sum was equivalent to the fiscal cost of the industrial restructuring that took place at the same time. Although during the period the evolution of the budget deficit was conditioned by different elements, the deficit multiplied by a factor of 50. From a being a mere 0.5 per cent of GDP in 1975 it rose to more than 6 per cent in 1984 and 1985. Credit to the private sector fell sharply from an annual growth rate of 25 per cent at the beginning of the crisis to a 1.4 per cent low in 1984. Shareholders and creditors of the banks placed under public administration incurred in heavy losses, but depositors did not suffer any reduction of their balances.

Behind the causes of the banking crisis there was a combination of exogenous and endogenous factors (Gil 1986; Cuervo 1988; Ontiveros and Valero 1988; Faus 2001). The banking crisis coincided with a deep economic recession. In the mid-1970s the stable macroeconomic environment of the previous decade came to an end. Energy, raw material and labor cost rose. The balance of payments current account deteriorated. Inflation escalated and nominal interest rates increased. Unemployment rose to record levels up to 25 per cent at the peak of the crisis. The industrial sector was severely hit. Low demand combined with increasing costs reduced the profitability of firms. Technical obsolescence, lack of competitiveness and dependability on external finance put industrial companies in a complicated situation. Firms in sectors such as mining, iron and steel, shipbuilding, and machinery experienced heavy losses and many had to close its doors. Consumer good industries also went through difficult times. Banks caught with large industrial portfolios saw their balance sheets deteriorated. The volume of non-performing assets rose. Banks' profits were reduced and in some cases losses were recorded although they were not publicly unveiled. Equity prices fell sharply, and so did housing and commercial real state prices after several years of a pronounced upward trend supported by high borrowing levels (figure 11). Around 1980 non-financial sector indebtedness had reached a historical record with a leverage ratio around a 100 per cent. The decline in assets and stock prices affected the portfolio of the banks and reduced its market net worth (Torrero 1990).

Deregulation and competitive pressures were other causes of the banking crisis. The number of banks increased slightly after the partial liberalization of the 1962 law, reversing the steady decline of the previous period. Moreover, there was a rapid expansion in the number of branches at existing commercial banks following the liberalization of the authorization to establish branches. Competition from foreign-owned banks after 1978, credit companies, insurance companies, and in particular finance companies led to intensified pressures. Bank managers, not used to operating in a competitive environment, increased their focus on gaining market share. Many banks expanded into geographical and business areas in which they had little prior knowledge. Industrial banks established after 1962 lacked expertise and qualified professionals. There were cases of illegal banking practices, unwarranted risk concentration and imprudent management, as it had happened a century before in 1866.

As the banking crisis erupted almost unexpectedly, the Ministry of Finance and the Bank of Spain were caught unprepared. Deregulation had not been accompanied by the establishment of an efficient system of banking supervision. The authorities had neither the legal instruments, nor the institutional mechanisms to face the turmoil caused by massive banks insolvencies. The inspection department of the Bank lacked the human resources to carry out adequate banking examination. Disclosure requirements for financial holdings were not in place and hence it was difficult to gauge the solvency of the financial firms within the holding. Auditing of banks was not at the time customary and many firms resisted inspection by outsiders. Procedure rules to impose sanctions to managers were non-existent or outdated. Procedures to remove the administrators of banks in troubles were legally complex. In sum, despite the fact that a "regulatory regime" certainly existed, the financial authorities lacked an adequate system of information and supervision. To avoid a possible catastrophe the Bank had to implement emergency measures to prevent bank runs and a contagion effect from unsound to essentially solvent institutions. Containment included lender of last resort assistance to banks with temporary liquidity problems and intervention in basically failed banks.

At first the crisis affected only a limited number of small institutions. Rescue operations began in 1977 with Banco de Navarra and it was followed by a series of interventions that continued until 1983. To provide limited guarantee to depositors and to have a quick and adequate mechanism to intervene in banks a Deposit Guarantee Fund was established in November 1977. During the two initial years of the crisis the Fund intervened in 29 institutions. Only one institution was liquidated, while the rest were restructured and reorganized, and later sold to other banks. In 1978 a new and more potent institutions was created: the Banking Corporation (Corporación Bancaria), a society with a social capital of 500 millions pesetas, that received contributions from the Bank of Spain and from 95 banking firms. The objective of this corporation was similar to the Fund. To intervene in institutions in troubles, remove and substitute administrators, reorganize the banks, and, in due time, return them to the private sector. The main role in the restructuring process was played by the Bank of Spain.

In one special case, the bail-out of Banco de Urquijo, a major industrial bank, the intervention was conducted directly by the Bank of Spain. And the Ministry of Finance too intervened directly in another special case: the nationalization of the Rumasa holding, formed by 600 commercial and industrial firms and 17 banks that were essentially used to finance the operation of the group. With a level of risk concentration, that exceeded the legal limits, over 70 per cent of the credit granted by the banks went to firms of the group, and widespread fears of a ruinous collapse, the Ministry of Finance decide to nationalize the entire holding in 1983.

The resolution of the banking crisis was followed by an intense period of financial restructuring. Commercial banks reduced their industrial portfolios, whose share in the balance sheets declined from 33 per cent of total assets in 1975 to 13 per cent by 1986 (Martín, Carbó and Sáez 1995). The holding of public securities, on the contrary, increased. Financial concentration was also an outcome of the crisis. Mergers were the result of both public policy recommendations, and of purely economic reasons. Consolidation accelerated at the end of the 1980s and the beginning of the 1990s. In 1989 Banco Bilbao merged with Banco de Vizcaya to form BBV, which later in 2000 became BBVA after the purchase of the public banking group Argentaria. The other major merger was Banco Central and Banco Hispano Americano, in 1991, to form BCH, which later in 2000 consolidated with Banco Santander. Now BBVA and Santander are two giants in the Spanish domestic market as well as in the world financial system.

According to Mishkin (1991: 57), "although desirable, deregulation and liberalization can be disastrous if not managed properly. If the proper bank regulatory and supervisory structure is not in place before liberalization, risk-taking behavior will not be adequately constrained. Bad loans are likely outcome, with potential calamitous consequences for bank balance sheets at some point in the future. Financial deregulation and liberalization also often lead to a lending boom, both because of increased opportunities for banking lending and because of a financial deepening that brings more funds into the banking system, opening up new lending opportunities that may result in loan portfolios of very poor quality". This argument is perfectly applicable to the Spanish experience.

The authorities (Ministry of Finance and Bank of Spain) realized that the previous framework was flawed in many respects. The regulations in place at the time of the banking crisis were inadequate and insufficient. The financial statements provided by banks did not permit to evaluate the real risks of the institutions. Accounting procedures were obsolete. Moreover, the inspection capacity of the Bank of Spain was limited, and the sanctions that could be imposed on banks' administrators for wrong doings were of dubious efficacy.

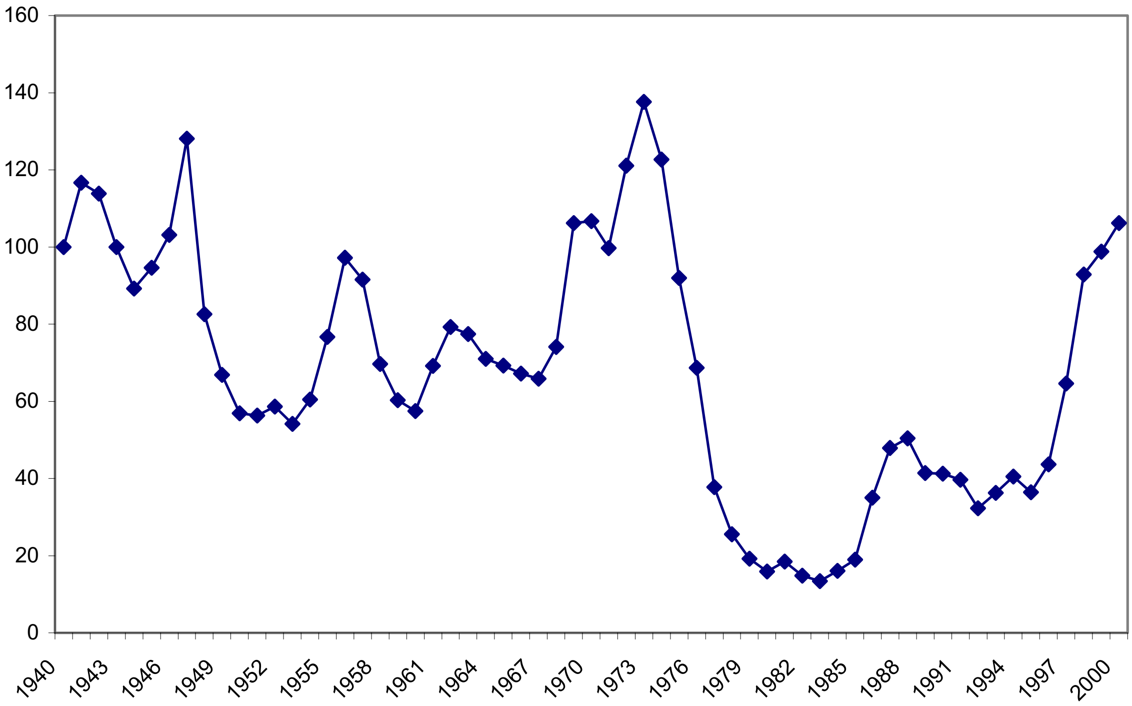
The crisis taught important policy lessons, and the regulators moved swiftly to forge a strong banking supervisory regime. First they realized that bank regulatory and supervisory agencies needed adequate resources to do their job properly. Without enough human and material means a bank supervisory agency is unable to monitor banks well enough to keep them form engaging in inappropriately risky activities, or to see that they have the appropriate management expertise and controls to manage risks and sufficient capital to keep in check the moral hazard incentives to take on excessive risk. Second, they realized as well that proper accounting standards and disclosure requirements are crucial to a healthy banking system. Third, bank supervisors need to take prompt action to stop undesirable bank activities and, even, close down institutions that do not have sufficient net worth, making sure that stockholders and managers of these insolvent institutions are appropriately punished. Fourth, because of prompt corrective action is so important, the bank supervisory agency requires sufficient independence from the political process so that it is not encouraged to sweep problems under the rug by engaging in regulatory forbearance. One way to do this is to give the bank supervisory role to a politically independent central bank.

It is not surprising therefore that while the crisis unfolded the regulatory authorities introduced legislation in order to reinforce the supervisory capacity of the Bank of Spain. In 1980 the Law of Governing Bodies of the Bank of Spain (Ley de Organos Rectores del Banco de España) transferred all responsibilities for bank supervision, discipline and sanctions to the central bank, that at the same time was given ample political autonomy. In a short time thereafter, the Bank, by means of ministerial orders or by mere communications (circulares) introduced new rules regulating accounting practices and disclosures norms with regard to the income and losses account. The distribution of benefits, the classification of risk according to the nature of the each asset, the provision against future insolvency, and norms to value balance sheets were subject of special attention. In 1988 the Credit Company Intervention and Discipline Law unified the control of all financial firms under the Bank of Spain. The law regulated the causes for bank intervention, made a graduation of the possible infringements, established the standard procedures for banking examination, and listed the sanction to banks and managers according to the severity of the fault. The following step came with the Autonomy of the Bank of Spain Law, in order to comply with EU legislation. Finally in 2000 the Bank of Spain introduced the so-called forward-looking provisioning, also referred to as the dynamic or statistical reserve, a mechanism of pre-provisioning for loan losses over the course of the cycle. The idea behind this new solvency provision, together with the "old" existing provisions, is to try to capture expected losses. From the very moment that a loan is granted, and therefore any impairment on this specific loan appears, there is a positive default probability (no matter how low it might be) following a statistical distribution with an expected loss. The expected loan is known in a statistical sense but not yet identified in a specific loan operation or borrower. As the risk appears at the beginning of the operation, so does the statistical operation requirement. With this system, provisions run in parallel to revenues and are, therefore, distributed through the cycle, allowing for a better mapping between income and costs in the profit and loss account. Its merit, according to the Spanish authorities, is that it introduces incentives for better risk management, while at the same time attenuating the cyclicality of the financial sector and, thereby, swings in the real economy. [19]

[19] Poveda (2000); Caruana (2003).

Figure 11

Real General Index, Madrid Stock Market 1940-2000



Source: Estadísticas Históricas de España (2005).

7. Conclusion

Episodes of financial fragility appear to be an inherent feature of market-oriented financial systems, and both macroeconomic and microeconomic factors have figured in banking crises, as observed by Caprio and Klingebiel (1996). Avoiding crises through regulation and supervision, and preserving at the same time the fundamentals of a market-oriented system have therefore been put high in the agenda of governments in many countries and in international standard-setting bodies.

The history of international crises and the history of financial regulation illustrate at least two points. First, regulation and supervision of individual financial institutions contribute to a safer and sound financial system by reducing the probability of financial distress of individual institutions. In particular, regulation and supervision protect the financial system against idiosyncratic risks, *i.e.* risks that affect a few banks depending on their exposures, but that may affect the financial system as a whole through interlinkages between financial institutions. As Caprio and Klingebiel (1996: 79-101) have suggested, banking systems can be made most robust in their responses "to bad luck and bad policies" through a regulatory framework that rewards prudent and diversified risk taking by bankers. Second, despite the improvements made in the regulatory frameworks and supervisory procedures, financial crises do reemerge time after time. So far regulation and supervision have been proven ineffective in avoiding or preventing financial crises. We still have to design a regulatory framework that enables the banking system to be a more resilient absorber of shocks. In his recent paper on the history of financial supervision, Goodhart (2007: 64) has put it clearly: what historical record demonstrates, and as every central banker and practitioner comes to understand, is that regulation and supervision are primarily reactive. In Goodhart´s words, when something goes wrong in the financial system, some people lose money and then almost by definition the existing system of supervision and regulation is held to be at fault. The Press takes up the cry, “heads must roll”. Since the politicians do not want it to be their own heads that they become parted from, they feel the need to be seen to be taking actions to make sure that that particular disaster never happens again.

Like the rest of the world, Spain has suffered frequent financial crises and changes in the regulatory framework. In various instances, regulatory changes have predated financial crisis, but, in others, banking crises have occurred without reference to changes in the regulatory regime. There have been crises that have been followed by reforms of the financial structure, and also troubled financial times with no modification of the regulatory and supervisory regime. Economic policy action has been usually absent in the XIXth century, while in the XXth century regulators have been more diligent. Moreover, in all cases, major financial crisis have produced intense financial restructuring, although as elsewhere banking restructuring and interventions not always have been successful.

The XIXth century legislation reflected the liberal ideology of the times. Banks were considered as any other commercial or industrial firms. The lack of regulation was the most prominent feature of the period. For credit companies, entry into the sector was easy and there were no restrictions on asset holdings or financial operations. There were no well-defined solvency or liquidity ratios. Banks of issue had some limitations. Entry was easy but only one per town was permitted. They had also restrictions insofar as their portfolio composition. Moreover, after 1874 the privilege to issue banknotes for the entire country was granted to the Bank of Spain. Supervision was practically absent and, presumably, banking examination was nonexistent. Disclosure requirements were minimum. There was not either any depositor insurance device in place. Market discipline rather than public surveillance prevailed for more than half a century. The Royal commissioner was the only, if somehow blurred, supervisory authority. Crises episodes and bankruptcies were not uncommon. Whether the existence of a regulatory or supervisory regime may have prevented the occurrence of financial turmoil it is something difficult to say and certainly more research is needed before a definite answer is given.

The postwar banking crisis brought to the fore the need to regulate the financial sector. The 1921 Banking Regulatory Law was to some extent a watershed because it broke a long period of nearly "free banking". Supervision was entrusted to the Supreme Banking Council, a new agency which was controlled by the banks themselves. We have characterized this period as one of self-regulation because the regulatory and supervisory tasks were put in the hands of the banks. Supervision was focused on the reinforcement of market discipline. The attempt to transform the Bank of Spain into a real central bank was another salient feature of the 1921 law. Until then, the Bank had privileged its private interest over its duties as bank of issue. The regulatory regime born in 1921 was of no use to prevent a new crisis in the mid-1920s or the liquidity scramble of 1931 that ended with various bankruptcies. However, in this last occasion the Bank of Spain employed its capacity as lender of last resort to avoid the collapse of the financial system.

The Civil War marked an abrupt shift in the regulatory regime. Legislation introduced in 1939-42 and later in 1946 imposed strict barriers to entry and restricted branching. Competition was superseded by government discretion. The lack of faith in the market led to arbitrary administrative allocation of resources. Banks were put at the service of political economy goals as defined by the financial authorities. Protected from competition within the industry and from outside, the banking industry enjoyed a long period of relative stability. Although the number of banks varied over time, there were no major failures. Forbearance for trouble institutions was permitted. Liquidity problems were resolved by the Bank of Spain on individual cases, and banks insolvencies were dealt with by merging operations.

The regulatory regime was altered in 1962 as part of a general shift from an inward-looking to an outward-looking growth strategy. The 1962 Regulatory Law softened the interventionism of the previous period and introduced a division between commercial and industrial or investment banks. A cautious process of liberalization began in 1969 and deregulation accelerated after 1974. Restriction on asset holdings were lifted as well as ceilings on maximum interest rates on deposits. However, deregulation was not accompanied by a change in the supervisory regime. During the favorable economic environment of the 1960s, the financial industry expanded considerably. When the world economic cycle changed in the mid-1970s, Spain was severely hit by the crisis, suffered a long and protracted period of financial turmoil. The banking crisis that began in 1977 affected half of the banking structure and lingered out until 1985. The supervisory authorities had to implement emergency measures to contain a generalized collapse. New instruments were created, such as the Deposit Guarantee Fund and a public joint-stock company, the Banking Corporation, to bail out banks in trouble. In the 1980s and 1990s the supervisory regime was reinforced and Spain introduced measures to comply with EU directives and the Basel accords.

APPENDIX A

MAIN BANKING REFORMS IN SPAIN

YEAR	LEGISLATION
1835	Royal Order of the Ministry of Interior promoting the establishments of savings banks
1853	Royal Decree regulating savings banks: not enforced
1856	Bank of Issue Law Credit Companies Law
1869	Joint Stock Company Law
1874	Decree granting the monopoly of issuance of banknotes to the Bank of Spain
1880	Law of Savings Banks. Statutes approved by the Ministry of Interior. Saving banks were put under the protection of the government. Defined as “charitable” institutions
1885	Reform of the old 1835 Code of Commerce. Removal of chartering requirements. Free establishment of all types of joint stock companies. Financial companies subject to similar rules than commercial and industrial firms.
1891	Royal Decree extending the monopoly of issuance of banknotes to the Bank of Spain
1921	Banking Regulation Law. First act regulating the banking industry. Establishment of the first regulatory body: the Supreme Banking Council
1926	Royal Decree establishing a Regulatory and Inspection Office for the saving banks
1928	Royal Decree creating the Spanish Confederation of Saving Banks (a supervisory body similar to the Supreme Banking Council)
1931	Partial reform of the Banking Regulation Law. It affected exclusively the functioning of the Bank of Spain
1933	Decree approving the General Statute of Saving Banks. Definition of saving banks as thrift and charitable institution. Regulating the portfolio composition of saving banks
1939	Order of the Ministry of Finance declaring a financial “statu quo”
1946	Banking Regulation Law. A complete reform of the previous Banking Regulation Law of 1921

1947	Decree regulating the composition and appointment of members of the Board of saving banks
1957	Decree by which the saving banks are put under the supervision of the Ministry of Finance
1962	General Banking Law. Complete reform of the 1947 law. Nationalization of the Bank of Spain. Division between commercial banks and investment banks.
1964	Decree defining saving banks as financial institutions. Restructuring the boards of the directors of the saving banks. Regulating the composition of the saving banks portfolio. Creation of the Credit Institute of the Saving Banks, with supervisory responsibilities.
1971	Official Credit Law, to reform the regime of the public financial institutions
1974	Orders of the Ministry of Finance liberalizing different banking prices, operations, and the opening of branches.
1977	Decree-law of Saving Banks, reorganizing the functions and operations of the savings banks
1980	Law regulating the functioning and responsibilities of the Bank of Spain
1994	Law of Autonomy of the Bank of Spain Law of Reform of the Financial System, to comply with EU legislation
1996	Royal decree regulating the establishment and activities of the financial system
2002	Reform Law of the Financial System

APPENDIX B

SPANISH BANKING REGULATORY AGENCIES

PERIOD	BANKS	SAVING BANKS
1856-1920	Ministry of Finance	Ministry of Interior
1921-1936	Ministry of Finance Supreme Banking Council Bank of Spain	Home Ministry: 1921-1926 Labor Ministry: since 1926
1936-1962	Ministry of Finance	Labor Ministry: until 1957 Ministry of Finance: since 1957
1962 to the present	Ministry of Finance Bank of Spain	Ministry of Finance Bank of Spain

APPENDIX C

SPANISH BANK SUPERVISORY REGIMES

BANKS

PRUDENTIAL REGULATIONS	FIRST PERIOD: 1856-1920	SECOND PERIOD: 1921-1936	THIRD PERIOD: 1939-1975
1. Entry	Only one bank of issue per town (1874: monopoly of issue granted to the Bank of Spain. Incorporation needed government authorization. Obtained easily with minimum requirements	Subject to government authorization and a favorable report of the Supreme Banking Council. Compulsory registration in the Official Register of the SBC	Restriction on entry. Entry subject to strict norms and regulations
2. Capital requirements	Fixed minimum	Fixed minimum	Regulated. Fixed by the Ministry of Finance
3. Limits on economies of scale	No limits	No limits	Strong branching limits. Strict controls on mergers and consolidation
4. Limits on economies of scope and diversification	Banks of issue: some restrictions Credit companies: no limits	No limits	Restriction on portfolio composition
5. Limits on pricing	No limits	Maximum rates on deposits	Strict regulation by the Ministry of Finance. All rates
6. Liability insurance	No liability insurance	No liability insurance	No liability insurance
7. Disclosure	Publication of financial statements in the Government Official Journal	Information disclosure to the Supreme Banking Council	Information disclosure to the Ministry of Finance
8.Examination	At the discretion of the government	Supreme Banking Council. Rarely conducted	At the discretion of the government. Examination by the General Inspectorate Committee
9.Supervision and enforcement	Royal commissioner. Limited to the compliance with the statutes	Limited to the observance of the rules establishes by the Supreme Banking Council	Strict enforcement of rules. Repeal of the bank charter in case of violation of the law

SAVING BANKS

PRUDENTIAL REGULATIONS	FIRST PERIOD: 1856-1920	SECOND PERIOD: 1921-1936	THIRD PERIOD: 1939-1975
1. Entry	Free Entry. Minimal discretion. The statutes required the approval of the Ministry of Interior	Unvaried	Similar to banks
2. Capital requirements			
3. Limits on economies of scale	One saving bank per town	Unvaried	Strict branching limitations
4. Limits on economies of scope and diversification	Restriction on assets	Unvaried	Restrictions on assets
5. Limits on pricing	Unregulated	Unregulated	Strict government regulation
6. Liability insurance	No liability insurance	No liability insurance	No liability insurance
7. Disclosure	Unregulated	Unregulated	Disclosure to the Ministry of Labor and later to the Ministry of Finance
8.Examination	Unregulated	Unregulated	Similar to banks. Examination performed by special agencies established to regulate savings banks
9.Supervision and enforcement	Unregulated	Unregulated After the approval of the General Statute of Savings Banks, supervision was conducted by Ministry of Labor	Similar to banks. Supervision conducted by the special agencies established to regulate savings banks

REFERENCES

BBVA (2003), *La Banca en España en el período de entreguerras, 1920-1935. Un modelo de modernización y crecimiento,* BBVA-Archivo Histórico: Bilbao.

Barth, J. R., Caprio, G. and Levine, R. (2001), "Banking systems around the globe: do regulations and ownership affect performance and stability?" in Mishkin, F.S. (ed.), *Prudential supervision. What works and what doesn´t?*, The University of Chicago Press: Chicago.

Benston, G. (1991), "Does bank regulation produce stability? Lessons from the United States", in Capie, F. and Wood, G. (eds.), *Financial crises and the world banking system,* MacMillan: London.

Bernanke, B. and James, H. (1991), "The gold standard, deflation and financial crises in the Great Depression: an international comparison", in Hubbard, R.G. (ed.), *Financial markets and financial crises,* The University of Chicago Press: Chicago.

Calomiris, C.W. and Gorton, G. (1991), "The origins of banking panics: models, facts and bank legislation", in Hubbard, R.G. (ed.), *Financial markets and financial crises*, The University of Chicago Press: Chicago.

Caprio, G. and Klingebiel, D. (1996), "Bank insolvency: bad luck, bad policy or bad banking", in Bruno, M. and Pleskovic, B. (eds.), *Annual World Bank conference on development economics*, The World Bank: Washington.

Caprio, G., Kligebiel, D., Laeven, L. and Noguera, G. (2005): "Banking crises database", in Honohan, P. and Laeven, L. (eds.), *Systemic financial crises. Containment and resolution,* Cambridge University Press: Cambridge.

Caruana, J. (2003), "Banking provisions and asset prices bubbles", in Hunter, W., Kauffman, G. and Pomerleano, M. (eds.), *Asset price bubbles: the implications for monetary, regulatory, and international policies,* The MIT Press: Cambridge.

Cuervo García, A. (1988), *Las crisis bancarias en España, 1977-1985,* Editorial Ariel: Barcelona.

Demigürc-Kunt, A. and Detragiache, E. (1998), The determinants of banking crises in developing and developed countries, IMF Staff Papers, vol. 45, No. 1.

Díaz-Alejandro, C. (1985), "Good-bye financial repression, hello financial crash", *Journal of Development Economics*, vol. 19, issue 1-2.

Estadísticas Históricas de España (2005), Madrid, Fundación BBVA: Madrid.

Faus Mompart, E. M. (2001), *Regulación y desregulación. Notas para la historia de la banca española,* Ediciones Península: Barcelona.

Gil, G. (1986), *El sistema financiero español*, Estudios Económicos, 29, Banco de España: Madrid.

Goodhart, C.A.E. and Delargy P.J.R. (1998), "Financial crises: plus ça change, plus c´est la même chose", *International Finance*, 1-2.

Goodhart, C.A.E. (2007), "Financial supervision from a historical perspective", Hayes, D.G. and Woods, G.E. (eds.), *The structure of financial regulation*, London, Routledge: London.

Gorton, G. (1988), "Panics and business cycles", *Oxford Economic Papers*, 40, 4.

Kaminsky, G. and Reinhart, C. (1999), "The twin crises: the causes of banking and balance-of-payments problems", *American Economic Review*, 89, 3.

Kindleberger, C.P. (1978), *Manias, Panics and Crashes. A history of financial crises*, Basic Books: New York.

Martín-Aceña, P. (1983), "La crisis financiera española de 1931 y la política monetaria del primer Gobierno de la República", *Historia económica y pensamiento social*, Alianza Editorial: Madrid.

———— (1987), "Development and modernization of the financial system, 1844-1935", in Sánchez Albornoz, N. (ed.), *The economic modernization of Spain, 1830-1930,* New York University Press: New York.

———— (1994), "Spain during the classical gold standard years, 1880-1914" in Bordo, M.D. and Capie, F. (eds.), *Monetary regimes in transition,* Cambridge University Press: Cambridge.

———— (1995), "Spanish banking in the inter-war period", in Feinstein, C.H. (ed.), *Banking, currency, and finance in Europe between the wars,* Clarendon Press: Oxford.

———— (2001), "El Banco de España entre dos siglos: de banquero del Estado a prestamista en última instancia", *Las claves de la España del siglo XX. Las transformaciones económicas,* Sociedad Estatal España Nuevo Milenio: Madrid.

———— (2007), *1857-2007. Banco Santander 150 years of history,* Turner/Banco Santander: Madrid.

Martín-Aceña, P. and Pons Brias, M.A. (1994), "Spanish banking after the civil war, 1940-1962", *Financial History Review*, 1.

Martín M., Carbó, S. and Sáez F.J., (1995), "Las participaciones accionarias de las entidades de depósito españolas, 1962-1992", *Fundación FIES*, Documento de Trabajo 114.

Mishkin, F.S. (1991), "Asymmetric information and financial crises. A historical perspective", in Hubbard, R.G. (ed.), *Financial markets and financial crises,* The University of Chicago Press: Chicago.

———— (2001), "Prudential supervision. Why is it important and what are the issues? ", in Mishkin, F.S. (ed.), *Prudential supervision. What works and what doesn´t?,* The University of Chicago Press: Chicago.

Minsky, H.P. (1977), "A theory of systemic fragility", in Altman, E.I. and Sametz, A.W. (eds.), *Financial crises: institutions and markets in a fragile economic environment,* John Wiley: New York.

Mitchener, K.J. (2006), "Are prudential supervision and regulation pillars of financial stability? Evidence from the Great Depression", NBER Working Paper, No. 12074.

Neal, L. and Weidenmier, M. (2003), "Crises in the global economy from tulips to today. Contagious and consequences", in Bordo, M.D., Taylor, A.M. and Williamson, J.C. (eds.), *Globalization in historical perspective*, The University of Chicago Press: Chicago.

Ontiveros, E. and Valero, F.J. (1988), "El sistema financiero. Instituciones y funcionamiento", in García Delgado J.L. (ed.), *España. Economía*, Espasa-Calpe: Madrid.

Pons Brias, M.A. (1999), "La legislación bancaria española, 1850-1960", in Martín-Aceña, P. and Titos Martínez, M. (eds.), *El sistema financiero en España. Una síntesis histórica,* Universidad de Granada: Granada.

———— (2002), *Regulating Spanish Banking, 1939-1975*, Ashgate Publishing Ltd.

Poveda, R. (2000), "La reforma del sistema de provisiones de insolvencias", *Boletín Económico del Banco de España,* Banco de España: Madrid.

Prados de la Escosura, L. (2003), *El Progreso Económico de España (1850-2000),* Madrid, Fundación BBVA: Madrid.

Reinhart, C. and Rogoff, H. (2008), "This time is different: a panoramic view of eight centuries of financial crises", NBER Working Papers, No. 13882.

Roldán, S. and García Delgado, J.L. (1973), *La formación de la sociedad capitalista en España, 1914-1920,* Confederación Española de Cajas de Ahorro: Madrid.

Sánchez Albornoz, N. (1963), "La crisis de 1866 en Barcelona", *Homenaje a D. Ramón Carande*, II. Banco Urquijo, Servicio de Estudios y Publicaciones: Madrid.

———— (1967), "La crisis de 1866 en Madrid: la Caja de Depósitos, las sociedades de crédito y la Bolsa", *Moneda y Crédito*, 100.

Sardá, J. (1948), *La política monetaria española y las fluctuaciones de la economía española en el siglo XIX,* CSIC: Madrid.

Schwartz, A. (1986), "Real and pseudo-financial crises", in Capie, F. and Wood, G. (eds.), *Financial crises and the world banking system,* MacMillan: London.

Sudriá, C (1990), "Los beneficios de España durante la gran guerra. Una aproximación a la balanza de pagos española, 1914-1920", *Revista de Historia Económica*, 7, 2.

Tedde de Lorca, P. (1974), "La banca privada española durante la Restauración, 1874-1914", in Tortella, G. (ed.), *La banca española en la Restauración*, Banco de España: Madrid.

Tedde de Lorca, P. and Anes, R. (1974), *Hacienda Pública Española*, 27.

Titos Martínez, M. (1999), "Las cajas de ahorros, 1853-1962", in Martín-Aceña, P. and Titos Martínez, M., *El sistema financiero en España. Una síntesis histórica,* Universidad de Granada: Granada.

Torrero Mañas, A. (1990), "El sector financiero: cambios y tendencias", García Delgado, J.L. (ed.), *Economía española de la transición y la democracia, 1973-1986,* CIS: Madrid.

Tortella Casares, G. (1970), "El Banco de España entre 1829-1929. La formación de un banco central", *Banco de España. Una historia económica*, Banco de España: Madrid.

———— (1973), *Los orígenes del capitalismo en España*, Tecnos: Madrid.

Tortella G. and Tedde de Lorca, P. (1974): "Censo y balances normalizados de los bancos privados españoles 1874-1914", in *La banca española en la restauración,* Servicio de Estudios del Banco de España: Madrid.

Tortella Casares, G. and J. Palafox (1984), "Banking and industry in Spain, 1918-1936", *Journal of European Economic History*, 13, 2.

PART B

KEY CRISES EPISODES AND REGULATORY RESPONSES

BANK REGULATION AND BANK CRISIS
THE MAIN DEVELOPMENTS IN THE NORWEGIAN REGULATORY SYSTEM BEFORE, DURING, AND AFTER THE BANKING CRISIS OF 1988-92

Sigbjørn Atle Berg[*] *and Øyvind Eitrheim*[**]

The Norwegian experiences of the past thirty years illustrate what we believe are two general tendencies in bank regulation. The first one is that a bank crisis will tend to focus regulators' minds and lead to stricter regulations. The second one is that cycles in regulation tend to interact with the economic cycle, in the sense that the rationale for strong regulation tends to become somewhat blurred when the economy is booming. These patterns appear in the Norwegian experience after the banking crisis of 1988-92, and they can presumably also be recognized in many other jurisdictions.

JEL: G28, N44.

1. Introduction

The bulk of research literature on bank regulation is concerned with identifying the socially optimal form of regulation. It is generally assumed that regulators will set and implement rules in order to provide banks with the correct incentives for socially desirable behaviour. The regulators are seen as completely rational, and the human limitations of regulation are rarely discussed. A review of this stream of literature is found in Bhattacharya, Boot and Thakor (1998). There is also a growing literature on how actual bank regulation affects the macro economy, in particular relating to the effects of the Basel capital adequacy requirements. See Goodhart, Hofmann and Segoviano (2004) for a prominent example. Furthermore, the literature contains some discussion of the interaction between financial innovation and bank regulation; see for instance White (2000).

There is also a literature on how regulation is affected by regulators' private interests. General papers in this tradition include Stigler (1971), Becker (1983) and Peltzman (1989). Papers more specifically on banking regulation include Kane (1990), Boot and Thakor (1993) and Kroszner and Strahan (2000). These papers discuss how the self-interest of bank regulators affects regulatory behaviour and makes it deviate from the socially optimal behaviour. In the present financial crisis much attention has also been paid to the limited resources of regulatory agencies and the consequences that might have for regulation and supervision, see for instance Goodhart (2008). It is increasingly being realised that regulators cannot be expected to implement long-term optimal solutions.

The present paper is primarily concerned with this latter aspect of bank regulation. We believe that bank regulation will always be influenced by the developments in the financial sector and in the economy at large. We try to illustrate this by looking at how the Norwegian banking crisis of the late 1980s and early 1990s influenced bank regulation in Norway. We shall argue that in the aftermath of this crisis the regulation in Norway has been stricter than in most other

[*] Norges Bank. Email: sigbjorn-atle.berg@norges-bank.no

[**] Norges Bank. Email: oyvind.eitrheim@norges-bank.no. We are grateful to Ingrid Hyggen, Frank Heid and Bent Vale for helpful comments and suggestions.

European countries, and that this strictness can probably be ascribed to the experiences during the banking crisis. But we shall also provide some examples that initial strict rules were eased as the memory of the banking crisis became more distant.

There may thus be regulatory cycles which are correlated with the financial cycles. After a banking crisis has occurred there will typically be a period with stricter regulations (a tightening phase). But as the upturn become manifest and the financial sector looks more resilient, the regulatory standards may gradually deteriorate (an easing phase). Such cycles would illustrate that bank regulation is a highly human endeavour, with severe limitations on the long run rationality of the regime as a potential consequence.

2. Overview

The Norwegian banking industry became heavily regulated after the Second World War. Interest rate regulations created surplus demand for credit, which was handled by quantitative regulations on credit volumes. In this environment there was no imminent need for prudential regulation, and the capital adequacy requirements formally in place were often not met. It was a period with little attention paid to capital adequacy in general. The prevailing view was that banks had accumulated sufficient reserves under the predominantly tax-motivated rules for loss provisioning. This led subsequently to a gradual softening of capital adequacy requirements, simply to avoid too many open violations of the regulation. Banking supervision also became more lax, and with fewer on site inspections.

During the 1970s and 1980s the quantitative credit regulations were increasingly circumvented, which helped feed a domestically generated boom that culminated only in the mid 1980s. Interest rate ceilings were lifted in the late 1970s and early to mid 1980s, but with little effect on credit growth. The failure of quantitative regulations was recognised, and they were gradually abolished in 1984-87. But the capital adequacy regulations were not tightened, and the supervisory agency was not reinforced. Thus, we observe that the Norwegian banks started the post-deregulation period with relatively low capital ratios.

The first banking failures after the boom period occurred in 1988, and the three major Norwegian banks all failed during 1990-92. At that stage the main focus of the authorities was on saving the most important banks. The Norwegian FSA had been reorganised in 1986 and was gradually becoming more efficient. When Basel I was introduced in 1991-92 in line with the rest of Europe, the new regulation did not attract much attention, mainly because it did not really represent a tightening of capital adequacy requirements for Norwegian banks. But within the Basel I framework, the Norwegian FSA did impose somewhat stricter rules than most other countries. And the Norwegian FSA has ever since been on the strict side in international discussions on bank regulation and in the implementation of the Basel regulations. In this sense the experiences from the banking crisis have had a lasting impact.

However, this did not prevent a new domestic credit boom to develop in the early 2000s. And there were a few cases of regulatory softening in 1998-2001. These cases of softening may not have had a significant impact on the credit boom that followed, and there was no further softening when the boom became more evident. But the occurrences do illustrate that the rationale for strong regulation indeed tends to become somewhat blurred during upturns.

3. The Norwegian banking crisis

The Scandinavian countries Denmark, Norway, Sweden and Finland, in that chronological order, all had their banking crises in the years from the mid 1980s to the early 1990s, see Berg (1998) for an overview. The main story of these crises are common to nearly any banking crisis all over the world: there was an overextension of credit and a boom in asset prices, which left the economies with huge debt problems once the price bubbles had burst. There were substantial differences in the details, however, and also in the severity of the crises. Below we merely provide a snapshot of the Norwegian crisis.[1]

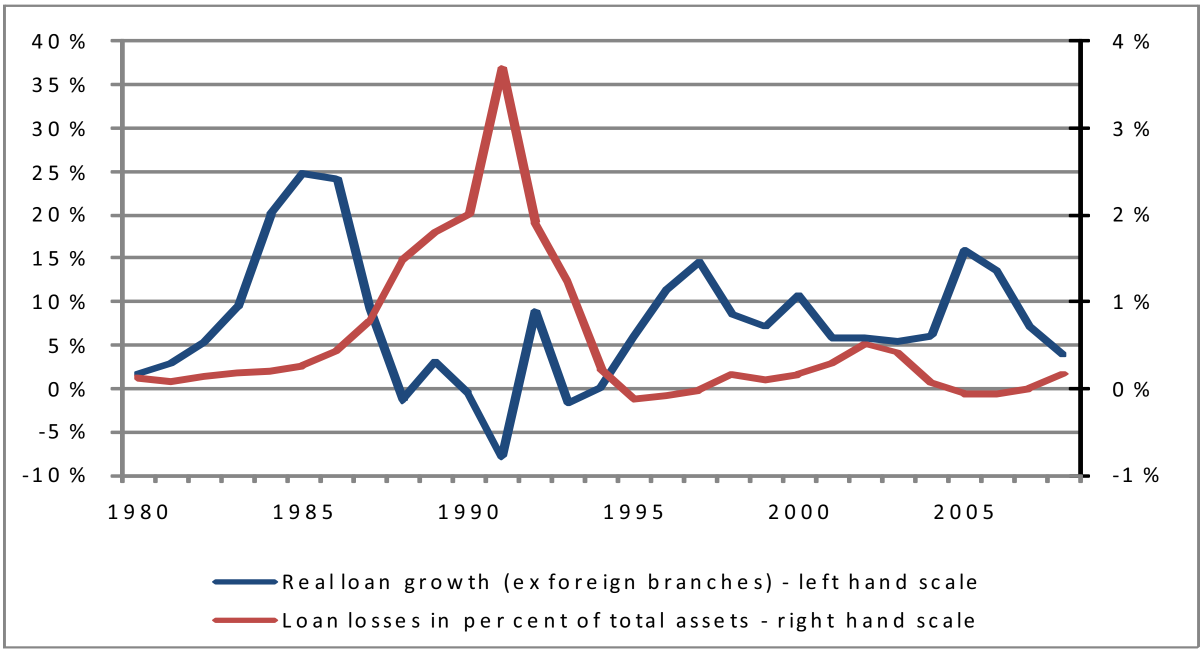
Figure 1 shows the growth in real lending from Norwegian banks in the 1980s. Inflation rates were in the double digits up to 1982, and real loan growth was not very strong in those early years. But when inflation gradually came down to 5-6 per cent in 1985 and the economy was booming, lending accelerated and real loan growth peaked at a rate around 25 per cent in 1985 and 1986. The real prices of non-residential real estate more than doubled, and tripled in nominal terms from 1981 to 1986. The increase in residential real estate prices was also brisk, but not quite at the same rate. See Steigum (2004) for a comprehensive discussion of asset price inflation before the Norwegian banking crisis.

Figure 1 also shows loan losses as a percentage of banks' total assets. There was an upward trend from 1981, but at a relatively low level. Losses picked up in 1986 and 1987 and exceeded one per cent of total assets in 1988. From then on the increase was dramatic until losses peaked at 3.7 per cent of total assets in 1991 before gradually coming down towards a level well below one per cent again in 1994. The first bank failures were observed in medium sized banks in 1988 and 1989. The problems at the three largest banks became evident in 1990, and they also suffered large losses in the two following years.

[1] There is an extensive literature describing and analyzing the Norwegian banking crisis. See e.g. NOU 1992:30, Report to the Storting No. 39 (1993-94), Report to the Storting No. 17 (1997-98) and Moe, Solheim and Vale (2004). Gerdrup (2003) put the Norwegian banking crisis 1988-1992 in a historical perspective and give a detailed description of three episodes of financial fragility in Norway since the 1890s.

Figure 1

**Real loan growth in per cent (left axis)
and loan losses in per cent of total assets (right axis) 1980-2008**



Source: Statistics Norway and Norges Bank.

By 1992 the three largest Norwegian banks had all been nationalised. This was done by forcing the banks to write down their non-performing loans. The rules were in place and no extra force applied. Shares were written down according to losses on the non-performing loans in the banks' portfolio. This loss of share capital was replaced with government capital. This is the Scandinavian model of crisis resolution that quickly restored well functioning banking industries in Norway, Sweden and Finland. Notice, however, that the subordinated debt in the capital base was not written down at the largest banks, and was effectively protected throughout the crisis. This was a consequence of the government's joint desire to avoid open bank failures, legal restrictions preventing write down of subordinated debt held by foreigners, and the explicit aim to maintain the banks as going concerns.

Two separate government bodies were set up to handle the failed banks. A government insurance fund first lent money to the deposit insurance funds of the banking industry, and at a later stage also intervened directly in problem banks. A government bank investment fund was set up, and later handled government ownership in the major banks. The investment fund played an important role in government banking policies during most of the 1990s. But the goal was always to sell the banks to private owners. Fokus Bank, the third largest, was sold in 1995, and Kreditkassen, the second largest, in 2000. These two banks have now foreign owners and are a branch of Den Danske Bank and a subsidiary of Nordea Bank[2], respectively. The Norwegian government still holds a blocking 34 per cent ownership in the largest bank, Den Norske Bank.

[2] In 2001 the Finnish-Swedish MeritaNordbanken merged with Danish Unibank and Norwegian Kreditkassen and formed Nordea.

This holding is managed by the Ministry of Trade and Industry, whereas banking regulation is the responsibility of the Ministry of Finance.

4. Pre-crisis regulation and deregulation

Central planning was an important component of Norwegian economic policy in the first years after World War II. Credit was a scarce resource that the government tried to funnel to high priority purposes. The direct regulations of credit flows did not last for very many years, but part of the regulatory regime survived into the 1970s and 1980s.

The interest rates both on customer deposits and on most loans remained regulated until late 1977, when the regulation was temporarily lifted. It was reintroduced in a different disguise in early 1978, and this lasted until 1980. From then on deposit rates were free, and banks started to compete for deposits. Loan rates were still regulated by informal and formal agreements between the government and the banking industry. The result was that interest rate margins were reduced. This was the situation until 1985, when these loan rate agreements were terminated. Monetary policy still kept interest rates at very low levels; in real terms after tax mortgage loan interest rates were negative until 1983-84, and remained at a low level for several years after that. This certainly helped fuel the lending boom we illustrated in Figure 1.

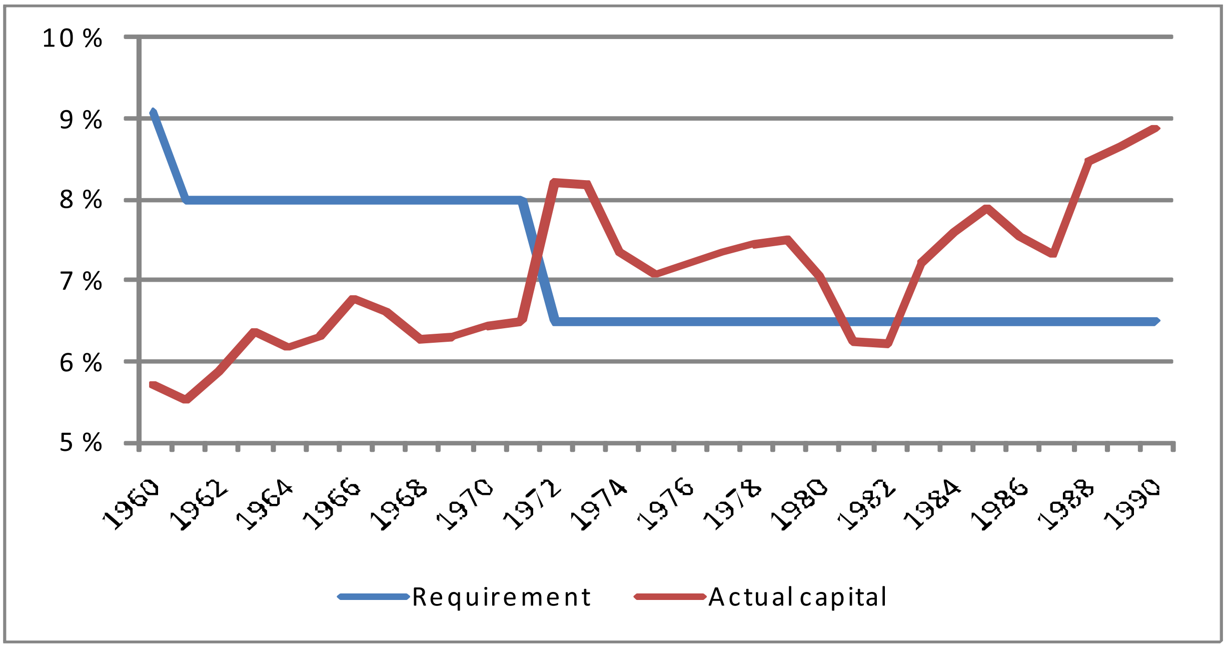
A strict limit to how much banks could borrow in foreign currency was in force until 1978. It was then replaced by a requirement that banks could not have open foreign currency positions. In practice this meant that banks were free to borrow as much as they wanted in foreign currency. They only had to hedge the currency exposures. This source of borrowing became very important for the funding of the lending boom in the 1980s. Furthermore, an important part of the capital base supporting the lending boom was subordinated debt raised in the international markets.

On the volume side the government initially produced credit budgets indicating how much bank lending should increase each year. The banking industry was expected to approximately meet these lending targets. After 1965 the credit budgets were supported by reserve requirements on lending volumes and on lending growth, and by an obligation for banks to invest part of their funds in government bonds. Initially this worked well, but from the mid 1970s and particularly in the 1980s, the reserve requirements were circumvented. The banks set up off balance sheet entities and directed part of the lending outside their own books. A side effect was that the government no longer knew how fast lending really increased, since the new lending entities did not report to the authorities. The two reserve requirements on bank lending were abolished in 1984 and 1987, and the obligation to buy government bonds was terminated in 1985. The main reason was that the government had realised how ineffective these regulations were.

In the post-war environment with regulations of both interest rates and lending volumes, banking became a protected industry whose general profitability was in fact a government responsibility. Bank failures were rare and mostly reflected severe management errors at the banks involved. There were capital adequacy requirements for commercial banks, but they were not deemed to be important in this relatively safe environment. The requirements on capital adequacy were reduced in 1961 and again in 1972, see Figure 2. Prior to 1972 the denominator had been total assets, but the denominator was now reduced, essentially by deducting own capital as well as liquid and government guaranteed assets from total assets. This had of course an immediate effect on the capital adequacy ratio.[3] The savings banks had no formal capital adequacy requirement whatsoever.

Figure 2

Capital requirements and actual capital held at commercial banks before Basel I. Per cent of stipulated assets



Source: Statistics Norway and NOU 1992:30.

Part of the motivation for these changes was that the commercial banks mostly did not meet the formal requirements before 1972, as illustrated in Figure 2. The government did not find it necessary to impose the capital adequacy requirements. Instead it helped the banks formally meet requirements by accepting larger volumes of subordinated debt as part of the capital. This happened from the late 1970s and accelerated during the 1980s. From 1984 the government[4] accepted that subordinated debt could be part of capital up to 50 per cent of bank equity, and from 1987[5] this was increased to 100 per cent, provided that the new 50 per cent quota was perpetual bonds. By 1986 the approval of subordinated debt as capital was a routine matter that was handled by the newly established Norwegian FSA without the involvement of the Ministry of Finance. Subordinated debt became an important part of bank capital in the 1980s, in particular at the commercial banks, see Figures 3 and 4. A large part of this debt was raised in international markets.

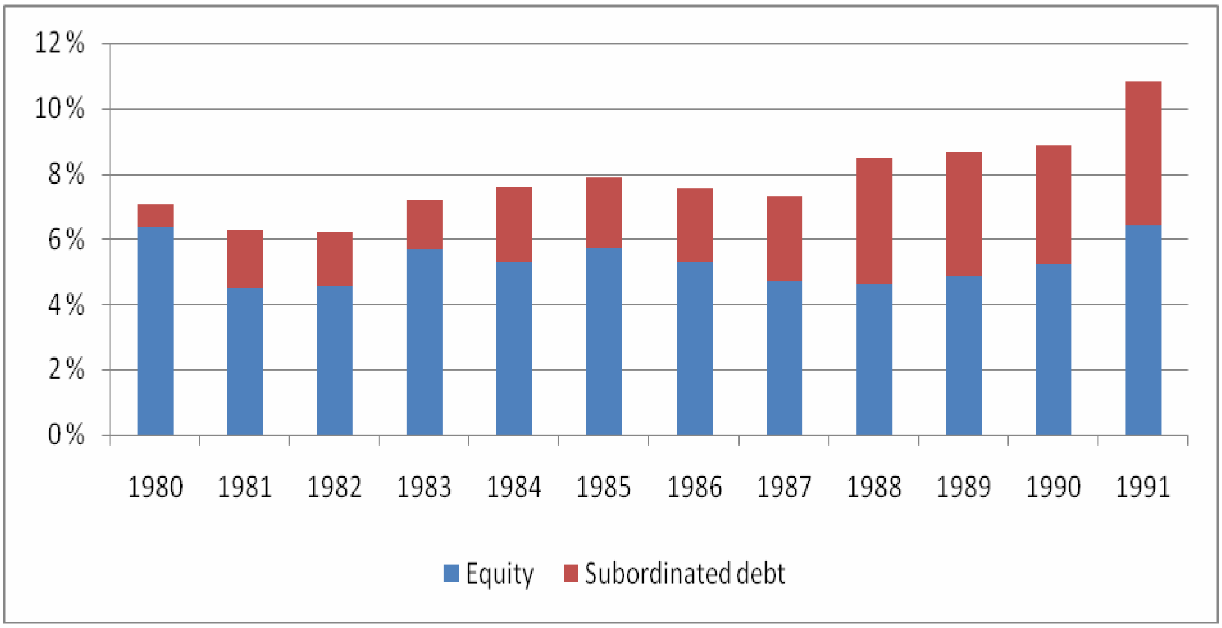
[3] The effective reduction in banks' capital requirements in 1972 has been estimated to around 25%. This reduction would support an increase in their total assets by 33% and represented in this respect a substantial increase in their lending capacity.

[4] Letter from the Ministry of Finance 18 January 1984.

[5] Letter from the Ministry of Finance 9 November 1987.

Figure 3

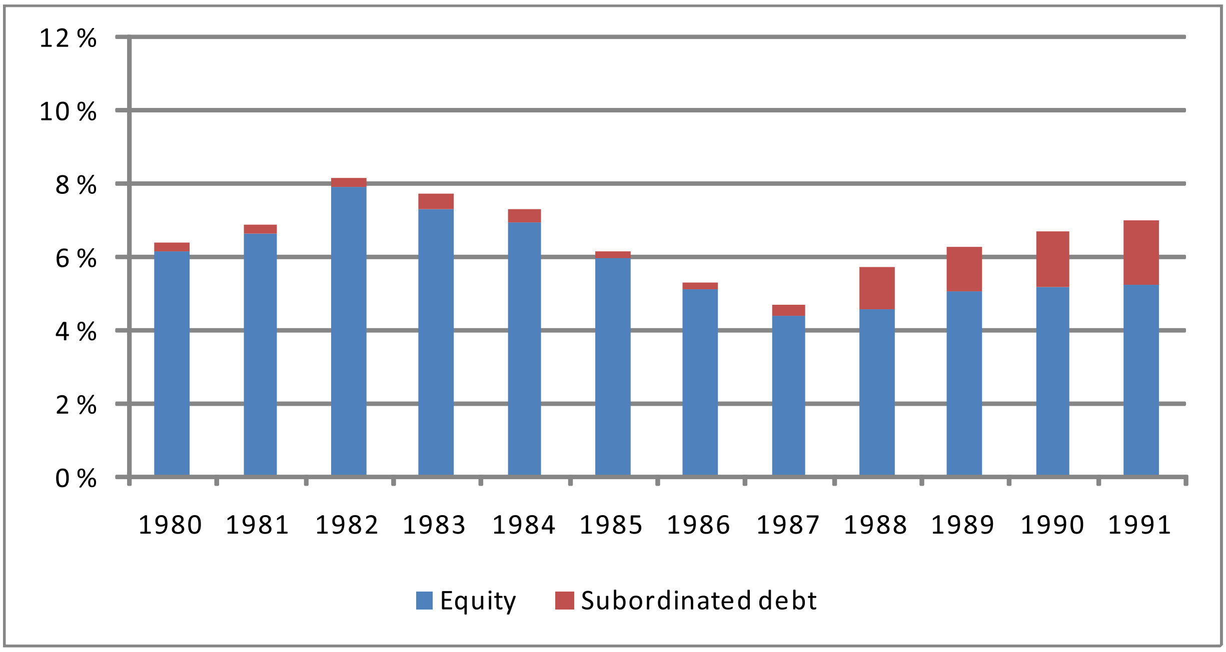
Bank capital at Norwegian commercial banks before Basel I



Source: NOU 1992:30.

Figure 4

Bank capital at Norwegian savings banks before Basel I



Source: NOU 1992:30.

5. Banking supervision

Banking supervision in Norway has its roots back to the 19th century and was institutionalized from the year 1900 when the first inspector for Norwegian savings banks was appointed.[6] The efficiency of banking supervision was gradually enhanced by more on site inspections. The reasoning behind was that this would increase confidence in the banks and promote savings. During World War I the number of commercial banks increased rapidly, and considerable financial imbalances developed. This spurred some concern, and additional regulations were introduced by the parliament in 1918. The regulations set new requirements for the licensing of new banks and for the expansion of existing ones.

A credit fuelled asset price inflation contributed to a strong boom-to-bust cycle in the economy, and Norway experienced a systemic banking crisis in 1920-28.[7] One consequence of this crisis was a strengthening of financial supervision in Norway. A new public institution for the common supervision of commercial and savings banks was established in 1924.[8] Prior to this Norges Bank (The Central Bank of Norway) had been handling the banking crisis on behalf of the authorities during the first half of the 1920s.[9]

Following new legislation in 1956 the mandate for banking supervision was further strengthened and the institution was now named the Inspectorate of Banks. The Inspectorate should primarily oversee that the commercial and savings banks fulfilled the prudential requirements stipulated in the banking acts. Hence, the main obligation of the Inspectorate of Banks was to secure depositors and other creditors against losses. During the 1960s and 1970s new financial institutions emerged on the scene and the responsibility for the licensing and supervision of investment and finance companies was added to the tasks of the Inspectorate. This development added to the already substantial administrative burden put on the Inspectorate of Banks by the Ministry of Finance (Ecklund and Knutsen 2000, p. 233). The consequence was that the number of on-site inspections in commercial banks as well as in savings banks was considerably reduced from 1960 to the mid-1980s. This development can be seen in Figure 5 which shows the number of on-site inspections per bank over a period of more than 50 years. [10]

We see that the number of on-site inspections per bank and year by the Inspectorate of Banks was gradually reduced from around 0.8 around 1960 to almost zero in the mid 1980s. Part of the background for this was that the Inspectorate of Banks shifted towards a more document-based system of inspections. There were also additional onsite inspections of savings banks carried out by the Savings Banks' Guarantee Fund, but we see that their activities follow a similar pattern during the late 1970s. The organization of financial supervision in Norway became further integrated in 1983 when the supervision of brokers was included in the Inspectorate of Banks. Finally, a major step towards full integration of financial supervision was taken in March 1986 when the

---

[6] See Ecklund and Knutsen (2000, Ch 2 and 3, in Norwegian only) for a detailed discussion.

[7] See Gerdrup (2003) for more details on the history of financial crises in Norway.

[8] This was a common institution for public inspection of commercial banks and savings banks, and its mandate was anchored in the new banking legislation which was introduced the same year. The institution was operative from 1 January 1925 and its first major obligation was to help in cleaning up and restructuring the banking sector during the latter half of the 1920s.

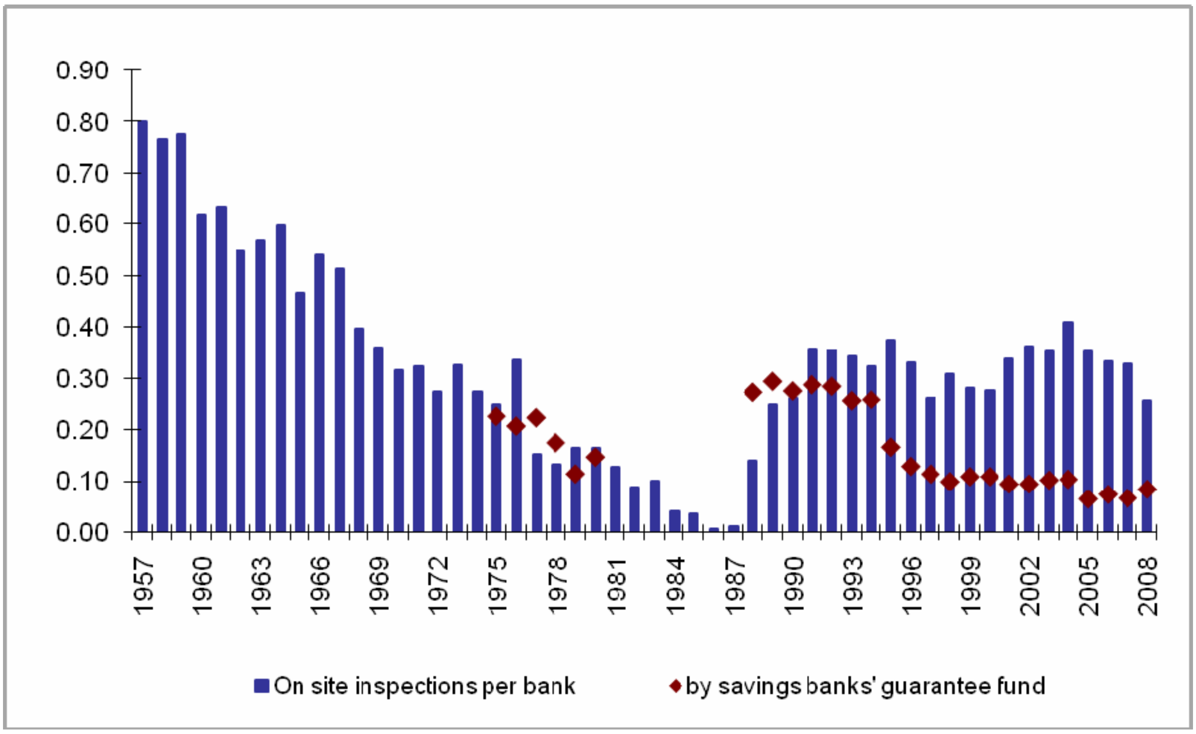
[9] See Ecklund and Knutsen (2000, pp 85-86).

[10] For 1986-2008 ordinary on-site inspections are reported in the Norwegian FSA's Annual Reports. For 1980-1986 ordinary on-site inspections are reported in Note 22 in NOU 1992:30, Report to the Storting no. 39 (1993-94). For previous years the number of ordinary on site inspections can be found in Ecklund and Knutsen (2000).

Inspectorate of Banks merged with the Insurance Council to form the Norwegian Financial Supervisory Authority (Norwegian FSA).[11]

Figure 5

Number of ordinary on-site inspections per bank reported by the Inspectorate of Banks 1957-1985 and the Norwegian FSA 1986-2008, and by the Savings Banks' Guarantee Fund 1975-2003 and the Norwegian Banks' Guarantee Fund 2004-2008



Source: Ecklund and Knutsen (2000) and annual reports from the Norwegian FSA and the Savings Banks' and Norwegian Banks' Guarantee Fund.

We conclude that banking supervision was gradually given lower priority during the regulated post-World War II period in Norway. Resources in the Inspectorate of Banks were shifted away from on-site inspections over to predominantly document-based inspections and to administrative tasks for the Ministry of Finance.[12] Thus, at the time when the lending activities in Norwegian banks peaked in the mid 1980s, the financial supervision in Norway was subject to a major reorganization, supervisory resources were used for administrative purposes, and there were virtually no resources available for on-site inspections. It also turned out that the information in the reports collected for document-based supervision of banks for the years 1986 and 1987 was subject

[11] The act which laid the ground for a more integrated financial supervision was in place in 1985. While the Inspectorate of Banks had been administratively subordinate to the Ministry of Finance, the Insurance Council was prior to this merger subordinate to the Ministry of Social Affairs. And, prior to the merger with the Inspectorate of Banks, the supervision of brokers was a subordinate of the Ministry of Trade. After integration in 1986 the Norwegian FSA has been a subordinate to the Ministry of Finance.

[12] See Ecklund and Knutsen (2000, p. 221). The administrative tasks in the Inspectorate of Banks which demanded more resources were typically related to work on structural issues and competition.

to massive manipulation by some banks in order to avoid the costly regulations which had been reintroduced by the government in an attempt to curb bank lending.

The parliamentary commission who wrote a broad evaluation of the banking crisis in Norway in 1998 stated that banking supervision functioned less than optimally in a situation with deregulation, increased competition among banks and strong credit growth. Activities were further weakened by the ongoing reorganisation of financial supervision. Moreover, the warnings that nevertheless were given by the Norwegian FSA were rarely followed up with adequate policy measures.[13] The parliamentary commission also criticised the FSA's involvement in approving the increased use of subordinated debt to meet banks' capital requirements.[14] The commission concludes, however, that it would be unreasonable to assume that better functioning supervision would have been sufficient to avoid the banking crisis altogether. But it states that better supervision would have contributed to dampen it.

After these years with initial problems the Norwegian FSA handled the years with crisis management during 1988-1992 reasonably well according to Ecklund and Knutsen (2000, p. 343). We see from Figure 6 that the number of on-site inspections per bank and year has stabilized around 0.3 over the period 1990-2008. This corresponds to one on-site inspection every third year on average. In the early years following the Norwegian banking crisis the FSA was given more resources, and there were substantial increases in the budgets for 1993 and 1994. The main ambition stated in strategy plans for the FSA from this period was to put more emphasis on preventive work to meet future challenges for financial stability. At the micro level the FSA would contribute to help each financial institution meet future challenges for its profitability and solidity. At the macro level the FSA would put more emphasis on a macroprudential approach to monitoring financial stability.

6. Capital adequacy after the crisis

In its Annual Report for 1993 the Norwegian FSA evaluated the capital adequacy requirements before and during the banking crisis. Two statements may be worth quoting: "The experience of the last decade clearly indicates that a capital ratio in keeping with the minimum standard set out in the statutory regulations is not sufficient to absorb losses on the scale experienced" (Norwegian FSA 1993, p. 14). "The minimum requirement for pure equity was too low, subordinated debt capital qualified too easily for inclusion in the capital base, and there was a lack of rules on capital requirements on a consolidated basis" (Norwegian FSA 1993, p. 14).

Capital adequacy requirements for savings banks were introduced in 1988, at the same level as for commercial banks. When the FSA wrote its report in 1993 the capital requirements for both commercial and savings banks had again been changed by the introduction of Basel I in 1991. These new rules did not create much discussion in the Norwegian banking industry. This was partly because the major banks were owned by the government, who had recapitalised the banks to a level where they looked very solid. But the Norwegian FSA also recognised that the rules were not really very strict: "New capital requirements were introduced in 1991 based on BIS/EC rules. With the exception of the consolidation requirements, the new rules did not entail a tightening of capital adequacy requirements" (Norwegian FSA 1993, p. 14)

[13] Report to the Storting no. 17 (1997-98) and Moe et.al (2004, p. 213).

[14] Report to the Storting no. 17 (1997-98, p. 75-76)

Given the evaluation of the previous capital adequacy rules, one might have expected the FSA to push for higher levels of bank capital and more restrictive use of subordinated debt. But it would probably not have been possible to argue that Norwegian banks should meet significantly more restrictive rules than their international competitors would get through Basel I. One thing that Basel I did imply was a more stringent approach to what constituted capital in a banking group. But Basel I did overall not imply a need for more capital at Norwegian banks, and the possibility to use subordinated debt was not reduced.

The implementation of the Basel rules in Norway still shows some signs that the banking crisis had an impact on the regulators. First, we can see this in those cases where the FSA had some leeway to choose risk weightings.[15] Loans to the commercial property industry constituted an important part of total bank losses during the crisis, and the Norwegian FSA responded by imposing a 100 per cent weighting on loans secured by commercial property. There had also been losses on residential mortgage loans. The 50 per cent risk weighting for such loans were initially accepted when the loan to value ratio was below 80 per cent, in line with the European standards. However, in 1998 the maximum loan to value ratio was reduced to 60 per cent. Finally, the FSA held the weighting of loans to local governments at 20 per cent, where it could have been set to zero.

Subordinated debt and hybrid capital were other items where the Norwegian FSA chose to be more restrictive than most other countries: the FSA would only accept non-perpetual subordinated debt as capital if the bank held at least 7 per cent of Tier 1 capital[16], whereas most other countries had no similar requirement. The FSA also tried to ensure the quality of bank capital by imposing strict requirements to the properties of the hybrid capital in Tier 1. This was formalised only in 2002[17], but had by then long been the practice of the FSA. Only 15 per cent of Tier 1 capital can be hybrid capital. This capital has to be perpetual and it should be written down *pari passu* with the share capital if Tier 1 capital falls below 5 per cent or total capital falls below 8 per cent. Interest payments on subordinated debt and hybrid capital can only be made if the bank has both Tier 1 and total capital ratios not less than 0.2 per cent in excess of the minimum requirement. Any missing interest payments cannot be accumulated for later payment.

Repayment of subordinated debt is in most countries conditional on permission from the FSA. But the Norwegian FSA initially decided that permission would only be given if Tier 1 capital exceeded 8 per cent and Tier 2 capital exceeded 4 per cent.[18]

A third point where Norway deviated from most other European countries concerns the funds for general banking risks. According to the EU regulations[19] these funds may count as capital, at least up to a certain ceiling. That allowance has not been included in the Norwegian regulation. Similarly, Norway is one of the few countries where tax deferred assets must be deducted from accepted capital.[20]

However, as the banking crisis became more distant, some of these rules were softened. In 1998 the minimum required Tier 1 capital for having non-perpetual subordinated debt accepted as

[15] FSA Regulation of minimum standards of capital adequacy for financial institutions and investment firms. 22 October 1990.

[16] FSA Circular Letter 20/1998, 12 August 1998.

[17] Letter from the Ministry of Finance 27 June 2002.

[18] FSA Circular Letter 21/2001, 11 September 2001.

[19] Council Directive 2000/12/EU.

[20] A comparison of national regulations across Europe is found in CEBS/2006/92.

capital at low risk banks was reduced to 6.5 per cent,[21] and in 2001 again to 6 per cent.[22] Repayment of subordinated debt could now be permitted if the Tier 1 capital exceeded 7 per cent, naturally on the condition that the bank was well capitalised after repayment of the debt. Also in 2001 the 50 per cent weighting of residential mortgages was again extended up to a maximum loan to value ratio of 80 per cent.

A new lending boom in Norwegian banking was at that time just around the corner. It is unlikely that these modest measures in a softening direction had much impact on that. But they fit into a pattern where regulation is affected by market developments.

7. Long-term learning from the crisis?

The main lesson drawn from the Norwegian banking crisis was about the importance of bank capital. Banks' equity capital, including funds, were too small and their subordinated debt turned out to be difficult to write down once it was decided that banks should continue as going concerns. These lessons appear to have had some lasting impact on bank regulation in Norway. The implementation of Basel I in Norway probably was on the strict side when compared to other European countries. This applies to some of the risk weightings, and thus implicitly to the level of capital.

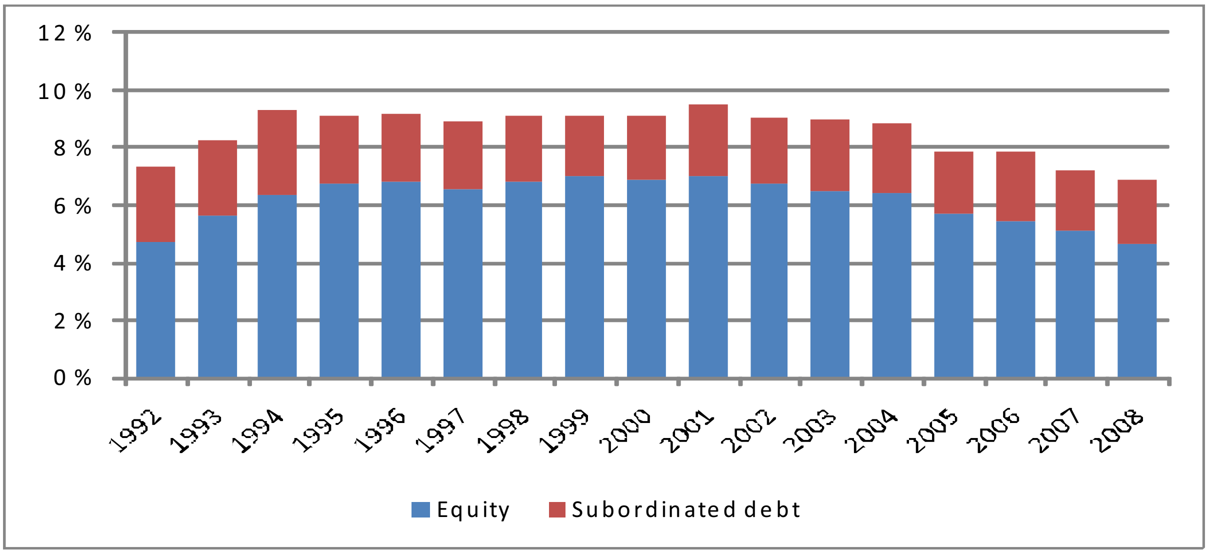
It also applies to the treatment of subordinated debt (see Figure 6 which extends the bank capital series up to the present). Since the distinction between commercial and savings banks is no longer meaningful after the largest bank formally was transformed into a savings bank through a merger in 2003, we only report aggregate ratios for the two groups. Notice that bank capital in the figure is reported relative to total assets and not relative to risk-weighted assets. After the banking crisis, subordinated debt has had a more modest role for Norwegian banks than is common across Europe. The use of subordinated debt as capital peaked in 1992 after the pre-crisis build-up, and has come down after the crisis. By the end of 2008 subordinated debt was about 30 per cent of Tier 1 plus Tier 2 bank capital, down from close to 50 per cent in 1992.

[21] FSA Circular Letter 20/1998, 12 August 1998.

[22] FSA Circular Letter 14/2001, 23 March 2001.

Figure 6

Bank capital in per cent of total assets in Norwegian banks, exclusive of foreign-owned branches, after the introduction of Basel I



Source: Statistics Norway and Norges Bank.

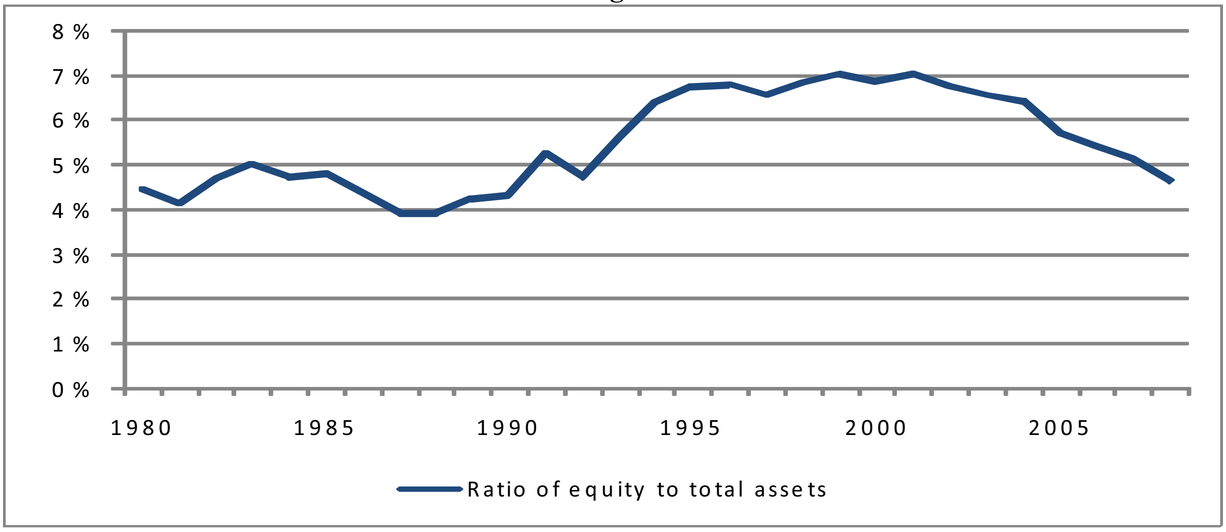
Securitisation is one of the main culprits of the current international financial crisis. When these instruments became popular on the international markets, the Norwegian FSA introduced such strict rules for securitisation that it really amounted to a complete ban. We had no securitised assets from Norwegian banks, and no bank even applied for the permission to set up such structures. This was true until covered bonds were introduced in 2007. With covered bonds the bank retains the incentive to control credit risk, and these bonds thus have fewer of the problems that have been exposed with the Anglo-American type of securitisation. This is perhaps an example of a FSA ruling that has prevented some problems on the Norwegian markets.

This restrictive tendency still appears to prevail when Basel II is now being implemented. The major banks have been given the permission to use their own IRB models to compute risk weightings to the same extent as banks in other countries. But the Norwegian FSA indicates that it has been quite restrictive in its requirements to these models. The FSA has also evaluated the ICAAP process, which requires banks to assess their capital adequacy under Pillar 2 in the Basel II framework. A number of banks are being told that they are not sufficiently well capitalised, even if they meet the Pillar 1 requirements with wide margins. This is consistent with the Norwegian FSA seeing itself as a strict regulator.

But there is another tendency apparent in this story. The tightening of regulations after the crisis did not always survive. There have been a few instances where strict rules have been partly reversed. This has happened in seemingly safe environments and at a certain distance in time after the crisis events. The examples we have found are quite modest, and they are unlikely to have had a significant impact on the strong credit growth we have seen in the past few years. But they can be seen as part of a pattern.

Figure 7

Share capital plus equity funds in per cent of total assets in Norwegian banks, exclusive of foreign owned branches



Sources: Statistics Norway and Norges Bank.

We conclude by looking at figure 7, which shows the leverage ratio of Norwegian banks since 1980. Until the crisis culminated in 1991-92, the banks had on average equity capital amounting to 4-5 per cent of total assets. The government interventions raised this ratio to above 6 per cent, where it remained until the early 2000s. Since then there has been a downward trend, and some banks are now reporting (in anonymous lending surveys) that their capital base is an effective constraint on their lending decisions. We may see a cycle where banks and regulators improve the standards after a crisis has hit and then let them gradually slide when the crisis has become a more distant experience. The leverage ratio of Norwegian banks still remains at a reasonably high level when compared to banks in other jurisdictions. Today there is a renewed focus on strengthening bank capital in most jurisdictions, and Norway is offering to inject new capital into its banks the same way as most other European countries.

REFERENCES

Becker, G. (1983), "A Theory of Competition among Pressure Groups for Political Influence", *Quarterly Journal of Economics,* XCVIII, 371-400.

Berg, S.A. (1998), "Bank failures in Scandinavia", in Caprio, G., Hunter W.C., Kaufman G.G. and Leipziger D.M. (eds.), *Preventing Bank Crises: Lessons from Recent Global Bank Failures,* Federal Reserve Bank of Chicago and Economic Development Institute of The World Bank.

Bhattacharya, S., Boot A.W.A. and Thakor A.V. (1998), "The Economics of Bank Regulation", *Journal of Money, Credit and Banking,* 30, 745-70.

Boot, A.W.A., and Thakor A.V. (1993), "Self-Interested Bank Regulation", *American Economic Review* 83(2), 202-12.

Ecklund G. and Knutsen S. (2000), *Protection against crises? Norwegian Financial Supervision through 100 years* (Available only in Norwegian; original title is: "Vern mot kriser? Norsk finanstilsyn gjennom 100 år", Fagbokforlaget).

Gerdrup, K. (2003), "Three episodes of financial fragility in Norway since the 1890s", BIS Working Papers*,* No. 142.

Goodhart, C.A.E. (2008), "The regulatory response to the financial crisis", *Journal of Financial Stability* 4(4), 351-8.

Goodhart, C.A.E., Hofmann B. and Segoviano M. (2004), "Bank Regulation and Macroeconomic Fluctuations", *Oxford Review of Economic Policy,* 20(4), 591-615.

Kane, E. (1990), "Principal-Agent Problems in S&L Salvage", *Journal of Finance*, 45, 755-64.

Kroszner, R. S. and Strahan P.E. (2000), "Obstacles to Optimal Policy: The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms", NBER Working Paper No. W7582.

Moe, T.G., Solheim J.A. and Vale B. (2004), *The Norwegian Banking Crisis*, Occasional Papers No. 33, Norges Bank.

NOU 1992:30, *The Banking Crisis*, Report to the Ministry of Finance, 31 August 1992.

Peltzman, S. (1989), "The Economic Theory of Regulation after a Decade of Deregulation", *Brookings Papers: Microeconomics*, Special Issue 1-41.

Report to the Storting No. 39 (1993-94), *The Banking Crisis and the Development of the Norwegian Banking Industry* (available only in Norwegian). Ministry of Finance.

——————— No. 17 (1997-98), from the Commission established by the Storting to inquire into the causes of the banking crisis (available only in Norwegian, but excerpts have been translated in Moe *et al*., 2004).

Steigum, E. (2004), "Financial deregulation with a fixed exchange rate: Lessons from Norway's boom-bust cycle and banking crisis", in Moe, T.G., Solheim J.A. and Vale B. (eds.), *The Norwegian Banking Crisis*, Occasional Papers No. 33, Norges Bank.

Stigler, G. (1971), "The Theory of Economic Regulation", *Bell Journal of Economics and Management Science,* II, 3-21.

White, L.J. (2000), "Technological Change, Financial Innovation, and Financial Regulation in the US: The Challenges for Public Policy", in Harker, P.T. and Zenios, S.A. (eds.), *Performance of Financial Institutions – Efficiency, Innovation, Regulation*, 388-411, Cambridge University Press: Cambridge, pp. 388-411.

A COMPARISON BETWEEN THE FINANCIAL CRISIS OF 1998 AND THE CURRENT CRISIS IN RUSSIA

*Yury Goland**

While the current crisis in Russia is obviously a part of the global financial crisis its deepest causes can be traced back to the policy choices taken in the past. It is difficult to comprehend the current situation without comparing it to the 1998 crisis. There are differences between these crises: budget deficit and fall in production in the 1990s, budget surplus and growth of GDP now. But in both cases Russia fell into a strong dependence on foreign capital and the revenue of basic export goods, primarily on oil prices. In both crises the fundamental causes lay in internal rather than external factors: energy and raw-material orientation of the national economy, insufficient development of the internal demand, the banking system's weakness and corruption. Financial regulation played an important role in the State's response to the crisis.
JEL: E66, G01, G28.

1. Introduction

The main experts are now failing to share a common view on the causes of the current global financial crisis and on how it can be overcome. To tackle the issue it is expedient to compare it to the previous crises. In the case of Russia, it is difficult to comprehend the current situation without comparing it to the 1998 crisis. To begin with, it is worth stressing som important features of Russia which emerge from a comparison with other developed countries. First, economic decisions taken both by the authorities and business entities are largely influenced by non-economic factors, including the widespread corruption. Second, currently the Russian economy has a high degree of dollarization. Dollars, and in recent years euros, are used as the store of value by the population. Third, the inflation rate is high, starting after the liberalization of prices in 1992 when consumer prices rose 26 times within a year. Since then Russia has failed to reach a sustainable single-digit indicator of annual inflation. Last year the consumer prices rose approximately by 13 per cent.

2. Economic policy before crisis of 1998

The 1998 Russian financial crisis was triggered by the Asian crisis in autumn 1997 which resulted in the foreign capital flowing out of the emerging markets, including Russia. However, its profound causes were laid down by the preceding Russian authorities' policy. In 1995, to counteract inflation and dollarization, the monetary authorities introduced the narrow exchange rate band. For a while this measure had a positive impact; however some years later it turned to be one of the factors which caused the financial crisis. Another reason of the crisis was related to the aspiration to put inflation under control. In the late 1990s, monetary authorities carried out tough monetary policy, and fixed an overvalued refinancing rate. It all resulted in the decline in production (GDP in 1996 decreased by 37 per cent compared to 1991[1]) and a widespread development of barter, arrears and money substitutions, which, in turn, triggered insufficiency of tax proceeds and other budget revenues. Many chief executives accommodated themselves to the situation and learnt how to benefit from such deficit of cash by avoiding taxation and refraining to

* Institute of Economy, Russian Academy of Sciences.

[1] Goskomstat Rossii 2000: 32.

pay full salaries to their employees. Certain powerful owners of major business entities, the so-called "oligarchs", availing of their connections with top-echelon structures, obtained various benefits in paying taxes, export and import duties. This resulted in a significant rise of the budget deficit, which reached 5% per cent of GDP in 1997.

To cover the deficit, the authorities resorted to the widespread use of short-term government bonds (GKO in Russian) creating favorable terms for investments in GKO, which allowed attracting banks and foreign investors. The foreign investors held 30 per cent of all investments in GKO (amounting to $20 billion approximately)[2]. In April 1997, the Central Bank approved a staged liberalization schedule to encourage non-residents to invest funds in the GKO market, which stipulated lifting restrictions for such non-residents' participation, including that of the minimum investment period, by the end of the year. Foreign exchange risks hedging by entering into forward contracts with commercial banks was permitted. The placement of Eurobonds became the additional instrument to attract foreign investments. All the above measures led to a reduction in credit interest rates which favoured the production leveling off by mid-1997. At the same time, the country fell into dependence on the inflow of foreign capital and global prices on basic export goods, primarily on oil prices. Economic decision-makers started talking about the beginning of economic growth. Our people, especially in Moscow, also were optimistic about the situation.

3. Development of the crisis

Such an attitude also influenced the Russian authorities' first reaction to the Asian crisis in October. Mr. Anatoly Chubais, then Minister of Finance, claimed that Russia was the smooth water which could attract the capitals after their flight from the Asian markets. In the beginning of November the Government and the Central Bank announced the extension of the period of the exchange rate band for 1998-2000 and confirmed their adherence to previously adopted decisions on the liberalization of non-residents' investments on the Russian financial market.

In that particular moment it was necessary to announce the abolition of the exchange rate band and to introduce the floating rate. This would have provided commercial banks with the correct reference points for drawing-up forward contracts. The band had an effect of reducing foreign exchange risks and allowed banks to disregard the probability of market changes. The implication was that the Central Bank assumed responsibility for possible losses in case it was required to accelerate the devaluation. By canceling the band the Central Bank would have induced banks to be more cautious in analyzing possible risks. At the same time the Central Bank was seeking to intensify control over major banks although the confidential relations between the Government and the owners of such banks made this job very difficult.

The outflow of foreign capital starting after the aggravation of the Asian crisis resulted in the GKO market losing its role as the source to cover budget deficits. On the contrary, the Central Bank was forced to expand budget resources for the redemption of previous issues. The situation was aggravated by the acceleration in exports due to the reduction of global prices on Russia's basic export commodities. In 1998, the Government put its principal hopes on raising external loans, believing IMF and the USA would necessarily provide indispensable assistance to such an extensive and major country as Russia, which had taken the path of democracy. This hope created moral hazard but it turned out to be ill-founded and Russia failed to raise sufficiently gross borrowings. The rumors about upcoming devaluation started circulating. Both individuals and entities started converting rubles into foreign currency. As a result, from January 1998 M2 money

---

[2] Goland 1999: 152.

supply began reducing month after month to fall by 6 per cent approximately as of September 1 compared to early 1998. Decline in production recommenced. The stock market continued its sheer fall: by the mid of August, Russian Trade System (RTS) index dropped to 100 points, *i.e.* almost 6 times compared to its maximum level 572 in October 1997.

The problems related to the bonded debt were supplemented with a rapidly deteriorating situation in the banking system. Certain major banks raised considerable loans in foreign banks secured by the state bonds. As Russia was losing credibility in global financial markets the price of these bonds started falling, hence necessitating high insurance premium payments (margin calls). In August non-payments crisis breaking out on the inter-bank market, virtually paralyzed its activities. The rumors about the difficulties major banks experienced started circulating among the population, and the depositors proceeded to withdraw their deposits. It became clear that some banks would fail to pay their margin calls to foreign creditors and fulfill their obligations by forward contracts. On 17August, the Government and the Central Bank announced default in the payments under GKO, which were to be re-issued into new securities, and introduced a 90-day moratorium on the banks' repayments of financial credits, margin calls and by forward contracts. The exchange rate band was abolished, and shortly thereafter the devaluation of Ruble was promptly effected. The dollar rate grew three-fold over three weeks and resulted in the increase of prices on imported goods and their temporary disappearance from the stores. People started withdrawing deposits from banks, many of which shortly thereafter terminated the redemption of deposits.

4. Strong financial and currency regulations in the first year after default

In September new executives of the Government and the Central Bank were appointed and introduced substantial changes to the policy. The State proceeded to broadening its intervention in the economy. So as to reduce the extent of arrears, the Central Bank held multilateral inter-bank clearings, reduced required reserve ratio for credit institutions' liabilities from 10 per cent to 5 per cent. Another way to raise banking system liquidity lay in extending credits to the large commercial banks by the CB on non-commercial basis for the period of up to 1 year. A State agency to restructure the credit institutions was set up. Prudential regulation became approximating to Basel recommendations. Alongside with crediting some commercial banks, the Central Bank was forced to extend credit for budget deficit payment purposes. Large-scale use of CB credits led to a marked increase in money supply. For the period from September till December 1998, M2 increased by 30.5 per cent.[3]

Currency regulations were imposed with a view to decelerate US dollar exchange rate growth. The percentage of foreign currency earnings which exporters were obliged to sell at currency exchange was raised from 25 to 50 per cent and subsequently up to 75 per cent. Simultaneously, so as to bring down demand on foreign currency, a limit on long currency position was established for credit institutions and a compulsory deposit rule was introduced. If an importer wanted to buy foreign currency for import contracts with advance payments, he was to consign 100 per cent of all sums in rubles. Herewith, the importers were entitled to the reimbursement of deposits only in case a commodity under contract was acknowledged as delivered to Russia. In such a way, the Central Bank aspired to reduce capital outflows under fictitious import contracts. The dollar exchange rate ceased growing in April 1999.

[3] www.cbr.ru/statictics.

The policy of reduction of real budget expenses was carried out for counteracting inflation. In spite of a significant increase in consumer prices, no adjustment of state employees' salaries was carried out, those of commercial sector employees were not raised to a proper extent, either. Consequently, in the fourth quarter of 1998, real disposable income dropped by almost 30 per cent compared to the corresponding period of 1997, in 1999 its reduction made up to 16 per cent compared to 1998. This lowered the inflation rate from 84 per cent in 1998 to 37 per cent in 1999. Some minor signs of growth became to materialize in some sectors, due to import substitution.

So, anti-recession policy carried out during the first year after the default of 1998 facilitated the stabilization of the economic situation. But sustained development began only after the recovery of world oil prices.

5. Sustainable economic growth since 2000

Sustainable economic growth started in 2000, when GDP grew of a 10 per cent rate[4]. It was primarily caused by a significant increase in world prices on the basic commodities of Russian export. During the following years, growth continued - from 2000 till 2007 GDP grew by 63.6 per cent [5]. Throughout these years, consolidated budget surplus persisted, achieving a maximum of 8.4 per cent of GDP in 2006.[6] Its most significant part was directed to reserve funds, in which part of oil proceeds not allocated for budget expenses was accumulated. The stock market, having experienced twofold decline after August 1998, grew rapidly. By November 1999, the pre-default Russian Trading System (RTS) index recovered. In August 2004 the RTS index recovered its pre-Asian crisis level. On 19 May 2008 it grew by 4.3 times, coming up to approximately 2500 points[7]. Russian international reserves grew rapidly, from $12.4 billion, as of 1 January 2000, up to $598 billion, as of 1 August 2008.[8]

6. Development of the current crisis

Against such a favorable background, the monetary authorities' answer to the first developments of the crisis on world financial market is not surprising. Alexey Kudrin, the Minister of Finance, declared Russia was "the island of stability". However, such estimate disregarded strong dependence of economic growth on fluctuations on world raw materials and capital markets. Energy resources, metals and other raw materials still comprised an overwhelming part of exports, their specific weight still growing. If in 1998 "machinery, equipment and transport facilities" made up to 9.8 per cent in 2007, their share decreased by 5,6 per cent.[9] High dependence on external borrowings remained, as well. However, the indebtedness of government authorities was almost cancelled, although corporate foreign indebtedness rose – from $33 billion as of 1 January 2000 up to $499.3 billion as of 1 August 2008.[10] External credits became an integral part of the Russian banking system normal operations; their unavailability resulted in emerging liquidity problems.

---

4 Rosstat 2008: 35.

5 Ibid.

6 Rosstat 2007: 348.

7 www.rts.ru/ru/index/stat/dailyhistory.

8 www.cbr.ru /statictics.

9 Rosstat 2008: 479.

10 www.cbr.ru /statictics

A bit later, reality ruined illusions. From August 2008, the world financial crisis started aggravating, thus causing a foreign capital outflow from emerging markets, including Russia. The Lehman Brothers bankruptcy in mid-September accelerated the outflow of foreign portfolio investments and the reduction in stock indices. RTS stock index was marked by a 3-4-fold reduction from its May 2008 maximum value. As soon as the shares were used by many companies and banks as credit collateral, this entailed a margin-call problem. The inter-dealer REPO market, on which inter-bank stock-collateralized credits were provided, was paralyzed in mid-September due to a crisis of confidence. Several major banks found themselves on the verge of failure.

The corporate bonds market was also affected. Its situation aggravated immediately not only the financial but also the real sector. At the starting point of the crisis, about 400 enterprises of various sectors issued their bonds. At the same time, the distributed bonds were acquired by institutional investors, primarily by the banks. Panic sales on bonds market started in September, which led to fall in prices. New bond issues were virtually stopped except for bonds of major companies with State interest, purchased by State banks. Technical defaults (temporary delays in payment) and real defaults (by credit service, warrants and bond offers) became large-scale. Until 2008, no major issuer default had been registered. From August till December 2008, above 30 defaults occurred and in January-February 2009 – 26 more. Speaking on these defaults in his recent interview, V. Milovidov, head of the Federal Financial Market Service quoted General Manager of a major finance company, “It’s only cowards, who pay debts on present-day market.”[11]

7. Financial regulation as a response to the crisis

Financial authorities responded to the stock market problems primarily with the allocation of significant resources to untie the knot of non-payments and with the ban of short sales and of marginal trade. State authorities made endeavors to support the stock market, through the allocation of budget resources to Vnesheconombank for share and bond acquisitions. Shares of major companies with State participation therein were essentially acquired; such purchases were made without preliminary notification, which facilitated the gain of higher proceeds by those who had obtained insider information on further VEB market entry. Nevertheless, such assistance has been important for terminating market decline, although its stabilization is still a long way ahead.

The allocation of assets by the Central Bank for banking liquidity enhancement turned out to be more effective. For the fourth quarter of 2008, the CB extended credits to the banks, totally amounting to approximately 3 trillion rubles or 100 billion dollars. Specific weight of CB assets in banking system liabilities mounted from 0.2 per cent as of 1 January 2008 to 12 per cent as of 1 January 2009.[12] The Central Bank reduced the required reserve ratio for credit institutions, significantly expanded the Lombard list of securities allowed to serve as collateral for credits, introduced pledge-free crediting for banks with rating, extended the credit period from 3 months up to 6 months and later on up to one year. Simultaneously, the Central Bank mitigated the risk assessment procedure as regards previously extended banking credits, the banks were allowed not to expand provisions in the event of a certain deterioration in quality of assets. Changes were made in banking portfolios’ stock accounting procedures, the banks were also allowed not to rediscount them in accordance with current market value. In December the Central Bank decided not to apply penalty duties to banks in the case of a breach of prudential requirements when caused by the crisis. The coverage of insured deposits was extended from 400,000 rubles to 700,000.

[11] “Parlametskaya gazeta” 13 March 2009.

[12] www.cbr.ru/analitics.

Having obtained significant monetary funds from the State, the banks allocated them primarily not for crediting real sector, but on the currency market. In September, the process of dollarization resumed in the country, similarly to the practice of previous crises. This was spurred on by a radical fall in world oil and metal prices, resulting in a reduction of foreign currency proceeds. The standpoint on inevitable dollar devaluation became more and more popular. The population began purchasing larger foreign currency amounts and converting rubles deposits into those nominated in foreign currencies. Foreign exchange was also in high demand with banks and companies, which accumulated for debt settlement purposes. In September-October, through expenditures of a portion of its foreign currency reserves, the Central Bank made endeavors to maintain the stability of the dual currency basket, based upon a combination of dollar a euro weighted 0.55 ad 0.45, respectively. However, in November, this strategy was replaced by taking a course to gradual devaluation, pursued until the end of January, when establishment of limit value of the dual currency basket was announced. In the outcome, the dollar exchange rate grew approximately by 50 per cent in relation to its minimum value. Hereupon, demand on free currency gradually reduced, however, expenditures for these purposes consumed one third of the Central Bank's international reserves.

The purchase of foreign currency allowed banks and companies to reduce foreign indebtedness by $50 billion in the fourth quarter. Meanwhile, conversion of rubles to foreign currency led to a radical reduction in the ruble money supply, which reduced by 17 per cent from September 2008 till 1 March 2009.[13] The Central Bank made endeavors to limit the banks' investments in foreign assets and addressed them a recommendation not to increase foreign assets in January-March 2009 and their net currency position compared to the previous period. The Central Bank limited the allowance for unsecured credits for those banks, which infringed upon such recommendations. At the end of March, the Central Bank extended these recommendations until July. As a follow-up for controlling the disbursement of credits allowed to the banks, the Central Bank started directing its representatives to commercial banks who were entitled to request information on performed and anticipated banking transactions.

8. Monetary policy contradictions

The Central Bank's policy is controversial. On the one hand, the CB provides assets to commercial banks, on the other hand, these are provided at extremely high rates. In contrast to developed economies, which reduced the refinancing rate to 1 per cent or to a lower level during crisis, in Russia the refinancing rate is increasing and is currently equal to 13 per cent. Other CB transaction rates are basically tied up to the aforesaid rate, falling in the range of 11-13 per cent for collateralized credits and achieving the level of 18 per cent for unsecured credits. In their turn, the banks are increasing this interest rate by their margin, providing for not only banking expenses, but also for the exposure fee. Such a situation makes the cost of credit prohibitive.

As affirmed by the government economists, low refinancing and credit rates in developed countries are conditioned by deflation hazard, while Russia is facing the real challenge of stagflation because annual inflation now exceeds the level of 13 per cent. In such estimates, inflation is assessed by the consumption price index and the significant reduction in industrial manufactures' prices occurring since the start of crisis is disregarded (in the fourth quarter of 2008, they showed a reduction by 21 per cent compared to the preceding quarter)[14]. It's necessary to

[13] www.cbr.ru/statictics.

[14] Rosstat 2009: 158.

reduce the interest rates significantly by CB transactions and in this way to instruct the commercial banks on reducing credit rates for enterprises.

In the event of non-implementation of such measures, recovery in manufacturing industries which has experienced decline since the end of last year will be impossible. Over the period of January-February 2009 industrial manufacturing reduced by approximately 15 per cent compared to the corresponding period of the previous year[15]. Such situation reflects a decline in external demand on export-oriented industries' products. Meanwhile, the reduction in internal demand has been noticed, the investments in fixed capital assets and householders' real income have reduced by 7 per cent, fall in non-finance organizations crediting has been observed compared to January level. To counteract this tendency, credit to enterprises should be expanded so as to provide them an opportunity for manufacturing commodities in demand, especially, import-substituting products, in view of the radical import contraction after devaluation. The problem is aggravated by the fact that borrowers, knowingly reliable prior to crisis, have became unreliable due to the reduction of demand on their products and their debts have been re-assessed as "bad debts". It is a real danger that the share of such "bad debts" will become more than 10 per cent in the end of the year. So, selection of most viable enterprises with efficient management is currently of primary concern. Above all, it would be expedient to lend credits to those of them which are agents at the end of the manufacturing chain and are capable of generating a demand wave all over the chain.

9. Conclusions

In Russia, the crisis has still a long way to go, but at its current stage some conclusions may be drawn, based upon its comparison with the crisis which broke out in the preceding decade. In both cases, the fundamentals are formed not by external, but by internal factors – energy and raw-material orientation of national economy, which predetermines excessive dependence on external economic fluctuations, insufficient development of internal demand, banking system weakness and corruption. Meanwhile, economic policy during the first post-default year was more feasible compared to the one pursued during the present-day period. This concerns primarily monetary policy and power-business relations. Currently, the State controls resources which might be allocated for rendering assistance to enterprises, but it is provided on a non-transparent basis. Resulting from that, the companies make more efforts to raising funds, than to improving their activities. The problem of moral hazard is not solved. This refers particularly to major companies with State participation, which attach insufficient attention to risk-management.

On the other hand, State authorities are currently exerting much stronger pressure on business organizations than 10 years ago. Such a situation requires changes before hopes in rapid external demand growth will reveal groundless. On this backdrop, promoting domestic demand should urgently become a cornerstone of economic policy.

[15] Rosstat 2009: 7.

REFERENCES

Goland, Yury (1999) "Dostizheniya i provaly v protsesse rynochnyh reform v Rossii" in Institut mezhdunarodnyh ekonomicheskih i politicheskih issledovanii, *Makroekonomichesraya* i *finansovaya politika v krizisnyh situatsiyah*: *mirovoi opyt i rossiiskaya deistvitelnost,* ("Achievements and failure in the process of market reforms in Russia" in The Institute for international economic and political studies, *Macroeconomic and financial policy in the crisis situations: world experience and Russian reality*): Moscow.

Goskomstat Rossii (2000), *Rossiya v tsifrah* (State Committee of the Russian Federation on statistics*, Russia in Figures*): Moscow.

Rosstat (2007), *Rossiya v tsifrah* (The Federal State Statistics Service*, Russia in Figures*): Moscow.

———— (2008), *Rossiya v tsifrah*, (The Federal State Statistics Service, *Russia in Figures)*: Moscow.

———— (2009), *Sotsialno-economicheskoye polozheniye Rossii II* (The Federal State Statistics Service, *Socio-Economic Situation in Russia II) ,* monthly bulletin: Moscow.

BANKING CRISIS IN GERMANY (1931) AND THE ROAD TO RECOVERY

Martin J. Pontzen*

Much has already been written about the 1931 German banking crisis, hence this article will focus on two less frequently addressed aspects. With respect to the question of the direct cause of the crisis and of the run which occurred on 13 July, pertinent developments in the area of gold and foreign currency reserves immediately prior to the crisis, i.e. *in the weeks preceding the collapse, will be scrutinised. Past and current experience teaches us that, from an academic perspective, it is of vital importance not just to investigate the causes of financial market crises but also to analyse the initial steps taken to overcome them. Efforts aimed at restoring public trust in the commercial banks are crucially significant in this regard. While government guarantees and financial assistance are important, they often do not per se suffice to re-establish the credibility of the affected players. In this context, there is much to be gained from assuming joint liability, in order to at least enable a resumption of interbank lending between the commercial banks. For this reason, the following article will examine a lesser known episode in German financial history, namely the Transfer Association* (Überweisungsverband) *of 1931 and the Akzeptbank A.G.*
JEL: N24.

1. The German banking crisis in 1931

Bank failures, combined with abrupt plunges in the prices of shares and foreign exchange rates, are not new events. We can and must learn from financial crises in order to prevent recurrences of future structural weaknesses which are evident at present. In this process, it might help to reflect on an interesting episode in German banking history.

The German banking crisis of 1931 left an indelible mark on the German banking sector, the effects of which are still visible today. Revisiting the past almost eighty years later provides a unique opportunity to examine factors which led to this historical banking crisis. This analysis seeks to focus on the reasons of the crisis and to examine the role played by the Reichsbank.

The factors leading up to the 1931 banking crisis are much more complicated than can be merely explained monocausally by the development of the capital market or the behaviour of German banks. The First World War and its consequences led to a severe destabilisation of Germany's financial situation. Owing to the inflation of the 1920s, the German capital market was weakened so seriously that the rising demand for credit could only be satisfied abroad. Reparations and import surpluses from the war increased the need for foreign currency. This war-time scenario coupled with a restrictive trade policy implemented by the United States made it impossible for Germany to settle its payment obligations.[1]

A major part of the loans which had been granted to Germany was short-term and rolled over on maturity. This critical situation was further exacerbated by a latent flight of capital, with German large enterprises transferring capital to their foreign subsidiaries, which in turn granted loans to their German parent companies. This combined scenario effectively created a drain and an inevitable strain on the local German economy.[2]

---

* Director at the Bundesbank.

[1] Henderson (1994: 190-196).

[2] Kaserer (2000: 3-13).

In 1927, in the run-up to the crisis, the President of the Reichsbank, Hjalmar Schacht, had already voiced serious concerns regarding the total volume of German foreign debt. A considerable chunk of the foreign debt was due to public sector borrowing as well as competition generated by commercial banks for foreign funds.[3]

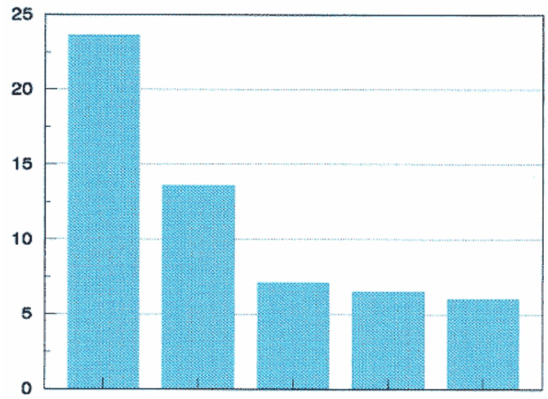
The low equity base of the big German banks (which was due to inflation and to the currency reform) plummeted even further in the 1920s as a result of a trend towards concentration, attempts to expand, and increasing competition against the background of a generally deteriorating economy. For example, the *own funds/borrowed funds* ratio of the big banks fell from approximately 1 to 3 and 1 to 4 in 1913 to between 1 to 15 and 1 to 16 in 1929.[4] Moreover, the rules of maturity matching were neglected. Although the Reichsbank had drawn attention to this rather unfavourable development at an early stage, it had no chance to react.

By the end of the 1920s, full-blown effects of a deteriorating economy began unleashing its reigns in tandem with the global recession known as the Great Depression.

The 1930 stock market crash aggravated the liquidity situation not only in the German Reich but also worldwide. Additionally, an increased outflow of capital abroad set in after the Reichstag elections on September 30, 1930, in which the NSDAP (the nazi-party) increased the number of its seats by just about nine fold (from 12 to 107 seats).[5]

Figure 1

The Development of Own Funds: Borrowed Funds



Year	1913	1925	1930	1931	1932
%	23,6	13,6	7,1	6,5	6,0

Source: Bissing v., W.M., Die Schrumpfung des Kapitals und seiner Surrogate,Referat ½, Untersuchungsausschuß für das Bankwesen 1933

To complicate matters, a segment of the foreign financial news media suspected that the Germans themselves were responsible for the deep crisis and that the Reichsbank simply needed to fight the capital flight vigorously to bring the situation back under control again.

[3] Mülhaupt (1982: 435-445) and Stucken (1968: 393-397).

[4] Fischer (1999: 183-189).

[5] Vocke (1971: 1-2).

However, it was not fully evident to all that the Reichsbank was in a difficult position in several respects. To recommend a suspension of Section 31 of the Reichsbank Act would have immediately revived latent inflationary fears already existing among the vast majority of the German population and would have resulted in a loss of confidence abroad.[6]

It is now clear that the actual crisis was triggered not by the behaviour of the Reichsbank but by a well-intended policy measure and concerted efforts of the Reich's Government.

On 6 June 1931, the Reich's Government tried to achieve a more favourable bargaining position for reparation negotiations by posting a public notice which created the impression that a payment crisis was imminent. This immediately triggered an increased outflow of capital abroad. The Reichsbank reacted swiftly, raising the discount rate by two percentage points. It thus set a clear signal of a stability-oriented policy.

However, the effect was only short-term.[7] It was then rumoured that the Reichsbank was about to discontinue payments within a few days, which further shook confidence in the German currency only a week later, affecting both local and particularly foreign interests in an adverse way.

This rumour was probably based on the level of cover of banknotes in circulation which was approaching the 40 per cent mark. However, it was unjustified in view of the fact that the Reichsbank had, at that time, already decided on more restrictive lending through bills of exchange.

With its actions, the Reichsbank sought to calm foreign creditors and domestic savers. At the same time, it could not "stab the Reich's Government in the back" in the reparation negotiations. To alleviate the critical situation regarding the cover of banknotes in circulation, the Reichsbank decided to ask other central banks for support. On 20 June the Reichsbank received a loan worth $ 100 million from the three most important western central banks (France, United Kingdom and the US) and the BIS. However, it was not sufficient to satisfy demand for foreign exchange. For that reason, Reichsbank President Luther himself travelled to London, Paris and Basle on 9 July. Unfortunately, the trip was unsuccessful. Mistrust of the Reichsbank was growing, in particular at the Banque de France and within the French Government, due to the dreaded aggressive policy of the German Reich. A major factor contributing to the mistrust might have been the announcement of a customs union with Austria in March 1931 and the arming of the German Navy.[8]

For observers of the international stock market scene, the impending crisis, which was characterised by a flight from the German market, was already discernible since the second week of May 1931. Turnover of German bonds in New York trading had risen by around two-thirds compared to the first few days of May, with the price of the Young bond falling continuously, to cite just one example. The Berlin foreign exchange market, however, remained relatively calm up to the third week of May.[9]

The situation worsened when it became known that the textile group – Nordwolle, which was supported by the Darmstädter und Nationalbank (Danatbank *i.e.* one of the major German

[6] Mülhaupt (1989: 341-346).

[7] Schnabel (2005).

[8] James (2000: 15–24) and Kopper (2006: 186 – 193).

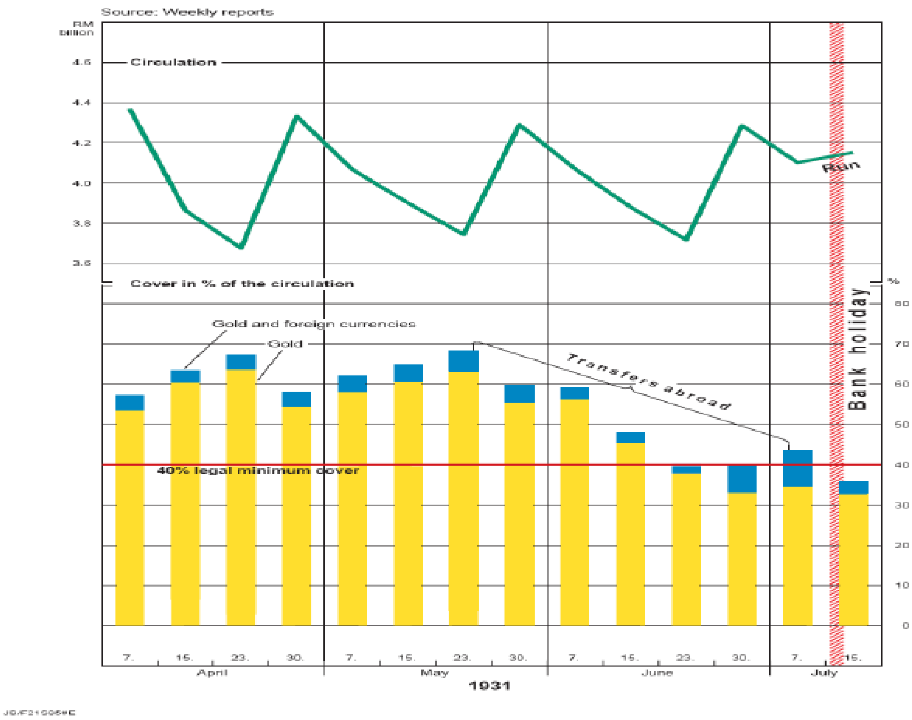
[9] Federn (1976: 69–80).

commercial banks at the time) was about to collapse. This triggered even further massive outflows of capital abroad.[10]

Later, the question was often raised whether the outflow of capital abroad or the depositors' and retail customers' cash withdrawals triggered the crisis. This question can best be answered by analysing the weekly reports of the Reichsbank. If one considers that the outflows of capital abroad resulted in a depletion of the gold and foreign exchange reserves and that cash withdrawals led to an increase in the number of banknotes in circulation, the picture is relatively clear. However, the Reichsbank only gradually became aware of the total magnitude of the commercial banks' liquidity problems. If one compares the situation at that time with that of today, various lessons can be learned, although the underlying conditions have changed.[11]

Figure 2

Analysis of the German banking crisis in 1931



Source: Reichsbank Verwaltungsbericht

It is paramount that initial steps be taken to ensure that the financial sector of affected countries become more transparent. The prevalence of "insufficient information" surrounding financial institutions in the Tiger countries is shockingly astonishing. This, amongst other factors, also led to Germany's largest banking crisis in 1931.[12] For that reason, transparency should be the order of the day, even if this leads to painful confessions. A jolting shock at this juncture might prove beneficial in the end.

---

[10] Kaserer (2000: 11-14).

[11] Priester (1932: 26 – 31).

[12] Mura (1981: 252 – 253).

The next delicate topic to be explored will focus on ways in which countries respond to local currency depreciation. The sharp depreciation of western currencies was, and continues to be, an accelerating factor in financial crises. Fears of administrative controls are prevalent.[13]

This begs the question of how, then, will countries and their central banks react to the collapse of financial enterprises and the concomitant liquidity bottlenecks in the "real economy".

The Reichsbank's weekly reports show that the cover ratio fell sharply as early as June of 1931, whereas the volume of banknotes in circulation was still fluctuating constantly in line with the monthly pattern. This demonstrates an initial onset of the outflow of capital abroad, and thus decisively reduced the Reichsbank's foreign exchange reserves. The withdrawal of bank credits in Germany then followed with a time-lag.

However, what ultimately triggered the crisis was, for the most part, the behaviour of the Danatbank. Uneasiness in the German money market was additionally fuelled by speculation about the liquidity problems of the Danatbank. The Danatbank refused to extend a loan to the City of Berlin. This considerably undermined confidence in the solvency of the bank and resulted in a wave of short-term credit cancellations - not just at Danatbank.

The Reichsbank learnt only gradually of the losses suffered by the Danatbank, and also became informed of the precarious liquidity problems that the other big banks were experiencing at a very late date. The commercial banks' willingness to cooperate with and provide information to the Reichsbank, even in the crisis meetings of 11 and 12 July can only be described as very restrained.

Efforts by the Reichsbank to push through two official holidays (days when there are no office hours) by emergency decrees (Article 48 of the Weimar Constitution) failed initially: Reich Chancellor Brüning could not be convinced of the necessity of these measures. On Monday 13 July, Danatbank's counters did not open again. The Reich’s Government believed that it could save the day by providing a guarantee for the Danatbank.

2. The road to recovery

Charting the road to recovery calls carefully thought through decisive moves, and clearly planned survival strategies and tactics. Fortunately, the German Banking Crisis of 1931 triggered a reaction in the right direction. A very important step in achieving this goal lies in reactivating the clearing and settlement activity between the commercial banks. This was the aim of the Transfer Association in Germany known as the *Überweisungsverband*. This played an integral role as a temporary institution for restoring payment transactions between banks reactivating a semblance of normalcy and stability throughout the troubled sector.

In this decisive move, bank holidays were declared on 14 and 15 July 1931 in which all monetary and bank transactions in Germany were to be brought to a standstill.[14] Then, as of 16 July, strict transfer limits – with a few exceptions (e.g. for wages and salaries) – were enforced.[15]

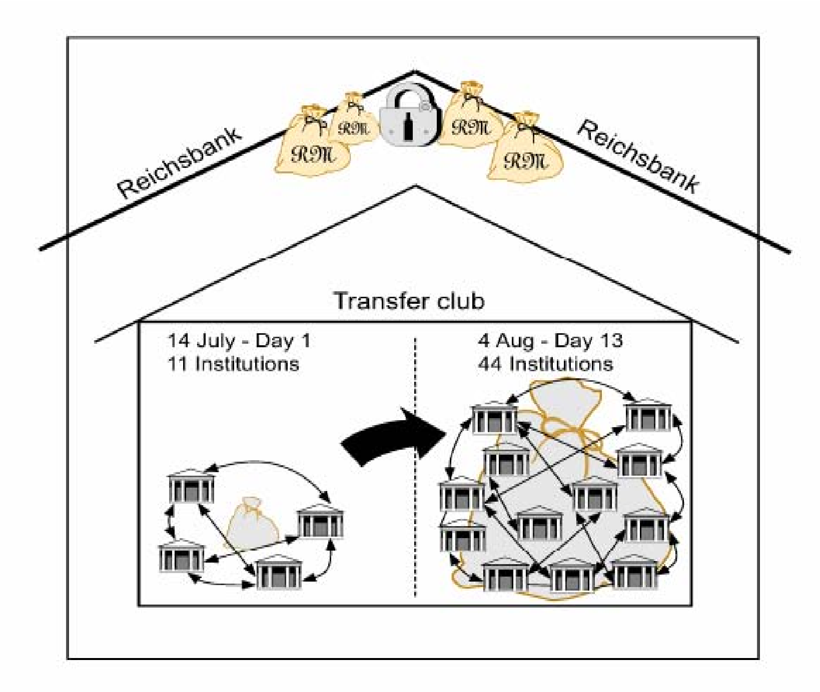
---

[13] Reichsbank (1932: 453 – 455).

[14] Decree of the Chancellor of the Republic of 13 July 1931 governing implementation of the Decree of the President of the Republic on bank holidays.

Figure 3

Development of the "Transfer Club"



Up until 20 July, transfers were initially limited to a total of RM 10,000 and they were not permitted to exceed a total of half of the remitter's credit balance. These transfers could only be made to the existing account of a third party at one of the institutions affected by the bank holidays.[16] From 20 July, the ceiling was inceased from RM 15.000, then to RM 50.000, and finally to RM 100.000 - but with the additional exception of exempted transfers underpinned by the agreements of the *Überweisungsverband*.[17]

It was clear that such a tight restriction of transfers between banks could not be maintained for a long time. For this reason, following discussions at the Reichsbank involving the "Prussian Consortium" of prominent bank managers and bankers, it was decided on 18 July 1931 to establish an organisation which came to be known as the Transfer Association.[18] In its articles of association, it was mandated "to broaden the basis for and thus facilitate credit transfers from accounts affected by the ban on transfers and withdrawals held at member institutions of the

[15] Decree of the Chancellor of the Republic of 15 July 1931 on the resumption of payment transactions following the bank holidays.

[16] Second Decree of the Chancellor of the Republic of 15 July 1931 on the resumption of payment transactions following the bank holidays.

[17] Third Decree of the Chancellor of the Republic of 18 July 1931 on the resumption of payment transactions following the bank holidays. See Born (1967: 114 – 117).

[18] Hofrichter (1932: 625-634).

Association by means of suitable measures, in particular the establishment of a settlement procedure".[19]

Simply put, the idea behind this Association was to unify the most important financial institutions into a kind of "super-bank" and to ensure the smooth settlement of all "internal" transfers, regardless of their size.

The Association's activity was limited to carrying out transfers from one member institution to another via its settlement procedure. Credit transfer orders could be settled for own account or for the account of a third party. Of the transfers for the account of a third party, orders from banks and bankers not belonging to the Association – as in the case of normal customer orders – were made entirely subject to the transfer limits. In the case of transfers for own account, the member institutions were not required to observe the regulations governing transfer limits.

By eliminating cheques and bills of exchange, all members were protected against having to make unforeseen large payments. Mutual exchanges of cheques were carried out directly and mutual payables and receivables were settled by transfer.

The articles of association of the *Überweisungsverband* provided for the possibility of immediately settling corresponding debit balances via its Reichsbank account.

The positive reactions to the Association's settlement of credit transfers only a few days after its establishment led the five Munich banking institutions that were members to introduce a system of on-site pre-settlement; the balances of these transactions were communicated by telephone on a daily basis in order to be settled within the Transfer Association.

The Association remained in existence from 21 July until 4 August (13 business days). During this period, the number of participating banks rose from 11 to 44. A total of 91,721 credit transfer orders with a total value of RM 280 million were submitted for settlement.[20] As the number of participants and the volume of settlements carried out through the Association grew, the transfer limits generally applicable to the banking sector were raised in stages.[21]

On 5 August 1931, it was declared that the normal settlement of all withdrawals and transfers had been restored. The Association ceased to operate at close of business on 4 August.
The Transfer Association was thus able to fulfil its task of protecting institutions affected by mass withdrawals.

The next step towards a normalisation of the banking systems was the founding of the Akzeptbank A.G. The original Akzept- und Garantiebank (A.G.) was founded on 28 July 1931. The aim of this specialised bank was to maintain or reopen access to central bank credit for those financial institutions which had run into difficulties. Its main function was to make loans accessible by the acceptance and discounting of bills of exchange. Direct lending to the business sector was not possible.

---

[19] Articles of association of the transfer association of 18 July 1931, chapter I, section 1 (1) (in German only).

[20] Hofrichter (1932).

[21] Fifth Decree of the Chancellor of the Republic of 23 July 1931 on the resumption of payment transactions following the bank holidays and the Sixth Decree of the Chancellor of the Republic of 28 July 1931 on the resumption of payment transactions following the bank holidays.

The capital amounted to RM 200 million. Of this amount, RM 80 million was subscribed by the Reich's government with RM 12 million of this temporarily being subscribed by the German Central Cooperative Bank (*Deutsche Zentralgenossenschaftskasse*). The German Gold Discount Bank (*Deutsche Golddiskontbank*) and Deutsche Bank as well as the Discount Company (*Disconto-Gesellschaft)* each subscribed RM 20 million. The Bank for German Industrial Bonds (*Bank für deutsche Industrie-Obligationen*), the Deutsche Rentenbank-Kreditanstalt, the Prussian State Bank and Dresdner Bank each subscribed RM 12 million. The rest was subscribed by other large Berlin credit institutions.

The share capital was subscribed only at 25 per cent. However, the Reich's Government committed itself, if necessary, to further subscriptions of an additional 50 per cent of the nominal share amounts for the account of the other shareholders.

Close cooperation existed between the Reichsbank and Akzeptbank as, to begin with, the only way the latter was able to procure the funds needed for its operations was by recourse to the central bank. For this reason, Akzeptbank generally had to obtain a rediscount commitment from the Reichsbank before it gave a firm commitment to grant an emergency loan.

Initially, the main task of the Akzeptbank was to support the two big banks which had run into difficulties by granting them emergency loans. The reopening of Darmstädter und Nationalbank depended on the granting of emergency loans, which amounted to several hundred millions by the end of 1931. A similarly large amount was needed to keep Dresdner Bank afloat. Large loans were also given to Landesbank der Rheinprovinz, Düsseldorf and Norddeutsche Kreditbank A.G., Bremen (formerly J.F. Schröder-Bank), both of which had to be additionally supported by special measures taken by the Reich's Government and the states (*Länder*) affected. Besides this, the Akzeptbank was relied on by a number of smaller credit institutions whose situation likewise no longer allowed direct assistance from the Reichsbank.

The main item was borrowing by the German Central Giro Institution (*Deutsche Girozentrale*). Despite the special loan granted by the Reichsbank in July, the German savings banks ran into difficulties as they did not have sufficient liquidity of their own to cover withdrawals.[22]

3. Impact on banking supervision

Until the collapse of the German banking industry in July 1931, banks enjoyed extensive freedom to trade. Temporary state intervention in banking activity until then had had the objective of safeguarding the currency and preventing capital flight (exchange control legislation of 1916, Capital Flight Act of 1919). Various attempts to introduce regulations aimed at protecting customers had little effect.

The events of 1931 precipitated numerous regulations and statutory orders restricting the scope of banks for transacting business. It was recognized that the importance of banking for the national economy was so great that the principle of free trading could not be sustained for this sector.

---

[22] Bankenkommission (1933) "Untersuchung des Bankwesens 1933" I. Teil, Berlin, pp. 74-76 and p. 231.

The initial implementation of a proper banking supervision system in Germany was as a result of the German banking crisis of 1931. This was largely due to the fact that legislators responded immediately to the 1931 crisis and in that same year created a body dedicated to observing market developments in the banking sector.[23]

After lengthy preliminary work (Bank Enquiry 1933/34), the Banking Act was passed in 1934; it finally replaced the principle of free trading with a prohibition of trading subject to licence and led to the introduction of permanent state supervision of all banks. In 1934, this body was endowed with monitoring rights and power in the framework of the new Banking Act (*Kreditwesengesetz*). As the central bank, the Deutsche Reichsbank was incorporated into the supervisory process from the outset in accordance with section 7 of the Banking Act.

The commission of inquiry, which was set up in autumn 1933 to study the German banking system and its shortcomings, identified a whole range of causes that ultimately led to the crisis. Besides political unrest, these included the strains on the German economy posed by the reparations payments, the global economic crisis, liberal use of short-term foreign loans by the German business sector, and the monetary policy of the Reichsbank, which adhered to exchange rate stability. At the same time, the shortcomings in the way lending was organised and in lending policy became apparent: among other things, the banks no longer had an overview of the extent of foreign debt and their liquidity and investment policies were inadequate, especially the flawed investment of short-term foreign funds. The shortcomings in policy towards borrowers were also revealed: while lending to large was lax, lending to small and medium-sized customers was treated much more rigidly. The lack of banking supervision had led to banks holding inadequate capital and reserves and also disguising their losses. Another factor which came to light was overbanking which led to a reduction in the volume of business. Finally, the commission cited the supervisory boards' lack of control over the banks, the lack of solidarity among the banks, and inadequate cooperation between the Reichsbank and the German banks as unsatisfactory situations.

The Reich Banking Act (*Reichsgesetz über das Kreditwesengesetz*) of 5 December 1934, which may be regarded as the "founding law" of the German banking industry, introduced standards, some of which are in force up to the present day. These standards concerned the licensing, amalgamation and dissolution of credit institutions; the commencement, management, expansion and closure of business operation; capitalisation and liquidity management; the limitation and management of risks by setting maximum limits for individual areas of business and individual transactions, such as large exposures; ensuring that the supervisory bodies have sufficient information by means of extensive reporting and notification requirements; auditing of the annual accounts by independent auditors; providing information to the general public by means of appropriate disclosure requirements, and the regulation of interbank competition through agreements on interest rates and competition.

The exercise of this supervision was entrusted to the Supervisory Office established as the supreme body responsible for all questions of banking supervision at the Imperial Bank and to the Imperial Banking Commissar as executive body. After repeated amendments and supplements in the years that followed, the Banking Act was revised in 1939. In connection with this, the Supervisory Office at the Imperial Bank was dissolved and its duties were transferred to the

[23] Engel and Pontzen (2007: 30-34).

Imperial Minister for Economic Affairs. The duties of the Imperial Banking Commissar passed to an authority controlled by the Imperial Minister for Economic Affairs, the Imperial Banking Supervisory Office.

This continued to be the case after World War II when centralised banking supervision was re-established in the form of the Federal Banking Supervisory Office (*Bundesaufsichtsamt für das Kreditwesen*, BAKred), created in 1962. This body also cooperated closely with the Deutsche Bundesbank and its nationwide branch network on banking supervisory.

A further organizational change came into force in 1944. The Imperial Supervisory Office was dissolved and its sovereign duties were transferred to the Imperial Minister for Economic Affairs, while the Directorate of the Imperial Bank took over the job of banking supervision.

After the end of the war in 1945, the material legal provisions of the Banking Act of 1939 remained in force. The supervisory function was assumed by the various Federal State authorities. In order to prevent discrepancies from arising within the Federal Republic of Germany, the banking supervisory authorities of the Federal States coordinated their activities with the State Central Banks in the "Special Commission on Banking Supervision". However, the changes in the constitutional and economic foundations and also the complexity of the supplementary regulations issued in the course of time eventually called for a comprehensive revision of banking supervisory law. After lengthy consultations, the Banking Act (BA) was passed on 10 July 1961 and came into force on 1 January 1962. Owing to the reversion from a regional to a central organization of banking supervision, several Federal States had initiated judicial review proceedings at the Federal Constitutional Court which, however, confirmed the constitutionality of the Act in July 1962. In the subsequent years, the Banking Act was amended on various occasions. Mention should be made of the fundamental amendments of 1976 and 1984 and, later on, several times by influence of European Union (EC Directives). The amendment of 1976 contained, among other things, stricter structural norms for large loans, the introduction of the double-check principle in management and an extension of the Office's inspection powers through the introduction of routine inspections. The main points in the 1984 amendment were the introduction of a consolidation procedure for banking supervisory purposes, the re-definition of capital and the reduction of the large loan ceiling. A lot of amendments followed from 1993 on, initiated by several EC Directives like own funds, solvency, large loans. In this context, the supervision was spread out to financial services institutions like brokers and dealers.

REFERENCES

Bankenkommission (1933), Untersuchung des Bankwesens 1933, 1. Teil, Berlin, pp. 74-6 and p. 231.

Bissing von, W.M. (1933), Die Schrumpfung des Kapitals und seiner Surrogate, Referat ½, Untersuchungsausschuß für das Bankwesen, Berlin.

Born, K.E. (1967), Die deutsche Bankenkrise 1931, Munich.

Engel, J. and Pontzen, M. (2007), Bankaufsicht in Deutschland, Kriseninstrumente im Spiegel der Finanzgeschichte, Saldo, Moscow, pp. 30-4.

Federn, W. (1976), "The banking crisis of 1931 – how the tremors spread", Euromoney, November, pp. 69-80.

Fischer, A. (1999), "'Schuld und Schicksal' in der Bankenkrise – eine westdeutsche Perspecktive", Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, 86, 2, pp. 183-9.

Henderson, W. O. (1994), "Das Bankwesen in der Weltwirtschaftskrise 1929-1931", in Büsch O. and Witt P. C. (eds.), Studien zur europäischen Geschichte, Internationale Zusammenhänge der Weltwirtschaftskrise, Berlin, pp. 190-6.

Hofrichter, H. (1932), "Der Überweisungsverband e.V. Ein Beitrag zur Geschichte der Bankenkrise 1931", Bankwissenschaft, 8, pp. 625-34.

James, H., (1998), "Die Reichsbank 1876 bis 1945", in Id. Fünfzig Jahre Deutsche Mark, Notenbank und Währung in Deutschland seit 1948, Deutsche Bundesbank: Munich, pp. 29-89.

―――――― (2000), Haben Goldstandard und freier Kapitalverkehr die Finanzkrise von 1931 verursacht?, in 12. Wissenschaftliches Kolloquium am 30. November, Frankfurt am Main, pp. 15-24.

Kaserer, C. (2000), "Die deutsche Bankenkrise von 1931 - Marktversagen oder Staatsversagen? ", Institut für bankhistorische Forschung e.V: Frankfurt, pp. 3-13.

Kopper, C. (2006), Hjalmar Schacht. Aufstieg und Fall von Hitlers mächtigstem Bankier, Hanser: Munich.

Mülhaupt, L. (1982), "Von der Bankenkrise 1931 zur Bankenaufsicht 1981", Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung, 34, 5, pp. 435-45.

―――――― (1989), "Von der Bankenkrise 1931 zur Bankenaufsicht 1981", in Deppe, H. D., Geldwirtschaft und Rechnungswesen, Schwarz: Göttingen, pp. 341-6.

Mura, J. (1981),"Sparkassenorganisation und Bankenkrise 1931. Die Krise: Ursache, Verlauf, Folgen", Sparkasse, 81, pp. 252-3.

Priester, H. E. (1932), Das Geheimnis des 13. Juli; Tatsachenbericht von der Bankenkrise, G. Stilke: Berlin.

Reichsbank (1932), Verwaltungsbericht Berlin 1931, Untersuchung (Anm. 13), pp. 453-5.

Schnabel, I. (2005), "The Role of Liquidity and Implicit Guarantees in the German Twin Crisis of 1931", Preprints of the Max Planck Institute for Research on Collective Goods Bonn. pp. 5-35.

Stucken, R., (1968) "Die deutsche Bankenkrise von 1931",, in Ehrlicher W. and Lipfert H. (eds.), Kredit und Kapital, Duncker & Humblot: Berlin, pp. 393-7.

Vocke, W. (1971), "Der 13. Juli 1931", Beiträge zur Bankgeschichte, special supplement to File 13.

PART C

THE DESIGN OF REGULATION EXPERIENCE AND THEORY

GOVERNMENT INTERVENTION IN FINANCIAL MARKETS STABILIZING OR DESTABILIZING?

Robert L. Hetzel[*]

The current world recession brings back the perennial debate over the role of financial instability as a cause of cyclical fluctuations in economic output and employment. The consensus that banks took on excessive risk leaves unanswered key questions. First, how should government regulate risk taking by banks? Should it extend and enhance the existing regulatory apparatus? Alternatively, should it introduce market discipline by limiting the financial safety net? Second, to what extent have bank portfolio losses caused the recession and to what extent are they symptoms? This essay highlights the issues confronting the policymakers who will reform the existing bank regulatory apparatus and offers some views on the fundamental issue of whether the recession reflects an inherent instability in private markets or failures of monetary and regulatory policy.
JEL: G21, G28.

The current crisis highlights the relationship between economic and financial instability. The imperative of understanding the relationship between these twin phenomena and of using that understanding to design policy to prevent future recurrences of world recession is transcendentally important. A person (Financial Times, 6-7 June 2009) speaking for Angela Merkel, Germany's chancellor, said: "Another crisis like this one and the west will be wiped out". Unfortunately, understanding the cause of any individual episode of financial and economic instability, no matter how severe the episode, is inherently problematic because of the complexity of the forces involved and because of the simultaneous occurrence of these forces. Economists talk about the "identification problem" of disentangling causation from common correlation. Unfortunately, competing models cause economists to disentangle causation in ways that yield different implications for government policy.

When policymakers institute reform, they implicitly choose between these alternative models. The wise choice of a model to guide policy necessitates looking across long historical experience, identifying common patterns (correlations) of financial and economic behavior, constructing alternative models that can assign causation to these common correlations, and then asking how well the alternative models predict. Essential to this exercise is the kind of historical knowledge particular to particular episodes of instability that allow economists to identify "shocks" in the form of changes in government policies and in various external economic events. The economist then asks whether these shocks possess different implications for the way that different models explain instability. As daunting as this task appears, the alternative is sobering. If economists do not engage in this exercise, inevitably the public will look for scapegoats. Those scapegoats will be individuals, not the incentives created by different institutional arrangements that governments put into place to "regulate" economic activity.

The Banca d'Italia Conference on "Financial Market Regulation after Financial Crises: The Historical Experience" offers an extraordinary collection of relevant scholarly studies of bank crises: the "case studies" that economists will use to construct models of the interaction between the financial and real variables driving the business cycle —models they will use as the basis for their advice to policymakers. For example, Martin Pontzen, in "Banking Crisis in Germany and the

[*] The author is Senior Economist and Research Advisor at the Federal Reserve Bank of Richmond. Email: Robert.hetzel@rich.frb.org. The views expressed in the paper are those of the author, not of the Federal Reserve Bank of Richmond.

Road to Recovery", extends this discussion by inquiring whether the failure of German banks in summer 1931 is attributable to the stresses produced by gold outflows due to contractionary United States and French policies or to internal mismanagement by the banks themselves and an inept response by the Reichsbank. Eugene White, in "Lessons from the History of Bank Examination and Supervision in the United States, 1863-2008", provides indispensable background concerning the nature of bank regulation and how the evolution of that regulation has handled the trade-off between reducing the systemic risk of bank failures and increasing the risk-taking incentives of banks.

The following excerpt captures the public debate generated by the current crisis (Financial Times, 2-3 May 2009):

> The onset of the worst global recession since the 1930s has led many to suppose the era of liberal economics and light-touch financial regulation ushered in by Thatcher and Ronald Reagan is over. Failures of untrammeled capitalism are blamed for the crisis. Discredited "socialist" solutions are back: banks are nationalized or rescued with taxpayers' funds; borrowed money is pumped into economies in a Keynesian effort to boost demand.

The remainder of this essay attempts to clarify the fundamental issues with which policymakers must grapple in their efforts at reform.

1. Rules versus discretion

The current world recession and accompanying financial instability has reopened the most fundamental issues of economics. How should societies provide for the regulation of the economy and the financial system? The interventionist tradition that springs both from popular lore and from numerous academic schools such as Keynesianism holds that markets are inherently unstable. Financial fragility and real instability interact to produce swings in economic activity. Stability requires the regulation of markets through government intervention. In contrast, the free-market tradition, which takes Adam Smith as its founding father, holds that markets are self-regulating provided that government allows the price system to allocate resources and gives individuals an incentive to monitor the use of their resources, physical and financial, through the protection of property rights. The ongoing debate carries the moniker of rules versus discretion. Should government provide for economic stability by shaping behavior through the establishment of rules or by discretionary intervention in markets?

Protagonists in this debate choose their own language. The interventionist tradition speaks of "unfettered" capitalism meaning that the "greed" of powerful individuals is unconstrained by the market. The implication is that markets unrestrained by government regulation allow powerful actors to exploit the weak and allow the excesses of those actors to destabilize economic activity. There is a need for government to monitor and to control. With respect to financial markets, the government needs to provide a financial safety net to prevent the excesses of bankers from creating a general depositor panic that can bring down the entire financial system. Government regulation must limit the risk taking of bankers.

The free-market tradition speaks of "self-interest" disciplined by the market place. The price system determines market-clearing prices and those prices coordinate the actions of individuals to produce an efficient allocation of resources. Another person's greed and one's own self-interest redound to the creation of national wealth because of the protection of property rights. Property rights protect free entry, that is, the ability of any individual to bring his/her resources into competition with anyone else. The other side of free entry is free exit, that is, market-determined bankruptcy.

The market always exists regardless of institutions: individuals always trade in pursuit of their own self-interest. However, a competitive market shaped by the protection of property rights is extraordinarily difficult to achieve and to protect. In financial markets, a financial safety net prevents the creditors (depositors and debt holders) of banks from incurring losses and eliminates the incentive of those creditors to monitor and to limit bank risk taking. The financial safety net erodes the protection of property rights through forced transfers from taxpayers to bank creditors when the risky investments of bankers turn out badly (Hetzel 1997). The resulting limitation on free exit (bankruptcy) encourages excessive risk taking.

According to the interventionist view, the excesses of powerful actors produce destabilizing swings in aggregate economic activity. Government must intervene directly in the economy to offset this instability. In recession, spending falls short of the spending consistent with full employment; therefore, government should spend an additional amount to compensate for the shortfall. Also, in recession, lending by banks falls short of the lending consistent with full employment; therefore, government (the treasury and the central bank) should lend so as to compensate for the shortfall.

At present, the interventionist view is in the ascendance. Just as in the Depression, popular opinion blames the "unfettered" greed of Wall Street for world recession. Did not the concentrated power of Wall Street bankers bring down the economy? How can one escape the conclusion that the free-market system failed? Surely Adam Smith was wrong that market discipline channels greed into constructive innovation and wealth creation? Surely, the price system failed to disperse the power of producers and give it over to the numerous buyers in the market place. The example discussed in the following section makes clear that such assertions regularly recur at times of crisis, but also that they merit careful scrutiny.

2. Do speculative manias drive the business cycle?

An eternally popular explanation of the business cycle is the alternation in financial markets of periods of greed and fear. Speculative mania starts a boom phase, followed inevitably by bust and deflation. Washington Irving (1819-1820 [2008: 4]) wrote:

> Every now and then the world is visited by one of these delusive seasons, when the 'credit system' (…) expands to full luxuriance: everybody trusts everybody; a bad debt is a thing unheard of; the broad way to certain and sudden wealth lies plain and open (…). Banks (…) become so many mints to coin words into cash; and as the supply of words is inexhaustible, it may readily be supposed that a vast amount of promissory capital is soon in circulation (…). Nothing is heard but gigantic operations in trade; great purchases and sales of real property, and immense sums made at every transfer. All, to be sure, as yet exists in promise; but the believer in promises calculates the aggregate as solid capital (…). Now is the time for speculative and dreaming of designing men. They relate their dreams and projects to the ignorant and credulous, [and] dazzle them with golden visions (…). The example of one stimulates another; speculation rises on speculation; bubble rises on bubble (…). No 'operation' is thought worthy of attention, that does not double or treble the investment (…). Could this delusion always last, the life of a merchant would indeed be a golden dream; but it is as short as it is brilliant.

Commenting on the same event, William Graham Sumner (1874 [2006: 4]) quoted from a report of the Pennsylvania legislature that attributed the distress of the 1819 recession to the prior excesses of an expansion in bank credit begun during the War of 1812:

> In consequence (…), the inclination of a large part of the people, created by past prosperity, to live by speculation and not by labor, was greatly increased. A spirit in all respects akin to gambling prevailed. A fictitious value was given to all kinds of property. Specie was driven from circulation as if by common consent, and all efforts to restore society to its natural condition were treated with undisguised contempt.

Timberlake (1993: Ch. 2) provides a different analysis of this episode. With the War of 1812, the government began to run fiscal deficits, which it financed with the issuance of treasury notes. These notes constituted legal tender and served as a medium of exchange. Banks used them as clearing balances. As high-powered money, they allowed banks to expand their note issue, which the public used as currency. This expansion in the money stock fueled inflation. With inflation, the paper money price of gold rose and banks suspended the convertibility of their notes into gold.

With the end of the war, in 1816, the government began to run surpluses. In order to achieve resumption of the gold standard, that is, the reestablishment of convertibility between bank notes and gold at the pre-war parity, Treasury Secretary Crawford used these surpluses to retire the treasury notes. Now, high-powered money contracted, and deflation replaced inflation. The monetary contraction that began in 1816 led to declines in the price level starting in 1817. By 1818, the country was in severe recession.

Timberlake (1893: 25) wrote: "The price level decline in 1818-1820 that resulted in full-scale resumption was accompanied by the usual symptoms of failing banks and business hardships (…)." The banks then found they were forced [in the language from an 1818 *Treasury Report* written by Treasury Secretary Crawford] "to contract their discounts for the purpose of withdrawing from circulation a large proportion of their notes. This operation, so oppressive to their debtors, but indispensably necessary to the existence of specie payments, must be continued until gold and silver shall form a just proportion of the circulating medium."

Although the Treasury forced the monetary contraction, the Second Bank of the United States received the blame. Wood (2005: 131) wrote, quoting the historian Bray Hammond: "There was a scramble for liquidity, and failures almost included the United States Bank, whose 'grim efforts' to collect its debts aroused a popular hatred that was never extinguished (…). Andrew Jackson's bank-hating adviser, William Gouge, wrote of this episode that 'The Bank was saved and the people were ruined'".

Of course, what is interesting in this episode is the way in which one generalizes across such episodes in order to predict the consequences of alternative policies relevant to the present. Both of the above interpretations stress different correlations with real instability, one financial and one monetary. But which is symptom and which is cause? Consider first the fundamental issue, namely, how well does the price system work to assure macroeconomic stability?

The credit-cycle view, represented in the popular view that recurrent bouts of speculative mania drive the business cycle, implies that periodically the concentrated power and greed in financial markets overwhelm the self-equilibrating properties of markets. Of course, in reality, the calculating, optimizing agents in economists' models are human beings with emotions. During cyclical expansions, they feel optimistic about the future. During cyclical contractions, they feel pessimistic about the future. Over the cycle, exuberance gives way to gloom and greed gives way to fear. However, implicit in these credit-cycle explanations of the business cycle is the assumption that this alternation in human emotions between greed and fear overwhelms the incentive effects of the price system.

The opposing quantity-theory tradition concentrates on whether monetary disorder prevents the price system from working. In this tradition, the central price is the real interest rate: the intertemporal price of resources, that is, the price of obtaining resources today measured in terms of resources that must be delivered tomorrow. It serves as a fly wheel to moderate fluctuations in real GDP around its longer-run trend. When individuals are pessimistic about their future job and income prospects, a low real interest rate increases real aggregate demand sufficiently to absorb full-employment output. Conversely, when individuals are optimistic about the future, a high real interest rate constrains real aggregate demand to the level of full- employment output. In the tradition of Wicksell (1898 [1962]), the real economy produces a unique real interest rate (the natural rate) consistent with maintaining output at potential. As a condition for the monetary control required to maintain price stability, the central bank must have procedures that cause its interest rate target to track the natural rate and, by implication, allow the real economy to determine real variables.

Do waves of optimism and pessimism overwhelm the working of the price system and prevent the real interest rate from serving its equilibrating role? Monetary history reveals that prolonged, significant downturns in economic activity require that monetary disorder interfere with the market determination of the real interest rate. During downturns, money destruction limits declines in the real interest rate. Similarly, during expansions, money creation limits increases (Friedman and Schwartz 1963a; Hetzel 2008a). As Wood (2006: 6) noted:

> Irving Fisher (1911: 66) also attributed a great part of financial fluctuations to slowly adjusting interest rates. Expansions are characterized by rising credit, commodity prices, and profits, and end with the 'loss of confidence' that 'is the essential fact of every crisis' and 'is a consequence of a belated adjustment in the interest rate.'

With this background, it is now possible to illustrate how historical narrative allows for the identification of shocks with different implications for different theories. According to the credit-cycle view of the business cycle, speculative activity drives booms and then busts follow inevitably. The fall in asset prices from their boom-driven unsustainable level and the need to work off excessive debt leverage through forced liquidation produces deflation and recession. As pointed out by Friedman (1964 [1969]), if this view were correct, the magnitude of the preceding boom would predict the magnitude of the following bust.

However, Friedman found that the magnitude of cyclical expansions in output fails to forecast the magnitude of subsequent cyclical declines in output. This fact contradicts the implication of credit-cycle explanations of the business cycle that recessions manifest the working out of prior speculative excess. Using data on cyclical expansions and contractions from 1879 through 1961, Friedman (1964 [1969]: 272) concluded that: "[T]here appears to be no systematic connection between the size of an expansion and of the succeeding contraction (…). This phenomenon (…)[casts] grave doubts on those theories that see as the source of a deep depression the excesses of the prior expansion. At the same time, the magnitude of an economic contraction predicts the magnitude of the subsequent expansion". Morley (2009: 3) reconfirmed Friedman's results using quarterly data from 1947Q2 through 2008Q4: "[E]xpansions imply little or no serial correlation for output growth in the immediate future, while recessions imply negative serial correlation in the near term".

The empirical finding that the magnitude of recessions does predict the magnitude of recoveries finds expression in the description of recoveries as V-shaped. If there is a natural rate of interest, and the Fed puts considerable inertia in real interest rates relative to the cyclical behavior of the economy, then the real rate either exceeds or falls short of the natural rate. In recovery phases, when the Fed has pushed the funds rate down below the natural rate, the economy recovers quickly. Therefore, one gets a V shaped recovery. This pattern characterizes the stop-go period of monetary policy. However, if instead, powerful nonmonetary forces are causing the recession and overwhelming the working of the price system then there is no reason for a V shape to recession/recovery phases. In the case of a boom-bust credit cycle, there should be a slow recovery if it takes a long time to work through debt defaults so that the magnitude of the bust depends upon the magnitude of the prior boom.

How is this review of past cyclical fluctuations relevant to current experience? The reason is that if the Friedman-Morley analysis is correct, it is hard to find convincing evidence that past recessions arose from dysfunction in credit markets. The implication is that credit markets work well to transfer funds from savers to investors. In the jargon of finance, no-arbitrage conditions are a useful characterization of financial markets. Of course, there may be something special about the current recession that explains a failure of financial markets, but the general presumption that financial markets have worked well in the past raises the hurdle that a special explanation must satisfy. What about the common perception that the Great Depression arose from the collapse of the banking system? Perhaps the current recession is a replay of the Great Depression.

3. The cause of the Great Depression: monetary or credit-market instability?

At present, during the current crisis, one often hears that central banks have learned the lessons of the Great Depression. But what are these lessons? Learning requires the testing over numerous historical episodes of models that allow assignment of causation to correlations given an identification of shocks. In the Depression, what was the shock and what kind of model translates that shock into a decline in output?

Just as at present, during the Depression, the most common answers to this question appealed to the credit-cycle view of a speculative financial boom followed by a debt-liquidation bust. Just as at present, commentators pointed to an easy money policy of the Fed as the factor initiating the speculative boom. The following quotation is a random sample of credit-cycle views currently espoused to explain the 2008-2009 recession. In a review of Robert J. Samuelson's book, *The Great Inflation and Its Aftermath*, Scheiber (2008) wrote:

> In 1998, after a global financial crisis threatened the expansion he'd so carefully cultivated, Greenspan flooded the economy with cash, and kept interest rates low for more than a year (highly questionable). The extra money led to the tech frenzy that ended so badly in 2000. Beginning in 2001, Greenspan aggressively lowered interest rates and kept them low into 2004. Once again, all the excess cash resulted in a bubble—this one in real estate—the bursting of which we are now struggling through (…). The prices of stocks and homes are every bit as vulnerable to inflation as the prices of toothpaste and sandwich bread, even if government statistics properly account only for the latter pair. And as we are discovering, the consequences of that inflation are every bit as damaging.

In the Great Recession, policymakers held that the view that in 1927 Governor Strong of the New York Fed had violated the real bills doctrine. According to this doctrine, the Fed should lend only on real bills (short-term, self-liquidating loans to finance goods in the process of production). Conversely, it should avoid open market purchases that would provide funds in excess of what was needed to finance trade and thus would spill over into speculation in financial markets. In 1927, Strong had lowered interest rates in the United States to provide financial conditions conducive to Britain's resumption of the gold standard. Meltzer (2003, 289) quotes San Francisco Fed president Calkins who stated that "the 1927 experiment [is] now quite generally (…) admitted to have been *disastrous*" [italics in original]. Starting in 1928, the Fed raised interest rates in a deliberate attempt to deflate what it saw as a speculative bubble in equities on the New York Stock Exchange.

After the August 1929 peak in the business cycle, the Fed lowered the discount rate and market rates only very reluctantly out of fear that ease in credit markets would reignite the speculation it held responsible for the boom-bust cycle. Meltzer (2003: 294) quotes a policy statement of the Fed's Open Market Committee in January 1930:

> [It] is inexpedient [to] attempt to stimulate business when it is perhaps on a downward curve (…) in a vain attempt to stem an inevitable recession (…). The majority of the Committee is not in favor of any radical reduction in the bill rate or radical buying of bills which would create an artificial ease or necessitate a reduction in the discount rate.

In expressing opposition to open-market purchases, in a memo for 25 September 1930 Open Market Policy Conference, the Philadelphia Fed articulated majority sentiment among the regional Banks (Meltzer 2003: 318): "We have (…) found ourselves out of harmony with the policy [open-market purchases] recently followed of supplying unneeded additions to credit in a time of business recession (…). We have been putting out credit in a period of depression, when it is not wanted and cannot be used."

Understanding the Great Depression in a way that is useful for extrapolation of its lessons to the present crisis requires identification of the initiating shock and use of a model that explains how that shock propagated to the real sector. Did the shock originate in a speculative bubble followed by a forced liquidation of excessive debt acquired in the prior boom? Did runs on banks induced either by a fear that other depositors would run or by fears for the solvency of banks create another shock that exacerbated a breakdown in financial intermediation and in the financing of business? If the answer is affirmative and if the causes of the current recession mirror those of the Great Deflation, central banks should prevent any bank from failing and should intervene directly to correct the market failure that has kept financial intermediation from transferring funds from savers to investors.

The appropriate policy response changes if the Great Depression and the current recession both originated in a monetary policy shock propagated by monetary nonneutralities inherent in forcing down the price level in a way that renders impossible the coordination across firms of reductions in their dollar prices. In this case, the appropriate policy is to engineer a large increase in the money stock through central bank purchases of illiquid assets such as long-term Treasury securities in order to induce portfolio rebalancing while avoiding credit market interventions and allowing banks to allocate credit.

Meltzer (2003), Friedman and Schwartz (1963a), and Hetzel (2008a) offer a monetary explanation for the Great Depression. Although the Fed lowered the discount rate from its high of 6 per cent in 1929 to just above 1 per cent in 1931, the Fed raised the discount rate sharply in fall 1931 in response to gold outflows triggered by Britain's departure from the gold standard. Hetzel (2008a: Ch. 3, Table 3.1) uses the measure of expected deflation from Hamilton (1992) to calculate the real short-term interest rate in this period. Throughout, expected deflation made the real rate extremely high and it reached 9.7 per cent in 1931. Hetzel (2008a) argues that the Fed's attempt to prick the stock market bubble in 1928 and 1929 along with its reluctance to lower money market rates when recession developed and followed by interest rate hikes in response to gold outflows created a deflationary cycle. Monetary contraction led to deflation, which led to expected deflation, which led to increased real interest rates, which exacerbated monetary contraction, and so on.

Monetary contraction validated the high real interest rates engineered by the Fed. Given the unit-banking structure of the United States, the required fall in the money stock necessitated the failure of banks. While those failures occurred in waves, they did not involve an indiscriminate withdrawal of funds from the banking system. Depositors withdrew funds from the smaller, regional banks considered less sound and redeposited them in larger, urban banks considered safer (Calomiris and Mason 1997; Calomiris and Mason 2003; Kaufman 1994).

The identification of the original shock and its propagation is difficult because of the dual role of banks as providers of payments services through the creation of demand deposits and also as providers of financial-intermediation services through lending. A bank failure induces both monetary and credit restriction. However, two sorts of evidence favor a monetary interpretation of the Great Depression. The first kind of evidence comes in the form of differences across countries in the timing of going off the gold standard. Countries that remained on the gold standard and suffered forced deflation from gold outflows experienced economic contraction while countries that left the gold standard and stabilized their money stocks experienced rapid economic recovery (Eichengreen and Sachs 1985; Eichengreen 1995; Hetzel 2002).

The second kind of evidence comes from the timing relationships between the actions of the Fed and the business cycle. The first cyclical peak occurred in August 1929 after the Fed began increasing interest rates to deflate the stock market "bubble," while the first bank runs did not occur until a year later in fall 1930. More significant, the timing of the first business-cycle trough and ensuing recovery appears explicable in terms of monetary shocks but not credit shocks. As evidenced in the National Industrial Recovery Act and in the Agricultural Adjustment Act passed in summer 1933, the Roosevelt administration pursued policies to raise wages and agricultural prices. As part of this broader policy, the administration took the United States off the gold standard and undertook purchases of gold to raise its dollar price. In April1933, Roosevelt issued an order forbidding the private holding of gold and the export of gold. In June, the United States abrogated gold clauses in contracts. Because commodity prices were set internationally, dollar depreciation raised the domestic price of internationally traded commodities. By reversing the decline in the price level, these actions turned expected deflation into expected inflation and almost overnight changed the real interest rate from a high positive number to a negative number (Hetzel 2008a).

After March 1933, the economy began a vigorous recovery, which lasted until May 1937. An implication of the credit-shock view of the Depression is that bank failures depress economic activity by destroying the specialized knowledge developed in bank lending. Counter intuitively from the perspective of this view, economic recovery followed shortly after the wave of bank failures in the last quarter of 1932 and the first quarter of 1933 and coincided with the large-scale closing of banks both in numerous state bank holidays and in the Bank Holiday that Roosevelt declared in March 1933. Meltzer (2003: 424) wrote: "Approximately 4,000 banks did not reopen [after the Bank Holiday]. This was nearly 40 per cent of the banks that closed between June 1929 and June 1933. The Midwest was hit particular hard, losing 2,500 of the 4,000 banks".

After March 1933, the Fed withdrew as an active central bank and surrendered control of monetary policy to the Treasury. Concerned about runs and fearful of the stigma associated with use of the discount window to obtain reserves, banks accumulated excess reserves. By 1933, they had accumulated sufficient reserves to avoid recourse to the discount window to replace reserve outflows. The Fed's procedures for controlling market rates, which determined market rates as a markup over the discount rate that varied positively with member-bank borrowing, then became irrelevant. The Fed simply froze the size of its asset portfolio. Its attitude was that the high level of excess reserves indicated that nothing else could be done to ease monetary policy. This understanding of monetary policy had appeared in a letter written on 17 July 1930 by Governor Harrison of the New York Fed to the other governors (quoted in Meltzer 2003: 312):

> The principal New York City banks have paid off all their discounts here and at present have a surplus of reserves. Thus, the condition which we have desired, and for the attainment of which we believed purchases of government securities might be necessary, has been achieved (…). [T]he important thing to be achieved in present circumstances is that the money center banks should be substantially out of debt.

Consistent with the hypothesis in Hetzel (2008a) that the expected inflation created by the dollar depreciation begun by the Roosevelt administration in March 1933 lowered the real interest below the natural rate and allowed the economy to recover, monetary contraction abated and then ended in the first half of 1933. M1 growth went from (an annualized rate of) -12.4 per cent in 1933Q1, to -2.0 per cent in 1933Q2, to 9.3 per cent in 1933Q3 (Friedman and Schwartz 1970, Table 1). Vigorous monetary expansion continued until 1937Q1. With a new Board chairman, Marriner Eccles, and with the centralization of authority in the Board of Governors provided for in the Banking Act of 1935, the Fed in 1936 decided to again become an active central bank.

Eccles held conventional views of the causes of the Depression. Meltzer (2003: 464) wrote: "He believed the depression was caused by an overexpansion of debt and investment; the maldistribution of wealth—too much wealth concentrated in too few hands; and underconsumption by low-income earners". Meltzer (2003: 417) wrote of prevailing opinions:

> [M]uch of society at the time [believed] that speculation was responsible for financial collapse and the Great Depression (…). The Securities Exchange Act (1934) gave the Federal Reserve Board authority to set margin requirements in the belief that general monetary powers (…) cannot prevent a speculative boom in stock prices without harming the so-called legitimate needs of trade. Parts of the Banking Act of 1933, generally referred to as the Glass-Steagall Act, separated commercial banking from investment banking.

According to conventional views, monetary policy had no power to stimulate the economy because, as Eccles said in his 1935 congressional testimony, "you must have borrowers who are willing and able to borrow" (Meltzer 2003: 478). However, the Fed could forestall the ability of banks to resume speculative lending by neutralizing their excess reserves through an increase in reserve requirements. Without a cushion of excess reserves, a resumption of bank lending would again require recourse to the discount window, which would produce an increase in interest rates. As the Board's research director, Emanuel Goldenweiser told the regional bank presidents, the "most effective time for action to prevent the development of unsound and speculative situations is in the early stages of such a movement when the situation is still susceptible of control" (Meltzer 2003: 508).

Between 15 August 1936 and 1 May 1937, the Board raised reserve requirements on demand deposits by 100 per cent. Moreover, the Treasury sterilized gold inflows. The vigorous, double-digit M1 growth that had accompanied economic recovery slowed starting in 1936Q3 and the level of M1 declined over the last three quarters of 1937. With the cyclical peak in May 1937, economic decline began anew. After FDIC deposit insurance effective January 1, 1934, banks practically ceased failing. There are then no grounds for arguing that a shock to financial intermediation as distinct from money creation ended the expansion.

4. Drawing parallels between past and present

Friedman (1963a: 9) hypothesized that monetary instability produced real instability:

> The Great Depression did much to instill and reinforce the now widely held view that inherent instability of a private market economy has been responsible for the major periods of economic distress experienced by the United States. As I read the historical record, I draw almost the opposite conclusion. In almost every instance, major instability in the United States has been produced or, at the very least, greatly intensified by monetary instability. Monetary instability in its turn has generally arisen either from governmental intervention or from controversy about what governmental monetary policy should be.

Friedman used volatility in money growth (changes in a step function fitted to money growth rates) to measure monetary instability (Friedman and Schwartz 1963b). With the increased interest sensitivity and instability of money demand that has prevailed since 1981, money has largely lost its usefulness as a measure of the impact of monetary policy actions on the expenditure of the public. Nevertheless, the lack of information from the behavior of money about whether the central bank is introducing inertia into changes in the real interest rate does not diminish the quantity-theory insight that the central bank determines trend inflation through its control over money creation. As explained by Wicksell (1898 [1962]), stability of the price level requires monetary control. With an interest-rate instrument, a prerequisite for monetary control becomes the implementation of systematic procedures that cause changes in the real funds rate to track changes in the natural rate. Procedures that allow the price system to work to determine the real interest rate imply allowing the marketplace to determine real variables like the unemployment rate.

Hetzel (2008a, 2008b, 2009a) characterizes the systematic procedures that provide for monetary control as "lean-against-the-wind-with credibility." These procedures evolved pragmatically in the Volcker-Greenspan era, although they were adumbrated in the early years of the William McChesney Martin chairmanship. Using the terminology of FOMC chairman Martin, the FOMC follows a lean-against-the-wind procedure according to which it raises the funds rate in a measured, persistent way in response to sustained increases in resource utilization rates (decreases in the unemployment rate), and conversely for sustained decreases in resource utilization rates. Central to these procedures is the discipline imposed on the resulting period-by-period funds rate changes through the imperative that the changes be consistent with maintenance of the expectation of price stability read from the behavior of bond rates. That is, in response to real shocks, financial markets should believe that funds rate changes will cumulate to whatever extent necessary to maintain trend inflation unchanged. This belief is the nominal anchor. In the period known as stop-go, undisciplined by the imperative of maintaining the expectation of price stability, the Fed introduced cyclical lags into the behavior of short-term interest rates and as a result created procyclical money growth.

Within this framework, the current recession does not reflect the failure of a price system overwhelmed by the risk-taking of large banks but rather the failure of central banks to allow it to work (Hetzel 2009a). In 2008, an ongoing increase in the prices of energy and food lowered real income and an ongoing fall in housing prices lowered real wealth. Initially, central banks lowered their interest-rate targets in response to the resulting mild recession. However, in late spring 2008, central banks became increasingly concerned that persistent headline inflation in excess of core inflation would destabilize expected inflation and compromise their inflation objectives. In summer 2008, the FOMC, along with other central banks, departed from its lean-against-the-wind procedures and recreated the stop phase of the stop-go monetary era by failing to lower the funds rate in response to weakening economic activity. In fall 2008, distracted by a focus on financial intermediation, central banks lowered their interest rate targets only slowly in response to the huge destruction in wealth and the sharp increase in pessimism about the future as it became clear that the recession would be worldwide. When central banks did lower their rate targets, they ran into the zero-lower-bound problem in which the natural interest rate is sufficiently negative that it lies below the real funds rate.

5. The financial safety net and subsidies to risk taking

Beyond monetary stability, what about the other prerequisite for a free-market economy: the free entry into and exit from markets? Or, alternatively, what about the incentive to monitoring provided by the profit and loss associated with private property? Why did markets fail in their monitoring of bank risk taking? There is no doubt that the financial system that existed in summer 2007 was highly fragile as a result of the extensive use of leveraging: funding long-term, risky, illiquid assets with short-term borrowing in the form of commercial paper and repurchase agreements. No doubt, greed motivated the risk-taking represented by such leveraging, but what about the suppliers of the short-term funds that made the leverage possible? Were they not also greedy? Did they not mind losing money?

Common discourse places the origin of the current recession in the subprime crisis. The securitization of subprime mortgages and their placement in banks made these institutions vulnerable to the reversal of the run up in house prices that began in 2006. The resulting losses then reduced bank capital and banks' ability to finance productive investment. No doubt this story is descriptively accurate. Nevertheless, it leaves unanswered the fundamental question why the banks that held these securitized assets did not perform the due diligence, which is after all the primary activity for which they exist. The following attributes this excessive risk taking to the existence of the financial safety net. As background, the narrative reviews the role played by "affordable" housing programs in increasing house prices as a consequence of policies to increase the rate of homeownership. (For a more comprehensive discussion and for the sources of the statistics in this and the following section, see Hetzel 2009b.)

Understanding the subprime crisis requires understanding the role played by the GSEs (Fannie Mae and Freddie Mac). They increased the demand for the housing stock through subsidies that raised the homeownership rate to an unsustainable level, and, as a consequence of a relatively inelastic supply of housing due to land and local zoning constraints, contributed to a sustained rise in house prices. That rise in housing prices made the issuance of subprime and Alt-A loans appear relatively risk free.

In 1990, Freddie Mac and Fannie Mae owned 4.7 per cent of U.S. residential mortgage debt and by 1997 11.4 per cent. In 1998, that figure began to rise sharply and in 2002 it reached 20.4 per cent. (The figure is 46 per cent including mortgage debt guaranteed for payment of principal and interest). After 2003, as a result of portfolio caps placed on these companies by the Office of Federal Housing Enterprise Oversight (OFHEO) due to accounting irregularities at the GSEs, their market share declined. However, they continued to purchase significant amounts of subprime and ALT-A loans.

Early in the 2000s, the GSEs channeled into the housing market the increased foreign demand for riskless dollar-denominated debt that arose after the Asia crisis. When the interest rate on U.S. government securities fell to low levels, the GSEs encouraged foreign investors to shift from Treasuries to their agency debt. In doing so, investors could take advantage of somewhat higher yields on debt still guaranteed by the government, albeit guaranteed implicitly. In March 2000, foreigners owned 7.3 per cent of the total outstanding of GSE debt ($261 billion) and, in June 2007, 21.4 per cent of the total ($1.3 trillion). Foreign central banks and other official institutions owned almost $1 trillion of GSE debt in 2008.

The FHLBs (Federal Home Loan Banks) also encouraged the increase in home mortgage lending. FHLB advances, which are conditioned on real estate lending, grew from $100 to $200 billion from 1997 through 2000 and then accelerated. As of 2008Q3, the system had advanced $911 billion to banks and thrifts. In addition, the FHLBs subsidize housing directly by borrowing at their government-guaranteed interest rate and purchasing mortgage backed securities (MBSs) for their own portfolio. As of 2007Q4, they held $132 billion of residential mortgage backed securities.

Beyond subsidizing mortgage lending, government policies to increase home ownership work by encouraging a relaxation of (an increase in) the loan-to-value ratio required to borrow to own a home, say, by obtaining FHA (Federal Housing Administration) insurance. Highly leveraged borrowers with home mortgages rendered the financial system fragile. Robert J. Shiller commented (Wall Street Journal, 30 March 2009): "[W]e have a system that encourages homeowners to take leveraged, risky positions with all of their wealth in real estate in one city (…). How can it be optimal if you have all of your life savings in this one leveraged investment?"

6. TBTF and the absence of monitoring

The analysis of Jensen and Meckling (1976) explains how markets undistorted by government socialization of risk restrain risk taking. Equity holders in corporations have an incentive to take risks that are excessive from the perspective of bond holders because of the way that limited liability limits equity holders' downside losses without limiting their upside returns. As a result, debt holders, who suffer losses from a firm's insolvency, demand a return that increases with leverage, covenants that limit risk taking, and accounting transparency. Because the financial safety net renders superfluous the need of creditors of banks to monitor, market mechanisms for limiting risk in banking are attenuated. There is no offset to the additional expected return that banks earn from holding riskier portfolios arising from a higher cost of funds.

The financial safety net works to limit the need for creditors (debt holders and depositors) to monitor the risk taking of banks in two broad ways. First, as supervisor of bank holding companies and as the source of liquidity to banks through the discount window, the Fed has always served as a systemic risk regulator interpreted as the party responsible for maintaining stability in money markets. It has attempted to maintain this stability in part by smoothing short-term fluctuations in interest rates. Such smoothing lessens the apparent risk in funding long-term investments with short-term debt. Also, since the Depression and until Lehman Brothers, the Fed has allowed troubled financial institutions to use the discount window to allow uninsured depositors and short-term debt holders to withdraw funds, effectively passing on losses in the event of closure to the FDIC (Hetzel 1991). In these ways, the Fed has encouraged short-term liquidity investors to fund long-term investments. Second, and more directly, deposit insurance and too-big-to-fail effectively guarantee all bank creditors from loss, apart from the occasional losses suffered by uninsured depositors of small, community banks.

In an environment in which the financial safety net subsidizes risk taking, the low interest rates that prevailed in the first part of the 2000s naturally became the building block for using leverage to take advantage of the risk play offered by rising house prices. Of course, subprime brokers made loans to households with shaky finances and of course rating agencies provided unrealistic AAA ratings on the tranched securities packaging subprime mortgages, but the banks unconstrained by debtor monitoring demanded risky assets and the market provided them. After 2000, the exposure of banks to the real estate market increased significantly. Commercial bank assets held in real estate loans (residential and commercial) as a percentage of total loans and leases amounted to 40 per cent in January 1991 and 41 per cent in January 1999. This number rose moderately to 42.7 per cent in January 2001 but then rose rapidly to 55 per cent in January 2007. The large banks of more than a billion dollars in assets accounted for the increase. They held $800 billion in residential loans in 2002 and $1.8 trillion in 2007.

Bank exposure exceeded these numbers because of holdings of RMBSs (retail mortgage backed securities) and CDOs (collateralized debt obligations formed with tranches of MBSs) in off-balance-sheet conduits called qualified special purpose vehicles (QSPVs) or structured investment vehicles (SIVs). Although a weakness in the structured-finance model was the lack of incentive for credit analysis on the part of the mortgage originators who sold the mortgages to be packaged into RMBSs, the bank-sponsored QSPVs created the demand for the subprime and Alt-A loans packaged into these structured securities. Banks set up these off-balance-sheet entities for two reasons. First, they created a profitable spread between the rates on illiquid RMBSs or CDOs and the rates on the commercial paper used to leverage them. Second, they removed the mortgages from banks' books to reduce capital charges.

Large commercial banks drove the growth in structured finance after 2003 through the liquidity and credit enhancements that allowed the leveraging of QSPVs with commercial paper. Liquidity enhancements took the form of guarantees that the bank would extend credit if the commercial paper failed to roll over. Ratings agencies required these guarantees as a condition for rating the paper triple-A. Banks incurred the risk by not using the alternative liquidity enhancement provided by issuing extendible paper. Credit enhancements also took the form of bank-held subordinated debt, that is, that is, debt junior to the commercial paper.

7. The ongoing debate

The founders of the Fed established it to deal with the periodic recessions associated with bank panics. According to the prevailing real bills views, recessions followed inevitably from prior excessive risk taking by banks through forced liquidation of the resulting bad debt. In 1919, the Fed raised the discount rate to bring down the high level of commodity prices it attributed to a speculative bubble in world commodity markets. A business cycle peak followed in January 1920. In 1928, a consensus again formed over the occurrence of an asset price bubble in real estate in places like Florida and in equity prices on the New York Stock Exchange. A debate ensued over how to prick the bubble. The Board of Governors wanted to use quantitative measures to restrict credit used for speculative purposes. The New York Fed argued that credit is fungible and that the banks would circumvent quantitative restrictions. The New York Fed won the debate and raised the discount rate to engineer asset price deflation. The Great Depression ensued.

In the environment of the Depression, sentiment again turned to quantitative control of risk taking. The Fed received the power to regulate the extension of credit to purchase stocks through margin requirements. The Glass-Steagall Act of 1933 separated commercial and investment banking. The debate between proponents of unit banking and interstate branch banking concluded with the former victorious. The United States enforced rigorous limitations on bank entry and the competition held responsible for excessive risk taking. (On regulatory reform in this period, see Calomiris and White 1994, Fischer and Golembe 1976, Flood 1992, Mengle 1990, and Todd 1996.)

At present, with its discussion of creation of a systemic risk regulator, the U.S. political system is repeating the earlier debate. Perhaps it will be possible to solve the incentive and information problems encountered by central planners and create a systemic risk regulator with the omniscience and prescience to limit risk taking while allowing innovation in the financial sector (Hayek 1945). If not, the political system will need to restore market incentives to limit risk taking. It will need to address the issue of commitment required to end too-big-to-fail and to limit deposit insurance.

8. Recession: failure of the price system or failure of central banks to allow it to work?

At present, popular explanations for the current recession hark back to earlier explanations highlighting how a combination of easy money and speculative greed leads to asset bubbles, which when deflated require a purgative cleansing of debt that leads to deflation and recession. James Grant (Wall Street Journal, 20-21 December2008) recalled the attack in 1913 on the law establishing the Federal Reserve System by Elihu Root, senator from New York, who believed that a central bank would be lured into creating easy money:

> Little by little, business is enlarged with easy money. With the exhaustless reservoir of the government of the United States furnishing easy money, the sales increase, the businesses enlarge, more new enterprises are started, the spirit of optimism pervades the community. Bankers are not free from it. They are human. The members of the Federal Reserve board will not be free of it. They are human (…). Everyone is making money. Everyone is growing rich. It goes up and up, the margin between costs and sales continually growing smaller as a result of the operation of inevitable laws, until finally someone whose judgment was bad, someone whose capacity for business was small, breaks; and as he falls he hits the next brick in the row, and then another, and then another, and down comes the whole structure. That, sir, is no dream. That is the history of every movement of inflation since the world's business began, and it is the history of many a period in our own country. That is what happened to greater or less degree before the panic of 1837, 1857, of 1873, of 1893 and of 1907. Or, as Mackay (1841 [2009: 1]) said earlier, "Men think in herds (…)[and] they go mad in herds".

Paul Krugman generalized from the experience with the Great Depression to place the blame for the current recession on the excesses of unregulated large banks. Krugman (New York Times, 21 March 2008) wrote with reference to the Great Depression, "What turned an ordinary recession into a civilization-threatening slump was the wave of bank runs that swept across America in 1930 and 1931. This banking crisis of the 1930s showed that unregulated, unsupervised financial markets can all too easily suffer catastrophic failure". More succinctly, Krugman (New York Times, 10 April 2009) wrote of the current recession, "[F]inance turned into the monster that ate the world economy". More generally, the pro-free market management consulting firm McKinsey (10 June, 2009) wrote in a recent newsletter, "The parallels between financial crises and natural disasters (…) suggest that the economy, just like complex natural systems, is inherently unstable and prone to occasional huge failures that are very hard or impossible to foresee".

Government stimulus packages and government intervention in the market place and in financial markets undertaken in response to the recession create the impression that the government is intervening to fix a problem created in the private economy. Just as in the Great Depression, the natural response is to look for scapegoats in the financial markets. However, if the shock that turned mild recession into deep recession came from central banks and if a financial safety net that subsidizes bank risk taking provided the incentive for a highly-leveraged and fragile financial system, then the appropriate response is to evaluate the fundamental monetary and regulatory framework. Sorting out cause and symptom and designing appropriate policies are difficult. The issues are complex and require the study of history to provide context for the present. The Banca d'Italia Conference on "Financial Market Regulation after Financial Crises: The Historical Experience" constitutes an example of the kind of research required.

REFERENCES

Calomiris, C.W. and Mason, J.R. (1997), "Contagion and Bank Failures during the Great Depression: The June 1932 Chicago Banking Panic", *The American Economic Review*, 87 (December), pp. 863-83.

———— (2003), "Fundamentals, Panics, and Bank Distress during the Depression", *The American Economic Review*, 93 (December), pp1615-1647.

Calomiris, C.W. and White, E.N. (1994), "The Origins of Federal Deposit Insurance", in Goldin, C. and Libecap, G.D. (eds.), *The Regulated Economy: A Historical Approach to Political Economy*, University of Chicago Press: Chicago, pp.145-88.

Eichengreen, B. (1995), Golden Fetters: The Gold Standard and the Great Depression, 1919-1939, Oxford University Press: Oxford.

Eichengreen, B. and Sachs, J. (1985), "Exchange Rates and Economic Recovery in the 1930s", *Journal of Economic History*, 45 (December), pp. 925-46.

Financial Times (2009), *The Iron Age*, 2-3 May, p. 14.

———— (2009), *Merkel Makes a Mark*, 6-7 June, p. 8.

Fischer, G.C. and Golembe C. (1976), *Compendium of Issues Relating to Branching by Financial Institutions*, prepared by the Subcommittee on Financial Institutions of the Committee on Banking, Housing and Urban Affairs, U.S. Senate, 94th Congress 2nd session, Committee Print, October.

Fisher, I. (1911), *The Purchasing Power of Money*, Macmillan: Hants

Flood, M.D. (1992), "The Great Deposit Insurance Debate", *Federal Reserve Bank of St. Louis Review*, 74 (July/August), pp. 51-77.

Friedman, M. and Schwartz A.J. (1963a), *A Monetary History of the United States*, *1867-1960*, Princeton University Press: Princeton.

———— (1963b), "Money and Business Cycles", *Review of Economics and Statistics*, 45 (February), pp. 32-64.

———— (1964) "The Monetary Studies of the National Bureau", in Friedman M. (1969) (ed.), *The Optimum Quantity of Money and Other Essays*, Aldine Publishing Company: Chicago.

———— (1970), *Monetary Statistics of the United States*, National Bureau of Economic Research: New York

Grant, J. (2008), "Is the Medicine Worse than the Illness?, *Wall Street Journal*, December 20-21.

Hamilton, J.D. (1992), "Was the Deflation during the Great Depression Anticipated? Evidence from the Commodity Futures Market", *The American Economic Review*, 82 (March), pp. 157-78.

Hayek, F.A. (1945), "The Use of Knowledge in Society", *The American Economic Review*, 35 (September), pp. 519-30.

Hetzel, R. L. (1991), "Too Big to Fail: Origins, Consequences, and Outlook", *Federal Reserve Bank of Richmond Economic Review*, 77 (November/December), pp. 3-15.

———— (1997), "The Case for a Monetary Rule in a Constitutional Democracy", *Federal Reserve Bank of Richmond Economic Quarterly*, 83 (Spring), pp. 45-65.

———— (2002), "German Monetary History in the First Half of the Twentieth Century", *Federal Reserve Bank of Richmond Economic Quarterly*, 88 (Winter), pp. 1-35.

———— (2008a), *The Monetary Policy of the Federal Reserve: A History*, Cambridge University Press: Cambridge.

———— (2008b), "What Is the Monetary Standard, Or, How Did the Volcker-Greenspan FOMC's Tame Inflation?", *Federal Reserve Bank of Richmond Economic Quarterly*, 94 (Spring), pp. 147-171.

———— (2009a), "Monetary Policy in the 2008-2009 Recession", *Federal Reserve Bank of Richmond Economic Quarterly,* 95 (Spring), pp. 201-233.

———— (2009b), "Should Increased Regulation of Bank Risk Taking Come from Regulators or from the Market?", *Federal Reserve Bank of Richmond Economic Quarterly,* 95 (Spring), pp. 161-200.

Irving, W. 1819-1820 (2008), "The Great Mississippi Bubble 'A Time of Unexampled Prosperity'", *The Crayon Papers*, cited in Fisher, R.W., "Financial Market Tremors: Causes and Responses", Federal Reserve Bank of Dallas *Economic Letter,* 3 (April), pp. 1-8.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics,* 3 (October), pp. 305-60.

Kaufman, G.G. (1994), "Bank Contagion: A Review of the Theory and Evidence", *Journal of Financial Services Research,* 8 (April), pp. 123-50.

Krugman, P. (2008), "Partying Like It's 1929." , *New York Times*, 21 March, A23.

———— (2009), "Making Banking Boring." *New York Times*, 10 April, A19.

Mackay, C. 1841 (2009), *Extraordinary Popular Delusions and the Madness of Crowds*, in Fisher R.W., "Comments on the Current Financial Crisis", remarks before the Ninth Annual R.I.S.E. Forum, Dayton, Ohio, 26 March, Federal Reserve Bank of Dallas. Available at: http://dalasfed.org/news/speeches/fisher/2009/fs090326.cfm

McKinsey & Company (2009), "'Power curves': What natural and economic disasters have in common", *The McKinsey Quarterly*, 10 June.

Meltzer, A. H. (2003), *A History of the Federal Reserve*, vol. 1, 1913-1951, University of Chicago Press: Chicago.

Mengle, D. L. "The Case for Interstate Branch Banking." Federal Reserve Bank of Richmond *Economic Quarterly* 76 (November/December 1990), 3-17.

Morley, J. (2009), "The Shape of Things to Come", *Macroeconomic Advisers Macro Focus*, April 27.

Scheiber, N. (2008), "Cycles of Doom", *The New York Times Book Review*, November 30, p. 17.

Sumner, W.G. 1874 (2006), *History of American Currency*, cited in Wood, J.H. "The Stability of Monetary Policy: The Federal Reserve, 1914-2006", Working Paper Wake Forest University, December 20, p 4.

Timberlake, R.H. (1993), Monetary Policy in the United States: An Intellectual and Institutional History, The University of Chicago Press: Chicago

Todd, W. F. (1996), "The Federal Reserve Board and the Banking Crisis of the 1930s", in Kaufman, G.G. (ed.), *Research in Financial Services: Private and Public Policy*, 8, JAI Press, pp. 97-139.

Wall Street Journal (2009), *No Easy Answers*, 30 March, R11.

Wicksell, K. 1898 (1962), *Interest and Prices*, reprinted in Kelley, A.M.: New York.

Wood, J.H. (2005), A History of Central Banking in Great Britain and the United States, Cambridge University Press: New York

———— (2006), "The Stability of Monetary Policy: The Federal Reserve, 1914-2006", unpublished paper, Wake Forest University, December 20.

REGULATING FOR FINANCIAL SYSTEM DEVELOPMENT, FINANCIAL INSTITUTIONS STABILITY, AND FINANCIAL INNOVATION

Joseph R. Mason[*]

The issues in today's crisis – and indeed in the most important crises, historically – can best be understood as a manifestation of asymmetric information in an environment of rapid financial innovation. The present paper reviews the asymmetric information and financial innovation frameworks and applies those to major twentieth century U.S. financial crises. The paper posits that financial innovations inexorably create conditions of asymmetric information that can lead to financial crises and panics. Those events are crucial to the development of plain vanilla financial instruments, providing incentives to forgo margins in favor of liquidity. Regulatory attempts to stabilize markets by manipulating bank failures may ultimately result in substantial setbacks to market development.
JEL: E50,G20, N20.

1. The theoretical roots of market difficulties: asymmetric information and financial innovation

1.1 Asymmetric information and financial stability

The asymmetric information framework was pioneered by the Nobel prize-winning work of George Akerlof (1970). The basis for this work is the belief that some market participants have information that others do not. While many financial researchers tend to classify asymmetric information as a *per se* violation of market efficiency, it is important to remember that asymmetric information is compatible with market efficiency where asymmetric information is between the issuer and the investor rather than between individual investors in the same market.

While we are all familiar with the transactional effects of asymmetric information – moral hazard and adverse selection premiums – relatively few are familiar with the theory of how asymmetric information contributes to financial crises. With asymmetric information, when there has been a shock to asset values and investors do not know the incidence of that shock, investors rationally respond by divesting across all markets. Investors do not reinvest until they receive credible information about the incidence that helps them pick winners and avoid losers.

The banking crises of the Great Depression are held as a primary example of asymmetric information-based events. In my work with Charles Calomiris (1997), we showed that the information shock that precipitated the Chicago bank panic of June 1932 was the announcement that Congress and the Federal Reserve had turned down city requests to accept city "tax anticipation warrants" (securitized tax revenue bonds issued by the City of Chicago) as eligible paper at the discount window. For nearly a year leading up to the crisis, Chicago city employees were paid almost exclusively in these warrants and passed them on to others in lieu of cash for

[*] Hermann Moyse, Jr./Louisiana Bankers Association Professor of Finance, Louisiana State University, Senior Fellow at the Wharton School, and Partner, Empiris LLC. Contact information: joseph.r.mason@gmail.com; (202) 683-8909 office.

I wish to thank my discussant, Luigi Spaventa as well as the conference organizers, Alfredo Gigliobianco, Gianni Toniolo, and Eugene White, and participants at the conference "Financial Market Regulation after Financial Crises: The Historical Experience" at the Banca d'Italia, Rome, for useful discussion and remarks.

local transactions. Bank depositors knew that city finances were weakening and that the warrants were illiquid outside the greater Chicago area but they did not know which banks held greater or lesser concentrations of the illiquid and questionably-valued warrants. Hence, depositors ran all the local banks until they received more information, which in this case came from bank call reports filed on 30 June 1932.

The same pattern played out on a much larger scale in the year prior to March 1933, when nearly all the banks in the U.S. were closed “on holiday” due to heavy depositor withdrawals. Upon President Roosevelt’s inauguration on March 3, it was announced that all the banks would be closed and only sound banks would be allowed to reopen, their soundness to be established by inspections carried out by bank examiners throughout the country. Again, depositors knew there had been a shock to asset values but could not distinguish the incidence of the shock and responded by divesting from the entire market. Once information was credibly restored, depositors reinvested their funds.

Finally, while it is generally acknowledged that asymmetric information financial crises will not *cause* a recession, they are thought to be powerful *propagation mechanisms* for other economic shocks. Hence, a recession that occurs in the presence of credit shocks can be reasonably expected by be much deeper, and last much longer, than otherwise. Papers like Kiyotaki and Moore (1997) offer theoretical approaches to the issue, while those like Calomiris and Mason (2003a and 2003b) offer empirical support.

1.2 Financial development, financial innovation, and asymmetric information

Understanding the cycle of financial innovation involves extending of the concept of asymmetric information to financial institutions. According to Merton (1995), different types of financial institutions intermediate various levels of asymmetric information. Commercial banks intermediate relatively high asymmetric information financial instruments. Markets intermediate relatively low asymmetric information financial instruments.

The classic distinctions between banks and markets lie in a number of key dimensions regarding the relationship between the investors and the firms in each of the intermediaries identified in Figure 1. The investors and firms know one another in markets, whereas with banks investors (depositors) rarely know in which firms their money is invested. Banks cater to relatively naive investors who need the services of a delegated monitor, while markets cater to sophisticated investors who can monitor firm performance on their own by reading financial statements and performing research. To further that distinction, bank investors usually have some type of insurance backing their claims (deposit insurance) necessitating regulation to stem conditions of moral hazard, whereas market investors face harsh discipline of investment loss. Bank regulation therefore is typically functional in nature (telling the bank what it can and cannot do) rather than merely transparency-enhancing, as that used in financial markets.

Figure 1
Continuum of Financial Markets and Intermidiaries

Transparent			Translucent				Opaque	
Gov't Bond Markets	Stock Markets	Futures and Options Markets	Unit Trusts	Mutual Funds	Pension Funds	Finance Companies	Insurance Companies	Commercial Banks
Financial Markets						Financial Intermediaries		
● **Low asymmetric information** between investors and firms. ● Monitoring information must be communicated to each investor: **complex**. ● Sophisticated investors don't need third-party monitoring. ● Regulation to ensure transparency. ● Minimal regulation provides **efficient, if harsh, incentives.** ● **Seasoned** firms.						● **High asymmetric information** between investors and firms. ●Monitoring information need be communicated to one institution: **simple**. Intermediary may have inside information from deposit or payment relationships. ● Unsophisticated investors: intermediary acts as **delegated monitor**. ● Regulation to ensure **safety and soundness** and protect investors. ● Regulation such as deposit insurance may breed **moral hazard**. ● **Unseasoned** firms.		

Banks are often viewed as "special", in that they motivate small denomination idle savings into small denomination loans, providing a substantial boost to economic growth in a way that markets cannot. But it would be wrong to believe that a financial system can survive without banks or markets, or the myriad institutions that span the range in between. In fact, it is common to believe that the continuum between banks and markets forms the basis of a financial pecking order, where firms begin life funding themselves on the basis of bank loans and work their way up to market-based funding as they become more seasoned and reduce asymmetric information. Substantial gaps in the continuum of institutions in between make it difficult for firms to grow and credibly commit to reduced asymmetric information along the way.

But banks are special in another way, too. Banks also create high asymmetric information financial instruments to meet specific customer needs. These instruments are sometimes called bespoke products, because they are created in a custom one-off manner for a specific transaction. Bespoke products can be very innovative, meeting market challenges of hedging or speculating on specific types of risks.

Of course, there is a tradeoff between financial instrument specificity (uniqueness) and liquidity. So if a particular bespoke financial instrument becomes popular, firms using that instrument run the risk of illiquidity should their financial situations and needs change. Hence, it makes sense that as bespoke financial instruments become popular, the terms of the instruments become standardized so that the instrument can trade more like a commodity and be netted directly. As instruments are commoditized, they can be bought and sold more freely on markets, where brokers and dealers routinely add liquidity. As those instruments become even more popular they may trade on organized exchanges, reducing counterparty risk and adding further liquidity. In summary, as product specificity and asymmetric information declines, liquidity rises.

The overall problem of today's markets is one of conflicting incentives: custom products yield fat margins for banks while presenting the capability for widespread systemic risk. Hence, if innovators get lazy they sow the seeds of their own demise. But regulators did not recognize the shortcomings. The Federal Reserve Bank of New York is proposing a clearinghouse for Credit Default Swaps (CDS), but clearinghouses for non-standardized contracts will not yield appreciable market liquidity and stability. Rather, it is the standardization, itself, that needs to be fostered. To the chagrin of Wall Street banks that means no more fat margins, but it does mean long-term stability and liquidity and therefore a steady stream of new applications for Asset Backed Securities (ABS), Collateralized Debt Obligations (CDO), and CDS and other innovative products.

Viewed through the lens of the model described above, therefore, markets for many financial products that have recently become commonplace were inadequately developed despite having grown to fund a large proportion of today's financial marketplace. Mezzanine ABS and Residential Mortgage-Backed Securities (RMBS) were used to create CDOs, whose credit quality was bolstered by CDS either sold by monoline insurers or bought by them to hedge wrap insurance contracts. Some $9 trillion of securitizations were supported by roughly $0.5 trillion of CDOs, backed by a $50 trillion CDS market, none of which was written on the basis of standardized liquid contracts. Structures Investment Vehicles (SIV) and Constant Proportion Debt Obligations (CPDO) leveraged the securitizations and CDS in various ways, vastly increasing the size of the relevant market and the concomitant risk.

The instability and illiquidity that has contributed to today's market deterioration is, therefore, nothing more than a manifestation of typical risks inherent in a less-developed market. We know, for instance, that CDS are routinely exposed to credit risk, counterparty risk, model risk, rating agency risk, settlement risk, and the interrelationships among those risks. But while no market fixes have been proposed for those shortcomings, the Street has continued to build CDS upon CDS to achieve a multiplicative effect of risk layering. So now, commercial banks are not only losing the credit hedges that lower their capital requirements, but CDOs will lose their credit hedges as well and are unable to re-intermediate mezzanine ABS and RMBS as a result, thereby shutting down securitization. Immature innovative financial products are, therefore, poor building blocks for other innovative developments.

2. Innovative instruments are both assets and liabilities

2.1 Assets

The usual way of thinking about innovation is from the perspective of different types of financial assets that are created. Innovation is typically most effective if it can create securities accessible to a larger investor base. That means more granular instruments are generally favorable.

Historically important innovations have included 19th century BC evidence of contracts for grain delivery and instruments of war finance in the Song Dynasty. The Venetian Loan of 1172 represented one of the first important failures, wherein after funding a fleet during the Byzantine crisis, the government hypothecated revenues from the populace. When the battle went badly, the "loan" became permanent.

The latter period, however, created a benchmark for investors. From then, most European cities began to issue bonds, life-rentes and annuities to finance expenses. Loans and life annuities became personal means for people to plan their economic future, address risk and invest capital. By 1600, there was a broad investor class. The foundation for investment in corporations was in place.

The 17th and 18th century Netherlands saw the inception of the modern corporation (Vereenige Oost-Indische Compagnie, VOC) that issued easily transferable shares. Corporate bonds became popular and financial derivatives (forwards and options) were introduced. The period also saw early development of securitization and stock substitution via collateralized bonds very much like today's mortgage-backed securities, mutual funds, and depository receipts. In the 18th century "structured finance" securitizations, wherein cash flows of illiquid claims became collateral for securities, came to be traded. Stock securities were repackaged individually or as part of a portfolio to enhance liquidity. Principles of diversification were well-known by 1776, as well as principal-agent problems.

20th century U.S. crises were focused on investments in retail stock and on bond investments, as well as institutional experiments with long-term mortgage and consumer lending in the Great Depression, commercial real estate in the Thrift Crisis, and consumer mortgages and securitized claims on those investments today.

Despite a long history of investment, asset crises are usually relatively benign. Investors surely experience losses, but the systemic nature of the crisis and macroeconomic propagation effects are relatively contained. The reason is that the asset crises typically occur in secondary markets which, due to uncertainty, are particularly sensitive to long-term claims to cash flows. So while investors get hurt, firms are often still able to fund themselves in short-term markets and stay liquid while they prove their long-term viability.

2.2 Liabilities

Every financial asset, however, is also a financial liability. When primary issue liability markets are interrupted, crises can be much more severe. In other words, financial bubbles have taught us that while it is easy to fund short-term prospects with long-term debt, funding long-term prospects with short-term debt can be particularly dodgy.

Hence, authorities tend to regulate institutions that organize their funding to leverage the yield curve in this way. Early U.S. banks that funded themselves via money issue were particularly sensitive to liquidity difficulties. When regulatory authorities moved to stabilize monetized funding via the National Banking System, taxing banks that did not want to participate, banks turned to deposit-based funding.

After repeated deposit runs, culminated in the bank runs of the Great Depression (when, as discussed below, authorities dismissed the classical resolution mechanism of payment suspension), U.S. authorities moved to stabilize the liability side via Federal deposit insurance. By the 1980s, banks again leveraged cheap short-term funding via the development of brokered deposit markets, leading authorities to stabilize those markets with blanket deposit insurance coverage. Recently, banks moved to fund themselves via pseudo-hypothecated (securitized) and term-structured (SIV) arrangements, resulting in classic liability runs.

Unlike asset crises, however, liability crises tend to naturally be systemic. A much more intense propagation mechanism arises when even sound firms cannot obtain funding in primary markets. Furthermore, the underlying asymmetric information is particularly problematic when banks, themselves, cannot discern borrower viability and properly intermediate funds to value producing firms in a manner that produces economic growth.

3. Problem is not managing innovation, it is that innovation is not managed

Too often, however, both asset and liability innovation occurs in a regulatory vacuum. Regulators seem to remain unaware of innovation occurring within the institutions under their charge, judging balance sheet exposure too small to be of interest without adequate understanding of risks posed to the institutions of interest and viewing innovations as lying outside their narrow legally-defined regulatory scope.

3.1 Not every crisis need be systemic

In the Great Depression, mortgages were viewed similarly. The duration risk of maturity mismatches between deposits and long-term loans was not widely recognized as important until the mathematics of Macaulay duration were published in 1938. Still, however, in a heavily regulated financial system with usury rates on the lending side and interest caps on the deposit side, there was little room for Macaulay duration to matter. Indeed, it was not until freely floating currencies after Bretton-Woods in 1973 and interest rate deregulation in the 1980s that banks began to pay attention to duration gaps and manage interest rate risk, as well as develop interest rate derivative products.

Furthermore, bank runs before the Great Depression had been relatively contained. Suspension of payments addressed local crises, in a manner dating from the early days of Scottish free banking. Over the progression of the Great Depression, U.S. regulators and courts gradually rejected individual bank, local, then state, suspensions as crises mounted. By 1933, left only with nationwide bank holiday as a policy tool, National bank regulators and policymakers developed the present-day paradigm of Federal Deposit Insurance coverage.

Similarly, before the Thrift Crisis commercial mortgages were nothing special. In fact, commercial mortgage powers were granted to Thrifts as a means of augmenting earnings to Thrifts that faced margin pressures after interest rates paid on deposit accounts were deregulated under the Depository Institutions Deregulation and Monetary Control Act, which itself was a response to worldwide competition from Eurodollar accounts in the U.S.

Brokered deposits had never been much of a concern, either. To insolvent banks and thrifts, brokered deposits allowed quick leverage that could assist their bids for resurrection. U.S. regulators failed to take notice of such unbridled leverage even as the U.S. Bureau of Indian Affairs was arbitraging deposit insurance pass-through protection to maximize earnings from failing banks and thrifts. In total, use of brokered deposit leverage during periods of regulatory forbearance led to a roughly tenfold increase in losses to the deposit insurance system. Only recently (first quarter 2009) have regulators gotten around to proposing even the most rudimentary half-hearted regulations to address the use of brokered deposits to leverage returns in weak banks.

Today, too, mortgages were nothing special. There was no recognition of special risks in subprime mortgages, with even Vickie Tilman, CEO of Standard and Poor's, claiming in Congressional Testimony that her firm had thirty years' experience with mortgages – even though subprime mortgages had been in existence for only roughly three years at the time. Structured finance is still "off-balance sheet", and therefore of no concern to regulators, even as regulators consciously memorialized the refusal to impose differences in risk treatment of mezzanine and AAA-rated residential mortgage-backed securities held on bank balance sheets in the early 2000s, despite protests by industry participants, themselves.

In short, proper reflection on risk and appropriate regulatory classification of new financial instruments can avoid systemic crises. Such policy, however, will require regulators to look outside their immediate charges. Such a policy, while short of "systemic risk regulation", can help regulators – even if they cannot avoid the bubble – know where important exposures lie so they can clean up the system quickly and effectively after a crash.

3.2 Too often, however, the sole means of addressing crisis is retroactive forbearance

Forbearance, however, is all too often the sole means of addressing crises after the fact. Since at least the days of the Great Depression, when the Federal Reserve and Reconstruction Finance Corporation sought to value bank assets on an "intrinsic" basis rather than a market basis, bank regulatory agencies have sought to buy time after the fact rather than recognize risk (even if only unofficially) *a priori*.

The situation in the Great Depression led to a realignment of accounting standards under the 1938 Uniform Agreement on Bank Supervisory Procedures. In 1991-2, similar negotiations led to lenience toward financial institutions after the Thrift Crisis to offset the ongoing credit crunch. Today, authorities are pursuing similar strategies by relaxing mark-to-market accounting standards.

But even before forbearance with respect to external standards, regulators provide forbearance with respect to their own internal standards. During the Thrift Crisis, U.S. regulators ignored their own internally-generated CAMEL ratings, willingly allowing banks known to breach their own regulatory standards to continue operating without restriction. Today, the policy continues and has been recently reported by the Treasury Office of Inspector General (OIG) in their Material Loss Reviews of IndyMac and ANB. According to the OIG, "OCC did not issue a formal enforcement action in a timely manner, and was not aggressive enough in the supervision of ANB when problems first arose" (Office of Inspector General, Department of the Treasury 2008: 13). Well before failure, IndyMac showed signs of risky business strategy that could have justified regulatory action:

- Goodwill assets were nearly two-and-a-half times the industry average;
- Other borrowed funds were over four-and-a-half times the industry average;
- Volatile liabilities was almost double the industry average;
- Tier One capital was below the industry average and Tier Two capital was only about one-seventh the industry average.
- Interest expense was roughly twice the industry average;
- Trading gains (losses) were seventy-five times the industry average.

Hence, even in the most recent bank failures, ample evidence of increasing risk was not used to trigger existing Prompt Corrective Action provisions that could have reduced the costs of the failure.

4. Sources of asymmetric information today

In an asymmetric information financial crisis, investors – knowing there has been a shock to asset values but not knowing the distribution of that shock among investments – rationally pull back from the market as a whole to decrease their probable exposure. A recent example of such behavior was manifested in the Florida state money market fund offered to local municipalities. That fund experienced withdrawals amounting to approximately 30 per cent of the original $28 billion in the first two weeks after it was revealed that the fund held substantial exposures to defaulted SIVs and watchlisted RMBS.

Sources of information that can be used to resolve asymmetric information in today's markets are sparse. The meaning of bond ratings has been arbitraged to a two-step process, where investors have to know the investment sector before interpreting ratings (and thoroughly discount ratings on structured finance). Furthermore, structured products are overly complex, in that risk has been sliced and diced too finely to be supported by the statistical estimations of underlying collateral risk: the financial engineers got too tricky with the innovative new collateral.

Another element of information difficulties that investors are just beginning to learn about is the nature of "true sale". True sale lies at the heart of securitization, as that is the reason that securitizations can be considered "off-balance sheet". The concept of true sale is easy to demonstrate. Suppose I sell you my car. It breaks down as you drive away. Too bad. That is a true sale. Now suppose I offer you a money-back guarantee for two weeks. I should probably not spend the money I receive from the "sale" until the two week period expires. Until that, it is not a true sale.

When CitiGroup and HSBC issued their SIVs in a form that contained triggers and other elements that allowed the financial instruments at the heart of the SIV to be sold back to the banks if certain events occur, they violated the economic definition (if not the accounting definition) of true sale, even if the banks had the capacity to absorb the losses.

Such terms, however, are not new in structured finance. Even common RMBS allow the loans to be returned to the issuer in the event of loan fraud, which led the industry to insist at the beginning of the crisis that mortgage difficulties were due merely to widespread fraud. Similar terms apply to other ABS. In the credit card sector, in particular, credit card issuers that securitize a lot tend to report more fraud than others (Vermilyea *et al.* 2008).

But even where those terms do not apply, securitized pools have been repaired by issuing banks without consequence – an action termed "explicit recourse" – even though such actions clearly violated FASB 140 and explicit regulatory rules at the time. In some cases, regulators formally excused the recourse by reasoning that if recourse was *not* allowed the bank at issue would be rendered critically undercapitalized – either as a result of having to repurchase assets from the trust or having to fund future lending entirely on-balance sheet – providing the foundations of today's too-big-to-fail problem. Hence, bank regulators have repeatedly used recourse as a form of explicit forbearance, similar to the way bank regulators allowed insolvent banks to continue operating in the Thrift Crisis in the 1980s and the way Countrywide was supported by Federal Home Loan Bank advances (Mason and Higgins 2004).

In short, while loan proceeds were sold to investors, the risk of the loans never left the originating institution (the sponsor), typically a commercial bank. Think of the problem this way. If a bank sells a pool of loans with an expected loss rate of two percent, they can't really sell the last two percent. They could discount the price, but that is just taking the two percent loss now rather than later. But if losses turn out to be less than two percent, the bank made a bad deal. So the bank usually prefers to keep the first loss piece – called the residual. Hence, the expected loss is retained.

Moreover, regulators knew about the problems with risk transfer and consciously and willfully looked the other way, memorializing such practices in regulatory rules and finally moving explicitly away from requiring a transfer of a "majority" of risk to merely requiring a structured finance arrangement to transfer "some" of the risk in 2004.

In fact, regulators did so despite warnings by none other than Fannie Mae and Freddie Mac that such relaxed standards would indeed result in a shell game, where partial or nonexistent risk transfer would cause a financial crisis. In the words of Freddie Mac in response to notice of proposed rulemaking in 2001, such practices would encourage banks "(…) to structure securitizations that reduce their capital requirements to a fraction of what they would otherwise be required to hold, even though the risk exposure remains the same. The results could be a net reduction in the amount of capital in the banking system to protect against credit risk". Fannie Mae said even more clearly back then, "There should be equal capital for equal credit risk, regardless of the form in which the risk is held".

Realizing the shortcomings of true sale, however, is still just an introduction to the information asymmetries facing today's markets. The next step lies in better understanding the terms and triggers of securitizations to recognize perverse incentives apparent in selling the AAA securities but keeping the risk, while also servicing the loans. My recent paper, "Subprime Servicer Reporting Can Do More for Modification than Government Subsidies" shows that while securitization deal terms that require servicers to hold residual stakes can properly align incentives in steady state market environments, they can create perverse incentives when markets are in free-fall. Right now, therefore, a preponderance of servicers are using any means necessary – including modifying loans whether borrowers can pay or not – to keep securitizations in which they hold residual and junior bond stakes away from triggers that can move their own investment stakes from first in line to last in line.

In spite of realizing the structures and shortcomings above, bank regulators and FASB remain reluctant to see a "third way" of approaching true sale. In particular, regulatory capital and the contingent liability do not have to be absolute. My research with Charles Calomiris (2004a) goes so far as to suggest that well-functioning banks routinely hold additional capital against their securitizations, despite lacking regulatory requirements to do so.

The point is that if investors believe that issuers will support securitizations as has happened in the past, they will discount current performance – that is, inflate value from fundamentals – except in cases where the firm is not expected to be a going concern. If, instead, securitizations are treated as true sales that cannot be bailed out, they will be priced strictly according to fundamentals. Not knowing which value to use is confusing. Hence, regulators have a lot of work to do to redefine true sale and removing a great many points of confusion from markets and financial statements.

In conclusion, I would be remiss to leave the reader with an impression that the risks discussed above were unknowable. For years before the crisis, Wall Street joked about the regulatory approach, the saying on the Street being "The only securitization without recourse is your last". Indeed, without true sale even rating agencies knew the structure of a securitization did not matter. Hence, the remark by S&P analysts that "even a cow could structure it and we'd rate it". Willful ignorance is not systemic risk, and perpetuating willful ignorance guarantees repeat crises.

5. Resolving asymmetric information financial crises involves more than Bagehot's rule

While the Federal Reserve is warning of capital deficiencies in the banking sector, those cannot be fixed with loans. (Indeed, loans to capital deficient institutions violate the Federal Reserve's own Regulation A.). While bailouts are sometimes necessary, best practices identifying successful and unsuccessful bailouts are well-known through history. Perversely, however, the bailouts being applied today merely deny the capital crisis and perpetuate the asymmetric information. Instead, there needs to be a move to restore transparency to the financial system in a manner that will attract sufficient private capital to restore market and economic growth.

5.1 Promises and pitfalls of bailouts

It is not always clear why bailouts are necessary. With banks, the issue is (relatively) simple. Banks are thought to intermediate high-asymmetric information assets – particularly small business loans – that are thought to be a source of significant economic growth.

That, in itself, however is not generally sufficient to justify such radical support by the government. Banks also aggregate small short-term deposits and lend them in the form of larger longer-term loans. Hence, bank intermediation of information, as well as denomination and maturity make them socially and economically "special" and, perhaps, worthy of occasional government support.

But there are problems with bailouts. Banks that need bailouts often increase their risk by responding to skewed incentives in an incomplete regulatory framework *a priori*. Skewing incentives further with bailouts therefore worsens the problem.

Also, as the bank robber Willie Sutton famously said, banks are "where the money is". Politicians, therefore, tend to favor bailouts when they can control how the proceeds are distributed. Economists call this the "dark side" of bank bailouts.

Banks are repositories of economic and political power – a source not only of funds but also of substantial discretionary power over the economy. For example, Krueger and Yoo (2002) show that in Korea resources allocated to bail out banks were channeled in large part to value-destroying large firms. Thus, bank bailouts must be combined with effective reforms of lending practices. Arguments in favor of assisting banks therefore rely on attendant reforms in bank lending practices that will ensure that bank credit is channeled to firms on the basis of the merit of their investments. Too often such reforms are lacking.

As a result of those very real costs and benefits, it is important to think hard about WHY bailouts may be necessary in any particular instance. "The central goal of bank bailout policy is to design bank assistance to meet the legitimate goals of mitigating credit supply contraction for value-creating bank-dependent borrowers, while minimizing the potential abuse of assistance" (Calomiris and Mason 2004b: 377).

It is important, therefore, to think hard about the total package of bailout measures that mitigate credit supply effects while making sure appropriate business reforms are carried out. It is rare, however, that both those conditions are satisfied.

5.2 Costs of bailouts

Banking history, both recent and past, provides ample lessons about the pros and cons of bank bailouts.

Lesson one is that bank bailouts are very costly. In cases like China in the 1990s, the costs reached toward 50 per cent of GDP, and even 55 per cent of GDP in Argentina in the early 1990s. Typically the costs aggregate to only around 20 per cent of GDP. We can be tempted to suppose that developed countries are immune from such costs. Not so. Japan's costs of the "lost decade" have so far exceeded 12 per cent of GDP, Finland's costs of 1991-1994 came in at about 11 per cent, Norway 1987-1993 about 8 per cent, Spain 1977-1985 about 17 per cent, and Sweden of 1991 about 4 per cent.

5.3 Characteristics of model bailouts

Policymakers face two main policy choices for bailouts: loans and recapitalizations. (In Europe they call recapitalizations "nationalizations", but we don't like that term in the U.S.). No matter what you call them, however, the choice comes down to the type of crisis that afflicts the economy. For quick liquidity crisis, loans are sufficient. Deeper problems, *i.e.*, more than a week or so, are typically credit solvency problems, necessitating capital injections. Let's look at the properties of each, in turn.

5.3.1 Lending in liquidity crises

Loan-based assistance is based on Bagehot's rule. (Note, however, that what we call Bagehot's Rule is actually a bit bastardized, as it is unclear that Bagehot envisioned a central bank undertaking these functions, but I digress).

There are two main problems with Bagehot's rule. First, it is difficult, if not impossible, to distinguish illiquid from insolvent banks in a crisis. Second, banks don't like a true penalty rate, claiming it is too expensive. The point is, however, that if the bank was solvent, it would be able to pay!

But an even more important point is that Bagehot's rule has never really been followed. Almost from the Fed's inception, they have flaunted Bagehot's rule at the discount window. The Fed did this by lending to noticeably insolvent institutions as if they were illiquid.

As mentioned previously, one good measure of liquidity is whether the institution needs help for an extended period of time. Is one week enough? One month? Six months? One year? Liquidity crises are quick because they are typified by a situation where prices are known but money is lacking to buy the assets. (Regulatory forbearance keeps firms from supplying those assets to buyers, which confuses the issue in most crises). Since such situations cannot last very long before money becomes available, liquidity crises are, by definition, short-lived.

According to Anna Schwartz (1992), Discount Window lending problems were evident well before the Great Depression. In the 1920s, the Federal Reserve was already propping up banks that were at risk of insolvency. An early investigation of Federal Reserve lending to weak banks showed that of 457 banks that were continuous borrowers in 1926, 41 banks suspended operations in 1927, while 24 liquidated voluntarily or merged.

When the Fed was reaching its Discount Window lending capacity in the early 1930s, the Reconstruction Finance Corporation (RFC) entered the picture, lending to banks, railroads, and other firms explicitly to provide capital. The RFC made short maturity (six-month) loans at high rates (6 per cent) collateralized by banks' best quality, most liquid assets. Loans were typically rolled over at the end of the six months' time, facilitating a supply of long-term credit to weak banks.

Statistical studies of the program's success concluded that the RFC's practice of subordinating depositors' and investors' interests through senior claims on banks' best assets may have caused banks to fail (Mason 2001a). The idea is simple: you can't fix a solvency problem with more leverage.

A similar program was implemented during the Thrift Crisis of the 1980s. After the Thrift Crisis, the House Banking Committee ordered an investigation of Federal Reserve Discount Window lending. While during earlier crises one could plausibly argue that it is difficult to discern between illiquid and insolvent institutions, by the 1980s regulators had the benefit of ongoing surveillance and regularly updated CAMELs ratios that gave quick insight into bank conditions. (If a bank is rated CAMEL 4 it is in dire difficulty; 5, it is on the brink of failure).

The results of the House Banking Committee investigation of lending to insolvent institutions during the Thrift Crisis are therefore stunning: "Of 530 borrowers from 1985 on that failed within three years of the onset of their borrowings, 437 were classified as most problem-ridden with a CAMEL rating of 5, the poorest rating; 51 borrowers had the next lowest rating, CAMEL 4" (Schwartz 1992: 59).

The losses were also astonishing: Discount Window loans outstanding to banks at the time of failure amounted to almost \$10 billion. At the time of failure, 60 per cent of the borrowers had outstanding discount window loans. These loans were granted almost daily to institutions with a high probability of insolvency in the near term, new borrowings rolling over balances due. In aggregate, the loans of this group at the time of failure amounted to \$8.3 billion, of which \$7.9 billion was extended when the institutions were operating with a CAMEL 5 rating.

Japanese authorities followed the same strategy in the 1990s, based in part upon the perceived success of the U.S. RFC. The program extended ¥1,726b of bonds in 1998, with little economic effect.

The interesting part of the story is that the Fed knew all along that the Discount Window lending was problematic. In 1932, the Fed admonished: “Central banks must not in any way supply capital on a permanent basis either to member banks or to the public, which may lack it for the conduct of their business” (Schwartz 1992: 60).

In 1954, the Fed pronounced the problem eradicated, and promoted, “an established tradition against member bank reliance on the discount facility as a supplement to its resources”. The Fed reiterated its position in 1973 in the text of Regulation A, and again in the text of Regulation A in 1980 and 1990, while at the same time extending loans to weak banks liberally through the Discount Window, attaining a maximum exposure of about $18b within three months of bank failures during the height of the Thrift Crisis.

Hence there is a clear pattern in the 20th century U.S.: each time, loan programs and forbearance are promoted on the basis of their historical effectiveness, despite empirical statistical evidence to the contrary.

5.3.2 Recapitalization programs for solvency crises

As Mason (2001a) noted a three-part strategy of triage to clarify asymmetric information, closing value-destroying insolvent firms, and recapitalizing remaining banks by assuming substantial default risk can effectively resolve insolvency crises. Nonetheless, authorities typically lend to insolvent banks until crises rise to such unmanageable proportions that the tough three-part strategy is obviously necessary, which is the only point at which the costs of such an action can be fully justified. Furthermore, each time, as well, policymakers are reluctant to re-learn the lessons used by private capital firms: keep control of the firm and of the sums advanced.

The U.S. Reconstruction Finance Corporation advanced amounts of money to recapitalize banks that were reopened after supervisors established their solvency or near-solvency through bank examinations carried out during the Bank Holiday and afterward with voting preferred stock shares. Note, however, that those investments carried strict conditions, much like those that private equity firms today impose on their own investments: full voting rights, board seats, and dividend restrictions. Before the Depression was through, the government owned stocks in nearly every institution in the U.S., and often had effective control by way of owning the largest voting block of shares. The RFC used that power to fire CEOs and install its own managers to nurse the institutions back to health. As private equity investors know today, however, do otherwise would be a waste of money.

The results were dramatic. Dividends were restricted, but bank capital and bank loans increased. While the program could not immediately halt the decline in the capital/asset ratio or the loan/asset ratio (because assets still needed to be written down to reflect true credit quality), loans became available to creditworthy borrowers and banking sector stability was restored.

Now look at what happened in Japan. Massive capital infusions in 1998 and 1999, totaling some ¥7,500b were undertaken between 1998 and 1999 to little economic effect. The reason is simple: the Japanese authorities did not restrict dividends or otherwise undertake regulatory reforms that strengthened the banking system. As a result, dividend payments were increased after

1999, as proceeds were tunneled to keiritsu stockholders. Since the capital did not encourage loan supply growth, roughly ¥7,500b (roughly $75 billion) were wasted. The government undertook another, larger, round of recapitalizations with appropriate reform measures the following year achieved financial sectors stability (Calomiris and Mason 2004b).

5.3.4 The situation today

By ignoring the asymmetric information roots of today's crisis and remaining reluctant to close insolvent value-destroying institutions, U.S. bailout programs are merely wasting money and prolonging the downturn. At the time of writing, there remains no intention of publishing the full results of the Treasury's "Capital Allocation" program (colloquially referred to as the stress tests) or extending those tests to include regional banks.

Moreover, Treasury has vowed that none of the nineteen largest institutions will fail, regardless of their condition. Value-destroying firms can and often should fail through the process of reforming financial market transparency and liquidity (Mason 2009b). Tragically, no authority is proposing regulatory reform that can provide clarity to resolve the asymmetric information. Hence, the crisis continues.

6. Summary and conclusions

In summary, financial innovation is inextricably tied to asymmetric information and therefore sets the stage for financial crises. Over history, every truly meaningful crisis has had elements of asymmetric information, particularly affecting innovative financial instruments that are primary market liabilities.

But financial innovation, by definition, occurs outside the regulated financial sector. Indeed, that is often the point of financial innovation! Hence, limiting regulators' scope of supervision to one narrow legally-defined sector of institutions sets a natural stage for regulatory arbitrage and crises.

In such a system, crisis will always "surprise" supervisors, for whom financial innovations outside their narrow legally-defined charge do not exist. *Everything* will look like systemic risk, merely because banks reside in a financial system! Today, off-balance sheet structured finance-based funding, the regulatory approval of banks' use of credit default swaps for hedging capital needs, and the preponderance of non-bank subsidiaries in bank holding companies after Gramm-Leach-Bliley led to multiple sources of unrecognized risks that took regulators by "surprise", not because they were unknown but because regulators refused to look outside their narrow charges to see the wider financial system.

Similarly, however, any attempt to change regulations will inextricably affect other non - or differently - regulated institutions, thereby leading to "unintended" (not unavoidable) consequences. In short, it is time for bank regulators to wake up and realize they live in a far larger financial system. Once they acknowledge their environment, they can properly see regulatory arbitrage for what it is, and properly defend the boundaries of regulated financial institutions.

REFERENCES

Akerlof, G.A. (1970), “The Market for ‘Lemons’: Quality Uncertainty and the Market Mechanism”, *The Quarterly Journal of Economics*, 84, No. 3, pp. 488-500.

Anari, A., Kolari, J. and Mason, J.R. (2005), “Bank Asset Liquidation and the Propagation of the Great Depression”, *Journal of Money, Credit, and Banking*, 37, No. 4, pp. 753-73.

Calomiris, C.W. and Mason, J.R. (1997), “Contagion and Bank Failures during the Great Depression: The Chicago Banking Panic of June 1932”, *American Economic Review*, 87, No. 5, pp. 863-84.

—————— (2003a), “Consequences of U.S. Bank Distress during the Great Depression”, *American Economic Review*, 93, No. 3, pp. 937-47.

—————— (2003b), “Fundamentals, Panics and Bank Distress during the Depression”, *American Economic Review*, 93, No. 5, pp. 1615-47.

—————— (2004a), “Credit Card Securitization and Regulatory Arbitrage”, *Journal of Financial Services Research*, 26, No. 1, pp. 5-27.

—————— (2004b), “How to Restructure Failed Banking Systems: Lessons from the U.S. in the 1930s and Japan in the 1990s”, in Ito, T. and Krueger, A. (eds.), *Privatization, Corporate Governance and Transition Economies in East Asia*, University of Chicago Press: Chicago, pp. 375-420.

Higgins, E.J. and Mason, J.R. (2004), “What is the Value of Recourse to Asset Backed Securities? A Study of Credit Card Bank ABS Rescues”, *Journal of Banking and Finance*, 28, No. 4, pp. 857-74.

Kiyotaki, N. and Moore, J. (1997), “Credit Cycles”, *Journal of Political Economy*, 105, pp. 211-48.

Krueger, A.O. and Yoo, J. (2002), “Chaebol Capitalism and the Currency-Financial Crisis in Korea”, in Edwards, S. and Frankel, J.A. (eds.), *Preventing Currency Crises in Emerging Markets*, University of Chicago Press: Chicago, pp. 601-62.

Mason, J.R. (2001a), “Do Lender of Last Resort Policies Matter? The Effects of Reconstruction Finance Corporation Assistance to Banks”, *Journal of Financial Services Research*, 20, No. 1, pp. 77-95.

—————— (2001b), “Reconstruction Finance Corporation Assistance to Financial Institutions and Commercial & Industrial Enterprise in the US Great Depression, 1932 – 1937”, in Claessens, S., Djankov, S. and Mody, A. (eds.), *Resolution of Financial Distress*, World Bank Press: Washington, pp. 167-204.

—————— (2009a), “Restoring the Economy: Strategies for Short-term and Long-term Change”, *Testimony before the Congress of the United States Joint Economic Committee,* February 26, 2009.

———— (2009b), “Subprime Servicer Reporting Can Do More for Modification than Government Subsidies”, *Financial Economics Network Professional & Practitioner Paper Series.* Available at: http://papers.ssrn.com/abstract=1361331

Merton, R.C. (1995), “A Functional Perspective of Financial Intermediation”, *Financial Management*, 24, No. 2, pp. 23-41.

Office of Inspector General, Department of the Treasury (2008), “Material Loss Review of ANB Financial, National Association,” November 25, 2008 (OIG-09-013).

———— (2009) “Material Loss Review of IndyMac Bank, FSB,” February 26, 2009 (OIG-09-032).

Schwartz, A. J. (1992), “The Misuse of the Fed’s Discount Window”, *Federal Reserve Bank of St. Louis Review*, September/October, pp. 58-69.

Simonson, D. G. and Hempel, G. H. (1993), “Banking Lessons from the Past. The 1938 Regulatory Agreement Interpreted”, *Journal of Financial Services Research*, pp. 249-67.

Vermilyea, T. A., Webb, E.R. and Kish, A. A. (2008), “Implicit Recourse and Credit Card Securitizations: What do Fraud Losses Reveal?”, *Journal of Banking & Finance*, 32, No. 7, pp. 1198-208.

APPENDIX

PRUDENTIAL REGULATION AND SUPERVISION INSTRUMENTS AND AIMS: A GENERAL FRAMEWORK

Claire Giordano[*]

The aim of the present note is to outline a general, but at the same time comprehensive, framework of the array of instruments that regulators can use in their activity of prudential regulation and supervision. Such a framework should be applicable to a variety of geographical and historical contexts and should aid cross-country and temporal comparisons concerning regulation activity. It is an extension and a reorganization of White's (2009) categorization, which in turn is built on Mishkin's (2001) work. The novelty of the resulting framework is a clear distinction between the tools, the aims and the institutional setting of prudential regulation.
JEL: G18, G28, G38.

1. A first classification of regulatory and supervisory instruments: Mishkin and White

Both Mishkin (2001) and White (2009) argue that banks play a key role in financial markets, in that, by reducing both moral hazard and adverse selection problems via their information-collection ability, they are able to channel funds towards highly productive investments, thus in turn stimulating economic growth. Banks' presence in markets, however, creates a new type of asymmetric information due to the fact that depositors are not able to adequately monitor bank managers' actions. Bank regulation is therefore justified, since it mitigates the depositors' informational problem.

Mishkin (2001: 8) lists nine basic forms of prudential supervision of banks:

(a) restrictions on asset holdings and activities;
(b) separation of the banking and other financial service industries;
(c) restrictions on competition;
(d) capital requirements;
(e) risk-based deposit insurance premia;
(f) disclosure requirements;
(g) bank chartering;
(h) bank examination;
(i) a supervisory versus regulatory approach.

In particular,

(a) Restrictions on asset holdings and activities deter banks from incurring in excessive risk-taking by limiting the type of assets the banks can hold and by restraining banks from engaging in risky non-core business activities.

(b) The separation of industries is designed to prevent the Government's safety net to be extended to other activities as well as banking.

[*] Banca d'Italia. E-mail: claire.giordano@bancaditalia.it

I gratefully acknowledge useful comments and suggestions from A. Baffigi, F. Barbiellini Amidei, A. Gigliobianco and G. Toniolo. Any remaining error is my own.

(c) Restrictions on competition are useful in that, by sustaining the profitability of banks which may be heavily reduced in a competitive market, risk-taking to maintain former profit levels is discouraged. Such restrictions include the previously mentioned separation of industries, restrictions on entry of foreign banks, restrictions on branching, and ceilings on rates charged on loans or on deposits.

(d) Capital requirements increase the amount of capital held by banks, thus creating a larger loss in case of bank failure, in turn deterring banks from excessive risk-taking.

(e) Deposit insurance can increase the moral hazard problem, since banks are guaranteed a safety net and may thus be tempted to take on excessive risk. By appropriately pricing the premia to reflect the risks undertaken, the moral hazard problem may be reduced.

(f) Disclosure requirements make depositors and the marketplace more aware of the banks' conduct, thus enhancing market discipline, by setting accounting rules and requiring disclosure of specific information.

(g) Bank chartering implies an *ex ante* screening of the agents planning to run banks.

(h) Bank examination conducted by regulators allows the latter to verify the compliance of banks to the existing regulation and to take enforcement actions in the case of non compliance.

(i) As opposed to the “regulatory approach” of regulators, who simply ascertain the respect of regulatory rules, Mishkin defines the “supervisory approach” as a shift of the regulators' action to the monitoring of the soundness of bank managements' practices with regard to controlling risk.

White (2009: 2) too identifies nine basic forms of policy interventions to deal with asymmetric information problems. These are:

(a) controls on entry;
(b) capital requirements;
(c) limits on economies of scale;
(d) limits on economies of scope and diversification;
(e) limits on pricing;
(f) liability insurance;
(g) disclosure requirements;
(h) bank examination;
(i) bank supervision and enforcement.

The first two points are, respectively, point (g) and point (d) of Mishkin's list. Limits on economies of scale include restrictions on branching and on horizontal mergers, which Mishkin had included in the more general policy of “restrictions on competition” (point (c)). Limits on economies of scope and diversification constrain banks' portfolio choices or the types of activities they undertake, and thus reflect Mishkin's points (a) and (b). Limits on pricing take the form of usury laws and other interest rates restrictions, introduced to increase consumer protection. Mishkin had again included this type of intervention under “restrictions on competition”. Liability insurance corresponds to Mishkin's point (e), whilst disclosure requirements retraces his point (f). Bank examinations provide regulatory auditing and contribute to the previously mentioned “regulatory approach”, whilst bank supervision and enforcement support the “supervisory approach” in that they imply an assessment of the management's exposure to risk.

The following Table recaps and compares Mishkin and White's classifications.

Table 1
Nine forms of prudential supervision

Mishkin	White
(a) Restrictions on asset holdings and activities	(d) Limits on economies of scope and diversification
(b) Separation of banking and other financial service industries	(d) Limits on economies of scope and diversification
(c) Restrictions on competition	(c) Limits on economies of scale/ (e) Limits on pricing
(d) Capital requirements	(b) Capital requirements
(e) Risk-based deposit insurance premium	(f) Liability insurance
(f) Disclosure requirements	(g) Disclosure requirements
(g) Bank chartering	(a) Controls on entry
(h) Bank examination	(h) Bank examination
(i) Supervisory approach	(i) Bank supervision and enforcement

Sources: Mishkin (2001) and White (2009).

2. A more general framework of regulatory and supervisory instruments

The idea here is to suggest a further categorization, in which we wish to clearly separate regulatory instruments from the objectives they are designed to achieve and from the effects they actually produce. The resulting framework can then be used to analyze the evolution over time of regulation in different countries.

Before classifying the regulatory instruments, a first and extremely important consideration must be made, especially when analyzing regulation in a historical and cross-country context. This concerns the institutional setting in which the regulation is embedded. Both the perimeter of regulation and the nature of the regulators, in fact, must be defined. This implies identifying the objects of regulation (banks, banking groups, financial intermediaries, etc.), which from here onwards we more simply call “regulated entities”. It would also be appropriate to break up each general class of entities even further, in that regulation can differ according to the specific type of financial firm encountered. For example, the general category “banks” includes a wide variety of institutions, such as commercial banks, investment banks, mutual savings banks, cooperative banks, etc. The second specification suggested is the indication of who actually detains prudential regulation and supervision responsibility. The regulator may be the Central Bank or Government agencies or even a combination of several institutions.

After having taken into account this brief preamble, the analysis of the temporal evolution of regulation can be approached considering twelve possible regulatory instruments, which are here illustrated.

a) **Restrictions on entry and on dimensions.** These include bank chartering (a single charter may be required, or, on the other hand, one license for each activity, such as commercial banking, securities operations, insurance, may be necessary), controls on entry of foreign banks, restrictions on branching, restrictions on mergers, etc.[1]

[1] The effects of these instruments are restrictions on competition and limits on economies of scale, which may imply serious disadvantages to consumers. However, these effects must be kept separate from the actual policy instruments and do not enter the classification at this stage.

b) **Regulation on ownership and control.** It is crucial to define who can actually own the various regulated entities. These may be completely State-owned, which implies that regulation loses some of its scope. In this case, in fact, the financial firms are directly run by the government, which thus enjoys extensive control over the choice of projects to be financed and the risks to be undertaken.[2] The opposite extreme is attained when the regulated entities are entirely privately-owned. Possible owners are insurance companies, other banks, foundations, institutional investors, corporations, non financial firms, etc. Any of these categories could be forbidden to own banks. When ownership is mixed, an interesting indicator to take into account is the share of State property. There may also be limits on the number (or percentage) of shares owned by certain classes of shareholders, in order to refrain them from obtaining control of financial firms. These restrictions may extend to related party groups (e.g. family, business associates, etc.). Finally, regulation on ownership by foreign governments may also exist.

c) **Restrictions and directions on activities and asset holdings.** Regulation may explicitly allow or forbid regulated entities to undertake certain activities not directly included in their core business, or to hold specific assets in their portfolio. It is therefore interesting to verify if there are restrictions on permissible activities and if there is a required separation between banking and other financial services activities (e.g. securities underwriting and dealing, insurance or real estate).[3] The second issue concerns the types of assets that financial firms are allowed to possess. The maturity of these assets could also be a discriminating feature. Furthermore, risk diversification may be promoted by regulation, in that the amount of loans in particular categories or to single borrowers could be limited. Making loans abroad could be prohibited. Finally, there may be restrictions on off-balance-sheet activities and on the risks that can be undertaken.

d) **Price regulation.** This includes the introduction of ceilings or floors on the rates charged on loans or on deposits.[4]

e) **Capital and liability requirements.** Capital requirements can take different forms, such as leverage ratios, capital ratios, risk-adjusted ratios, etc. Further provisions which address specific classes of risk (e.g credit risk) may also be required. Other two factors to consider are the percentage of obligatory reserves prescribed -to be held within the bank or at the Central Bank, which may or may not earn an interest- and the existence, or lack of, limits on dividend payments to shareholders. All these instruments, in fact, force regulated entities to create a capital buffer, which becomes available in times of financial hardship. They therefore allow financial firms to absorb losses, without having to resort to credit rationing. Allowing or forbidding banks to hold reserves in foreign denominated currencies or other foreign denominated instruments could also be an issue. There may also be specific requirements concerning subordinated debt, that is to say bank debt which is junior to insured deposits and which is not insured by the government. Bankers who take on excessive risks will have difficulty in placing subordinated debt, since debt holders, in contrast to equity holders, do not share in the upside gains from risk-taking and thus are more conservative and vigilant.[5] Finally, the imposition of a multiple liability, according to which, in case of bankruptcy, the

[2] See La Porta et al (2002) for an in-depth study on Government ownership of banks.

[3] The effect of these policy interventions may be, in White's terminology, limits on economies of scope and on diversification.

[4] An effect of this regulation is again a restriction on competition.

[5] The strong incentives that subordinated debt holders have to closely monitor bank managers, since their debt is paid off only after more senior claims have been satisfied, are one of the forms of market discipline, stressed, among others, by Calomiris (1999) and Calomiris and Powell (2001).

shareholders are called upon to supplement the pool of assets available to creditors, has an impact on the actual capital held by financial institutions.

f) **Deposit insurance.** A deposit insurance may or may not be obligatory.[6] It could be Government- or private-funded or managed. If the insurance is mandatory, the percentage of deposits it covers may vary, *i.e.* the insurance scheme can encompass different coverage limits. It may or may not include foreign currency or interbank deposits. Coinsurance may be established. Another crucial point is the way the premia are calculated, that is to say if they are fixed for all regulated entities of a certain type, or if they vary according to the amount of risks assessed or actually undertaken.

g) **Regulation on compensation and insurance schemes for managers and directors.** Regulation can also impact on the remuneration of the regulated entities' managerial class, by offering guidelines or by specifying mandatory rules concerning the design and implementation of compensation plans. Managers and directors could receive fixed payments. Conversely, their salaries could be variable, in that they are linked to the performance of the institution they belong to or to particular financial instruments (e.g. stock options). How bonuses are computed, if they exist and are regulated, is also a relevant issue. Deferral, vesting and clawback arrangements may be shaped by regulation. Finally, managers may be allowed to be covered by insurance in case of damage claims, class actions etc, or such an insurance scheme may be forbidden in order to intensify their responsibility and accountability.

h) **Accounting standards.** Different accounting standards (historical cost, mark-to market, mark-to model, etc) can be prescribed to evaluate assets. A periodic reassessment of the value of assets may also be required. Formal, unequivocal definitions of certain balance sheet items (e.g. "nonperforming loans") could be stated. Finally, measures to limit the potential for accounting arbitrage, attained for instance by moving accounts between trading and investment accounts, or by relying on internal risk ratings of certain assets, may also be conceived.[7]

i) **Disclosure to authorities and on-site examinations.** Disclosure requirements define what information must be revealed to the regulatory authorities, in which form, and with what frequency. Disclosure may be general and refer to all risks undertaken (credit risk, market risk, operational risk, liquidity risks, etc) or may be targeted and refer to specific exposures, such as the off-balance-sheet ones. On-site examinations may also be required and it is important to ascertain who conducts them and in what way. For instance, there may be announced or surprise inspections.

j) **Disclosure to the public.** Certain information may also be obligatorily included in reports offered to the public. Regulation can again dictate the form and frequency of these information flows, as well as their content. A different type of information disclosure is the obligatory publicity concerning interest rates, payment fees, and, more in general, the terms of contracts, offered to potential and actual clients of the regulated entities. Finally, supervisory entities can also require financial firms to obtain certified audits and/or ratings from internationally renowned rating agencies. It is therefore crucial to consider the role credit rating agencies are assigned in financial markets, the activities they may undertake, the type of information they

---

[6] Countries that credibly impose a "no deposit insurance" policy may stimulate market discipline.

[7] Both Mishkin and White include the definition of accounting standards within the category of disclosure requirements. We keep them separate because the setting of accounting rules is an instrument which is used at an even earlier stage with respect to information release. Disclosure is useful only if the information given is accurate and truthful. Accounting standards are, in fact, a key measuring instrument for profits (or losses), cash flows, the amount of value generated (or destroyed) by financial firms. They are the basis for exercising market discipline.

are allowed to disclose, the frequency with which they must update their ratings, the way they are paid and by whom.[8]

k) Regulation on organization, risk management and corporate governance. Regulators often intervene with respect to the corporate structure of financial firms due to the "uniqueness" of their activity. *Ex ante*, managers and directors may be compelled to possess specific professional or other types of requirements. They could also be forbidden to detain other positions or appointments, considered to be incompatible with their role of managing financial firms. "Fit and proper" tests of key figures in financial institutions may thus be implemented. Ex post, the quality and soundness of the management's practices, especially with regard to risk-taking, may be periodically assessed. There could also be regulations on internal controls and on the use of external auditors. "Living wills" and wind-down plans in case of bankruptcy may be imposed upon regulated entities, so as to guarantee their orderly closing and to minimise their disruptive effects on financial markets.

l) Enforcement of the regulation. Regulators do not only assess the soundness of regulated entities, but must also promptly implement enforcement and disciplinary actions or sanctions when needed. The weapons regulators can use in case of lack of compliance are numerous and include: obligatory summoning of the corporate bodies' assemblies; cease-and-desist orders; override of management decisions by supervisors; suspension of dividends, bonuses and fees; forced changes of the regulated entities' organizational structure; suspension/removal of directors and officials; revocation of charters; declaration of insolvency and forced dismantlement; etc.

3. An additional framework to consider: the purposes of regulation

As previously mentioned, the framework outlined only refers to the instruments regulators possess and use in their activities of prudential regulation and supervision. It may be useful to attempt to classify the twelve categories of instruments listed according to the objectives they aim to attain.[9] It is immediately clear that policies which are grouped under the same heading may be employed for different purposes. It is, therefore, useful to superimpose a second framework, which identifies the aims of regulation, on the first. It is also noteworthy that some aims are actually in contrast with others.

Mishkin and White underline the need for regulation in order to reduce the asymmetric information problems which affect financial markets. We here adopt a broader view and roughly classify the macroeconomic and microeconomic goals regulation has had over time into six broad categories.

a) Crisis prevention/financial system stability. The singularity and importance of banking and financial intermediaries' activities, which include channelling funds from lenders to borrowers, warrant the need to avoid situations of financial distress. Crises must be prevented and financial stability guaranteed. In fact, disruptions in credit supply and in the smooth functioning of the payments system may have large and disastrous spillover effects to other sectors of the economy, thus originating more widespread downturns. Information disclosure

[8] The first and last policies, together with subordinated debt requirements, enhance market discipline. Publicity requirements, on the other hand, are an explicit way of increasing consumer protection.

[9] See Kroszner and Strahan (2001), among others, for a concise description of alternative approaches to justifying regulation.

requirements, instructions on financial firms' corporate governance, regulation enforcement, capital requirements are all instruments designed for this purpose.[10]

b) **Efficiency.** Regulation may be introduced to correct market failures, to ease market imperfections, such as asymmetric information problems and transaction costs, by coordinating the activities of many agents, and to manage public-good-type externalities in order to allow the efficient functioning of financial markets.[11] Mishkin and White consider all the regulatory instruments by them cited as having this function, among other purposes.

c) **Competition.** Regulation may be introduced to heighten or restrain competitive conditions in financial markets.[12] Examples could be introducing/removing controls on entry, branching liberalizations/restrictions or deciding (not) to introduce price regulation. Even restrictions on activities, by limiting the creation of large financial conglomerates, can affect competition, together with any regulation that can guarantee or distort a level playing field for financial institutions.[13]

d) **Consumer/investor protection.** Some regulatory instruments are introduced primarily in order to defend the weakest part of the financial contract, that is to say the counterpart of the regulated entities. Information disclosure requirements to the public are an example, as are ceilings on loan rates.

e) **Financial firms' protection.** Regulatory rules can be introduced as a result of lobbying pressures, in order to favour certain types of financial firms, increasing their profits by, for instance, setting barriers on entry. Also, small banks may be supported, when considered the most suitable entities to offer credit to small firms. A further example is the introduction of a ceiling on deposit rates, which favours all incumbent banks.[14]

f) **Credit allocation.** A government can abet banks via regulation, often coupled by moral suasion, to lend to politically or socially attractive projects, sectors or firms, and to attain a desired credit allocation. An example of instruments used for this objective is directions on asset holdings.

---

[10] In the case of a financial crisis actually occurring, emergency measures, such as recapitalizations and liquidity injections, and, more in general, lender of last resort facilities may be implemented. These instruments however concern crisis management procedures and are not part of prudential regulation.

[11] This purpose of regulation is at the basis of the "public interest theory" of regulation, according to which regulatory intervention occurs primarily to maximize social welfare.

[12] Some argue that effective screening of potential new bankers promote the soundness of the banking sector by minimizing the entry of low quality banks; others hold that monopolistic rents in banking are beneficial in that, by increasing the banks' franchise value, they reduce incentives to assume excessive risks. In contrast, limits on entry may protect inefficient banks and safeguard the interests of few against the forces of competition. Hence, greater competition may be good for efficiency, but bad for financial stability. However, the extent to which there is a negative trade-off between competition and financial stability may be questioned and the theoretical and empirical literature does not seem to be conclusive on the point. The stability effects of changes in competition policy and market structure are, in fact, extremely case and model-dependant, as shown in Carletti and Hartmann (2003) and in Allen and Gale (2004).

[13] Competition is also guaranteed by competition authorities, with which prudential regulators may interact. A further interesting issue to develop is the analysis of the relative roles of competition and regulatory authorities in different periods and in different countries, which here is not however discussed.

[14] This aim refers to the "private interest (or economic) theory" of regulation, according to which "compact, well-organized groups are able to use the coercive power of the state to capture rents for those groups at the expense of more dispersed groups" (Kroszner and Strahan 2001: 236).

Conclusions

The present note, building on Mishkin's and White's previous contributions, has attempted to create a general framework in which all types of instruments of prudential regulation and supervision, tied to specific institutional settings, can be placed and categorized. Furthermore, the aims of regulation have also been listed and classified. This second framework can be juxtaposed to the previous one. By applying the resulting "grid" to the history of regulation policies introduced in different countries, significant comparisons may be drawn concerning the choice of instruments adopted and the purposes with which they were used. The effects produced can also be an interesting object of comparison.

However, a further consideration, which here has not received any attention, is to be made. There may be a significant divergence between rules and actual practice of regulated entities, especially in the case of weak enforcement of regulation. Therefore, a comparison of rules only may not be as meaningful as anticipated. With this *caveat* in mind, we hope the general framework outlined here is a useful starting point for historical cross-country analyses of prudential regulation and supervision.

REFERENCES

Allen F. and Gale D. (2004), “Competition and Financial Stability”, *Journal of Money, Credit and Banking*, 36 (3), Part 2, pp. 453-480.

Calomiris, C.W. (1999), “Building an incentive-compatible safety net”, *Journal of Banking and Finance*, 23 (10), pp. 1499-1519.

Calomiris, C.W. and Powell A. (2001), “Can Emerging Market Bank Regulators Establish Credible Discipline? The Case of Argentina, 1992-99”, in Mishkin, F.S. (ed.), *Prudential Supervision. What Works and What Doesn't*, NBER Conference Report, The University of Chicago Press: Chicago.

Carletti, E. and Hartmann P. (2003), “Competition and Financial Stability: What's Special about Banking?”, in Mizen P. (ed.), *Monetary History, Exchange Rates and Financial Markets: Essays in Honour of Charles Goodhart*, Vol. 2, Edward Edgar: Cheltenham.

Kroszner, R.S. and Strahan P.E. (2001), “Obstacles to Optimal Policy. The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms”, in Mishkin, F.S. (ed.), *Prudential Supervision. What Works and What Doesn't*, NBER Conference Report, The University of Chicago Press: Chicago.

La Porta, R., Lopez-de-Silanes F., and Shleifer, A. (2002), “Government Ownership of Banks”, *The Journal of Finance*, 57 (1), pp. 265-301.

Mishkin, F.S. (2001), “Prudential Supervision. Why Is It Important and What Are the Issues?”, in Mishkin, F.S. (ed.), *Prudential Supervision. What Works and What Doesn't*, NBER Conference Report, The University of Chicago Press: Chicago.

White, E.N. (2009), “Lessons From the History of Bank Examination and Supervision in the United States, 1863-2008”, this volume.