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THE EVOLUTION OF THE FINANCIAL STABILITY MANDATE: FROM ITS ORIGINS TO THE PRESENT DAY

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ABSTRACT

We investigate the origins and growth of the Financial Stability Mandate (FSM) to examine why bank supervisors, inside and outside of central banks succeeded or failed to meet their FSM. Three issues inform this study: (1) what drives changes in the FSM, (2) whether supervision should be conducted within the central bank or in independent agencies and (3) whether supervision should be rules- or discretion/principles-based. As histories of bank supervision are few, we focus on the history of six countries where there is sufficient information, three in Europe (England, France, and Italy) and three in the New World (U.S., Canada, and Colombia) to highlight the essential developments in the FSM. While there was a common evolutionary path, the development of FSM in each individual country was determined by how quickly each adapted to changes in the technology of the means of payment and their political economy, including their disposition towards competitive markets and openness to the world economy.

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1. Introduction

"Financial stability remained a goal, of course."
-----Ben Bernanke (2013)

In his somewhat wistful discussion of the Great Moderation of 1984-2007 for the centennial of the Federal Reserve, Ben Bernanke (2013) conceded that "financial stability did not figure prominently in monetary policy discussions during these years" as many economists and central bankers had concluded that "the details of the structure of the financial system could be largely ignored when analyzing the behavior of the broader economy." The Federal Reserve's and most other central banks' financial stability mandate was often a secondary consideration for much of this period when control of inflation was of foremost importance. Since the Crisis of 2008, central banks have been given broad, new or renewed, mandates to guarantee financial stability. The objective behind these mandates is to prevent another financial meltdown, but there is little agreement about how to select and implement the appropriate policy instruments. While there is a vast historical literature on the issue of price stability that has informed the development of policies to carry out the price stability mandate, there are large gaps in our knowledge of financial stability policies in the past. In this paper, we provide a historical overview of the evolution of the "financial stability mandate" or FSM. Surveying its development from the emergence of modern central banks through the Great Moderation, we offer some general lessons.

As the behavior of policy makers during the Great Moderation demonstrated, price stability and financial stability are often treated as separable in "ordinary times," with regulation and supervision of financial institutions and markets frequently conducted outside of central banks. A commonly shared view, similar to that prevailing a century earlier, was that the best guarantee of financial stability that a central bank could provide was long-term price stability (Bordo and Schwartz, 1995; Bordo and Wheelock, 1998). If a financial crisis—an "extraordinary" event---erupted, the central bank should step in, as Bagehot (1873) recommended and act as a lender-of-last-resort (LOLR), providing liquidity to the market. Central bank responses to the 1987 stock market and the dot.com crashes are near textbook examples of this approach, with its emphasis on containment though liquidity provision that enables solvent firms to withstand a panic and preserves the payments and settlement systems (Mishkin and White, 2014). What is missing from this approach and what the Crisis of 2008 highlighted, is that regulation and supervision create financial systems that may moderate or amplify panic-inducing shocks. For the most part, we will leave questions of LOLR, which treats financial stability in "extraordinary" times to others in this conference volume and focus on financial stability policies---regulation and supervision---deployed during "ordinary" times with the aim of reducing the frequency and magnitude of crises.

In this paper, we investigate the origins and growth of the FSM with an eye to improving policy makers' understanding of why central banks and policy regimes in the past succeeded or failed to meet their FSM. Two issues inform this chapter (1) whether supervision should be conducted within the central bank or in independent agencies and (2) whether supervision should be rules- or discretion/principles-based? We focus on the history of six countries, three in Europe (England, France, and Italy) and three in the New World (U.S., Canada, and Colombia) to highlight the essential developments in the FSM. While there was a common evolutionary path, the development of FSM in each individual country was determined by how quickly each adapted to changes in the technology of the means of payment and their political economy, including their disposition towards competitive markets and openness to the world economy

Our historical approach permits us to provide an important perspective on the newly relevant FSM. Mandates for price stability and full employment have been broad, perhaps even vague, leaving central banks considerable discretion to define precise measures of their performance. The same is certainly true for the FSM.[1] For financial stability to be a separate goal from price stability and full employment, Ricardo Reis (2013) points out that there must be a measurable definition of financial stability and the trade-offs with these other goals must be recognized so that a policy action may be contemplated when prices are stable and the economy has met its growth objective but financial instability is a threat.[2]

In the next part, Section 2, we provide a definition of the FSM and the issues that arise from this definition. Our survey begins in Section 3 with the nineteenth century when FSM concerned itself with the convertibility of banknotes into coin. The challenge of deposit banking to the FSM is examined in Section 4. Section 5 covers the transitional years from World War I to the Great Depression when the problem of disentangling the payments mechanism from large systematically important banks---SIFIs---to use an anachronistic term led some countries to rescue insolvent institutions. Section 6 examines financial repression from the 1930s to the 1970s, when the shock the depression and the echoes of World War I induced countries to provide an explicit or implicit guarantee to all banks while they imposed heavy regulation either to fund wars or channel resources to favored industries. In Section 7, we cover the era of globalization and deregulation beginning in the 1970s through the 1990s, when driven by international capital flows and growing crises, financial repression collapsed. Although much of the regulatory structure of the previous period was abandoned, the explicit and implicit guarantees remained in place, leaving us with today's unresolved dilemma. We end our survey in Section 7 by examining the issues surrounding the internationalization of bank supervision. We touch briefly on the renewal of the FSM after the 2008 crisis.

Although the term FSM is of recent coinage, its purpose has remained basically the same over time: a protection of the payments and settlements system. Problems arise when attempts are made to use the supervisory regime for other purposes—serving macroeconomic policy or special interests. Several basic findings emerge from our selective historical survey: (1) Supervision can only be as effective as the regulatory structure it is mandated to enforce. It is necessary to support regulation but it has only limited scope in substituting for a flawed structure that requires reform to keep pace with financial innovation of the payments and settlement system (2) Given that financial innovation moves ahead of regulatory updating, it is challenging

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[1] The Swiss National Bank 's (2014) task is to "contribute to the stability of the financial system," where "a stable financial system can be defined as a system whose individual components---financial intermediaries and the financial market infrastructure—fulfil their respective functions and prove resistant to potential shocks." The European Central Bank (2014) seeks financial stability, defined as: "a condition in which the financial system comprising of [sic] financial intermediaries, markets and market infrastructures—is capable of withstanding shocks, thereby reducing the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities." The Norges Bank (2014) is charged to promote "financial stability and contribute to robust and efficient financial infrastructures and payment systems. The Financial Services Act of 2012 gave the Bank of England a statutory objective of protecting and enhancing the stability of the financial system of the United Kingdom. Under the Bank's "Core Purposes," the bank is committed to sustain financial stability whose purpose is to maintain three vital functions of the financial system (1) the payments mechanism (2) financial intermediation (3) insuring against and dispersing risk."

[2] Borio (2011) argues that it may not be possible to attain all of these objectives simultaneously, presenting the central bank with a dilemma.

for an exclusively rules-based supervision system to effectively monitor financial institutions, especially large systemically important ones. However, excessive reliance on supervisory discretion cannot replace a poor regulatory regime and often leads to inappropriate forbearance. (3) Initially, when competition in the payment's system was strong, as in the USA, independent supervisory agencies pursuing rules-based supervision were established; but when there was limited competition in the provision of the payments and settlements system, supervision was implicitly or explicitly was given to the central bank. When regulation became a tool for monetary policy, notably in times of financial repression, central banks gained increased supervisory authority. This shift often accompanies increased discretion and reduced transparency. (4) Most supervisory regimes successfully managed financial systems, except when they were hit by macro-systemic shocks, which they were not designed to manage. These types of shocks overwhelmed the supervisors' capacity to achieve their FSM and often produced a regime shift, as a response to the macro-systemic shock that tried to address the regulatory/supervisory deficiencies.

2. The FSM in Ordinary and Exceptional times

In our historical overview, we argue that the financial stability sought by various monetary and financial regimes is best described, in its narrowest and most precise definition, as protection of the "means of payment," or the "settlements systems." This definition broadly fits both a FSM in ordinary times and the LOLR function of the central bank in crises, thus harmonizing these two policy activities. In a spirited, critical survey of central bank intervention, Anna Schwartz (1987) argued that crises that merited LOLR operations were liquidity crises that threatened the payments mechanism. Other interventions were inappropriate because they essentially rescued insolvent rather than illiquid institutions, wastefully transferring resources and creating moral hazard. Her conclusions followed the classical Thornton-Bagehot school that the LOLR should discount freely to anyone having good collateral at a high rate to channel funds to illiquid financial institutions in order to halt a panic. An even stronger position has been taken by Marvin Goodfriend and Robert King (1988) who argue that discounting to selected banks is inherently distortionary and open market operations is the only instrument required to halt a liquidity crisis. At the other end of the spectrum is the position of Charles Goodhart (1985, 2011) who has argued that the LOLR should provide funds to illiquid and insolvent banks because it is impossible to distinguish between them in a crisis and bank failures sever valuable customer relationships, impeding recovery. Many central banks have adhered to this position, particularly in the last crisis, leading to legislative reactions, like the Dodd-Frank Act of 2010. These arguments about what is the appropriate role for a LOLR are, of course, arguments about how narrowly or how broadly the FSM should be in ordinary times and will inform how we trace the development of the FSM through history.

In reviewing the history of the agencies that have carried out the FSM, we have in mind the question whether the authority for regulation and supervision should be independent of or located in the central bank. Factors that have bearing on this question are the importance of information acquired through supervision for a central bank's success as LOLR, how redistributive trade-offs should be decided, transparency and political oversight, and whether supervision policies should be rules-based or discretion-based. While we will see how these questions were answered over time, it is worthwhile to note here that there is little contemporary consensus about who the regulator should be. Martin Feldstein (2010) has recently argued that a central bank should control the supervision of all large bank holding companies. Casting a wider but still limited net, favored by some central banks, Alan Blinder (2010) has recommended that the central bank supervise "all systemically important institutions."[3] Implicit in this design for the FSM is the granting of broad discretionary powers to the central bank. These approaches alarm Luigi Zingales (2009) who is concerned they would concentrate too much authority. Instead, he recommends that there be three agencies, each with its own goals---a central bank for monetary policy, a regulatory agency for supervisory policy, and a consumer protection agency---to induce transparency and allow for the evaluation of trade-offs in the political arena.

Furthermore, in today's debates about the FSM, the potential trade-offs between financial stability, price stability and full employment/growth receive scant attention. Yet, it is precisely the difficulty of addressing how to handle these trade-offs that weakened the effectiveness of financial stability policy over time, creating conditions that increase the threats that the FSM seeks to avoid. In its simplest form, this may be seen by considering the basic functions of money as defined by any standard textbook: money serves as a unit of account, a means of payment and a store of wealth. Problems that arise when money is difficult to use as a unit of account are rare in the modern world, arising mostly when hyperinflations create obstacles to determine the relative price of goods over even the shortest of time spans. The core difficulty in the search for financial stability is the fact that by guaranteeing the safety of the means of payment, there is a danger that a monetary authority will (be pressured to) guarantee certain stores of wealth. If one could restrict guaranteeing the means of payment simply to ensuring the safe and accurate crediting and debiting of accounts, then these two functions of money might be completely separable and the execution of the mandate might be straightforward. Instead, because stores of wealth are defined as money---currency and deposits, for example---both the public's perception of the goal of financial stability and the ability of the monetary authorities to clearly define the goal can be muddled and conducive to crises.[4]

In pursuit of financial stability, the monetary authorities may begin by very narrowly defining the means of payment and tightly regulating its issue, as was the case when banknotes began to supplement coin as a means of payment in the nineteenth century. By setting regulations and incentives for stakeholders, the government influences the risk-return choices made by financial institutions, economic growth and the vulnerability of the regime to financial crises. Supervision is deemed necessary as there is an asymmetry in banking management and other insiders vis-à-vis those funding the bank with deposits and borrowed funds. Consequently, some agency may be delegated the responsibility for forcing increased disclosure, examining banks for compliance with the rules, and disciplining them.

If the rules for such a system are carefully drawn and the system well-monitored, a regime may credibly guarantee the means of payment; but there are two inherent problems. First, those holding the protected means of payment, for example banknotes, would tend to regard it as a means to insure their wealth in this form. Secondly, if the supply of the means of payment is sufficiently constrained, it will fail to satisfy the demand for a low cost means of payment by a growing economy. The result will be financial innovation to provide an alternative

[3] Defining "systemically important institutions, Blinder (2010) states "the definition is clearly *subjective* and *not* numerical. Thus, a handful are the *systemically important financial institutions* that are too big to be allowed to fail messily."

[4] The temptation to broadly define financial stability is exemplified in the calls to guarantee almost all classes of financial assets. For example, the argument to treat investment funds with more than $100 billion as systemically important and potential candidates for bailouts, Morgenson, (2014).

means of payment. The public will hold wealth in new and old forms of means of payment, but shocks will induce them to shift to the guaranteed form of wealth holding, creating runs and perhaps panics, with the regime losing its credibility, as the public is aggrieved to have lost some wealth. Consequently, there will be a demand for a new regime that guarantees the expanded means of payment. If the guarantee of the means of payment is not carefully circumscribed in the new regime, more wealth will be guaranteed. This mission creep poses a threat to the task of securing financial stability, as it will induce moral hazard and create a potential for politically divisive future wealth transfers to make good on its guarantee.

3. The Protection of Banknotes and the Origins of the FSM

England

The Bank of England was founded in 1694 as a privileged bank of issue with expressed purpose of providing a loan of £1.2 million to the Crown in wartime. Oversight or supervision was provided by Parliament which imposed regulations on its total note issue. Collateral requirements protected the value of the currency and high minimum denominations kept notes out of the hands of the less financially literate public to protect against counterfeiting. The weekly task of verifying the accounts of the Bank---its notes issued, reserves, securities, and capital---fell to the Commissioners of Stamps and Taxes. Other banks, usually partnerships, operating without the privilege of note issue, were not the subject of regulation or supervision.

After the banking crisis of 1825, Parliament passed the Act of 1826 that ended the Bank of England's monopoly of joint-stock banking, permitting the establishment of banks with more than six partners, outside of London (Grossman, 2010). These partnerships—note-issuing joint stock unlimited liability banks---were not subject to any balance sheet regulations or requirements to file or publish financial data. Their only obligation was to submit an annual return, including the name of the bank, place of business and names of all partners and two officers in whose name the firm could be sued. Competition increased when the Bank Charter Act of 1833 permitted the formation of joint stock banks in London where they were not allowed to issue banknotes and were notably exempt from the reporting requirements.

The Bank Charter Act of 1844 began the centralization of note issue in England and Wales by forbidding new banks of issue (The Bank Charter Act of 1844). Although the Stock Banking Act (1844) established a banking code for England, it was repealed by, a series of acts between 1855 and 1857 that allowed banks to be formed with limited liability under company law. This arrangement with no explicit supervision became the basic legal framework that would govern English banking into the early twentieth century. One key feature was added by the Companies Act of 1879, which created "reserved liability," requiring half of banks' uncalled capital be available in the event of bankruptcy (Grossman, 2010, pp. 182-183).

Given that note issue had been de facto centralized in the Bank of England and the FSM focused on the convertibility of banknotes, there was relatively little concern for the supervision of other financial institutions. The Joint Stock Banking Companies Act of 1857, Section XIV specified that "No appointment of inspectors to examine into the affairs of any banking company shall be made by the Board of Trade, in pursuance of the Joint Stock Companies Act, 1856, except upon the application of one-third at least in number and value of the shareholders in such a company" (Wordsworth, 1859). No supervision was legally specified for the Bank of England though Bignon, Flandreau and Ugolini (2012) have shown the Bank of England maintained extensive files that enabled it to distinguish the quality of paper presented by discount houses.[5]

France

Although the Banque de France was founded in 1800, we begin our examination of France in the middle of the nineteenth century with two defining events: the de facto monopolization of note issue by the Banque de France in 1848 and the establishment of free and largely unregulated entry into the non-issuing banking business with the passage of the Commercial Code in 1867. The first made the Banque de France the guarantor of banknotes as a means of payment, while the second allowed a rapid development of the banking industry.

Until 1848, the Banque de France was the dominant but not the only bank of issue in France.[6] The crisis of that year led the government to concentrate the privilege of issue with the Banque. Coin continued to be the dominant means of payment; as late as 1880, coin constituted 65 percent of the means of payment, with banknotes and deposits dividing the remainder. Convertibility of banknotes into coin was ensured by the Banque's large gold reserves; and circulation was limited by high minimum denominations, similar to the Bank of England.

Until 1867, any firm, including banks that wished to form a limited liability corporation (société anonyme, SA) was subject to the Commercial Code of 1807 and had to follow a tortuously long review process, ending with a decision of the Conseil d'Etat. The new code in 1867 removed the discretionary power of the government and opened the doors to free entry. A wave of incorporation ensued and by 1898, there were 1,169 banks and insurance companies that had incorporated as SAs (Freedeman, 1993). There were modest minimum capital requirements and periodic reporting for all firms but few other limitations. The result was a competitive and diverse financial industry.

In 1877, the Banque de France began to report a quarterly review of its outstanding discounts and advances, providing the managers of the Banque with some surveillance of the industry, though it was primarily used to protect the Banque from bad loans. The absence of a supervisory authority, inside or outside of the central bank, to obtain information or examine banks well into the twentieth century is captured by a 1929 survey of French banking:

> It is difficult to define the precise limits of the activity of the big deposit banks…No law determines these, and sources of information are few and insufficient….Those things which it would be most interesting to know and which must influence the future of the company….remain the secret of the board of directors and of the management." The balance sheets are obscure, as each bank prepares them on a different plan, which it modifies at will. In the balance sheet the most dissimilar items are united. (Beckhart and Willis, 1929, p. 574).

Like the Bank of England, the Banque de France was seen as fulfilling its FSM by guaranteeing the convertibility of its notes into coin.

[5] Other nineteenth century banks maintained similar filing systems for the same purpose.
[6] See Leclercq (2010) for a recent description of the structure and operations of the Banque de France.

Italy

Prior to the Italian political unification (1861) banks of issue were found in the Kingdom of Sardinia, the Grand Duchy of Tuscany, the Duchy of Parma and Bologna, with the Kingdom of the Two Sicilies having two banks. As in other European countries, the establishment of banks of issue, with powers of discount and deposit, was seen as a financial innovation aimed at modernizing a backward financial system and useful subscribers to government bonds. After unification, the Sardinian (Piedmontese) bank, denominated Banca Nazionale nel Regno, became the dominant bank of issue with about 65 per cent of the outstanding circulation.

Similar to the pattern established elsewhere in Europe, the banks of issue were private-public companies, regulated and supervised by governments that issued charters, set minimum capital requirements, prescribed reserve ratio, and dictated the rules for the convertibility under a bimetallic system (which soon however became a de facto gold standard) . Supervision was entrusted to a government commissioner who sat on the banks' boards and whose approval was needed for major decisions, including changes in the discount rate and the creation of new branches. For Prime Minister Cavour, founder of the basic institutions of the Kingdom of Italy, the FSM mandate dictated that banks of issue "must be governed with the strictest prudence as their most stringent obligation is to be always solvent, with assets much higher than liabilities, in order to be always in such condition as to be able to honor their convertibility pledge in the case of notes and deposits" (Rossi and Nitti, 1968, p. 2074). Cavour believed that the government should exercise discretionary oversight of the central bank because of the potential disruptive threat of crises that made "useless the most stringent [legal] precautions"

Although Cavour included the guarantee of deposits in his view of the FSM, the dominant component of means of payment in Italy at mid-century were coins. Coins accounted for 80 percent of the means of payments with notes taking a little less than 10 percent and deposits a little more than 10 percent in 1861. This structure of the means of payment began to change very rapidly with the advent of easy incorporation for commercial banks---they remained virtually free from regulation and supervision. The Civil Code of 1865 did not treat banks differently from other "commercial" companies, and the Commercial Code of 1882 defined bank operations as "acts of commerce", subject only to a monthly delivery of certified statement of their accounts to local Courts.[7]

Unlike Britain and France, the development of banking in Italy occurred largely under a suspension of convertibility that lasted from 1866 to 1883 inducing more regulations and supervision to restrain the issue of inconvertible banknotes.[8] In the wake of the banking crisis of 1873, the Banking Act of 20 April 1874 imposed new regulations on the issue of banknotes and on investments by the banks of issue. The six banks of issue became subject to supervision by the Minister of Finance whose representatives participated in the board meetings and enjoyed inspection powers (Galanti, D'Ambrosio, Guccione 2012). Following a long-simmering banking crisis of the early 1890s the Banking Act of 1893 merged four banks of issue into the Banca d'Italia, which became the dominant bank of issue and discount. The 1893 Act (Toniolo 1990,

[7]The exception to this very liberal regulatory regime were land banks, specializing in securitized credit to agriculture, first regulated in 1866 and more systematically in 1869. The first comprehensive banking legislation was approved by Parliament in 1888, covering savings banks. These institutions were placed under the supervision of the Minister of Industry and Agriculture who could fine directors and dissolve the board.

[8] Banknote denominations were smaller in Italy than in England or France, which may have been the result of the suspension of convertibility, leading to an absence of coin. This phenomenon also occurred in Britain during the suspension of convertibility from 1797 to 1821.

Polsi, 2001, Toniolo 2013) set a maximum limit to outstanding circulation, tightened regulation of the discount business, forbade banks of issue from real estate mortgage operations and controlled deposits and interest payments. Already supervising the savings banks, the Ministry of Agriculture, Industry and Commerce was given supervisory authority over the banks of issue, in consultation with the Treasury. The general manager of the Banca d'Italia was to be approved by the government, no bank official could be also a member of parliament, and the state supervised the printing of banknotes (Negri 1989, 81-84). The fact that the Banca d'Italia was created as the response to a severe banking crisis impressed upon policy makers and the management of the new bank the idea that financial stability should be one of its main missions. As the banking crisis of 1907 would show, the Banca d'Italia had become aware that it had a de facto FSM. It therefore sought to acquire information about the operations of individual commercial banks, availing itself of its branch network and of the opportunities coming from its own lending and discount operations.

To sum up, in the nineteenth century, in Great Britain, France and Italy as in most other European countries, there was no institution formally or informally endowed with a FSM. The government directly regulated and inspected the monopolistic or dominant banks of issue primarily because of their role in the payments system; but with the exception of savings banks, other credit institutions were not perceived by legislators as different from any other commercial company or having a potential to destabilize the financial system. Although Britain had a limited banking code, a general commercial code sufficed for France and Italy, leading to development of universal banking, with mergers and branching forming very large banks by the end of the nineteenth century.

The United States

New World banking stood in contrast to Old World banking in that multiple banks of issue were the norm, leading to the formation of specific agencies for supervision. In the United States, federalism paved the way for the creation of competitive banks of issue. Although many of the newly independent states began by chartering a single bank (Schwartz, 1947), it became common for legislatures to offer numerous new charters, supplying the U.S. with substantial banking capital, which by some measures exceeded that provided in Europe (Sylla, 1998).

Price stability was anchored by the Coinage Act of 1792 that established a bimetallic system and banks were legally obliged to ensure the convertibility of their banknotes into coin. Empowered by their size and extensive branching networks, both the First and Second Banks of the United States (1791-1811 and 1816-1836) accepted a FSM, where they returned the banknotes of state-chartered banks promptly for collection, with the intention of increasing their liquidity and limiting loan expansion, and they provided loans to banks with liquidity problems. Supervision was conducted by the Secretary of the Treasury who could demand weekly statements, which were not available to the public or Congress. (Robertson, 1968). Whether the First and Second Banks interventions with state banks had a measureable effect on the financial system has been a subject of debate (Fenstermaker and File, 1986; Perkins, 1994), but the failure to renew both banks' charters put an end to this early American experiment in central banking.

After 1836, the FSM devolved completely to the states, which led to the establishment of the first explicit, agencies for bank supervision. While Congress or a state legislature might directly supervise a single or even a few banks, the competitive nature of the banking system and public concerns about potential corruption led to the creation of independent, specialist agencies to monitor compliance with regulations. Financial stability could thus be viewed as a separate issue from price stability. The years from 1836-1864 were period of experimentation by the states to protect the means of payment. Two experiments were the Safety-Funds and Free Banking (Rolnick, Smith and Weber, 2000). Supervision in the modern sense of delegating oversight responsibility to a public agency first appeared in the United States with the Safety-Fund System devised by New York in 1829 and copied by other states. These systems provided mutual guarantee funds aimed at protecting banknote holders and depositors from loss. Supervisors monitored banks but failed to control risk taking, leading to the demise of some systems and the restriction of others to the protection of note holders (Golembe and Warburton, 1958, Golembe, 1960, Calomiris, 1990). More successful and widespread were the free banking systems first implemented by Michigan (1837) and New York (1838). These laws permitted free entry with banknote issue, backed by state bonds, held in segregated accounts that were sold to compensate banknote holders in the event of failure. These provided a high degree of protection for banknote holders (Rockoff, 1975, Rolnick and Weber, 1983). To limit the financially illiterates' use of banknotes, the First Bank set a high minimum denomination of $5. While the state systems tended to follow this example, the democratizing impulse in the U.S. sometimes led to lower denominations (Bodenhorn, 1993).

The shock of the Civil War disrupted the banking systems of several states, giving the federal government an opportunity to intervene. The success of the New York version of free banking informed the writing of the National Bank Act of 1864, establishing a banking regime that would endure until 1913. The 1864 Act provided for free entry, a uniformly-designed and uniformly bond-backed currency issued by the individual national banks, plus regulations governing minimum capital, reserve requirements, and loans and double liability for shareholders. The act also created the Office of the Comptroller of the Currency (OCC), whose name reflects the initial overwhelming concern for ensuring that the national banknotes issued by each individual bank had the proper bonds set aside to protect them in the event of a bank failure. The Comptroller was empowered to obtain frequent reports from national banks and dispatch examiners to ensure compliance with regulations (White, 1983). Supervision was largely rules-based; and while it became more formalized over time, it represented a continuity with the earlier, smaller state efforts. Examiners and the Comptroller could privately reprimand banks for what they viewed as excessive risks, but the only true sanction was to close a bank down.

Canada

While influenced by both British and particularly Scottish banking with widespread branching, Canada followed the American pattern of detailed statutory regulation of banks that had the right to issue banknotes. Beginning with the passage of the Dominion Act in 1871, commercial banks were given ten year charters subject to renewal, thereby forcing a regular re-examination of supervision.

Although Canada may be considered to have a generally competitive commercial banking system, entry was tightly controlled and a special act of Parliament was required for a bank charter, with a high minimum paid-in capital. Like American national banks, their shareholders were subject to double liability. In 1871, there were 28 banks, declining primarily due to mergers to 10 banks in 1935. These ten banks had extensive national branching networks, making them large geographically diversified institutions, another contrast with the

United States (Allen, et.al., 1938). Canadian chartered banks had broad commercial and investment banking and brokerage powers, but mortgage lending was prohibited.

In this period, the FSM aimed at the protection of the means of payment, limited to currency, which came in two forms: Dominion notes and banknotes of the chartered banks, with the latter constituting the largest share. The issue of Dominion notes was tightly controlled, with a ceiling on the issues that could be created with a fractional reserve of gold and securities and above that a 100 percent reserve was required. This well-protected currency was issued in denominations over $10,000 for interbank transactions and under $5 for hand-to-hand transactions. Similar to U.S. and European countries, the minimum denomination for banknotes was set in relatively high in 1881 at $5. Banks were required to redeem their notes in gold coin or Dominion notes. In the event of insolvency, banknotes had first lien on a bank's assets, a strong protection given that a bank's issue was limited to be a maximum of its paid-in capital.

When the Bank Act was revised in 1891 a Bank Circulation Redemption Fund was established and endowed with funds equal to five percent of the average circulation of banks. The fund was not intended to guarantee banknotes, for which there were other protections, including double liability, but to ensure that notes of failed banks could be redeemed at par without delay, while liquidation was completed (Allen, et.al. 1938). To protect this redemption fund, the Canadian Bankers Association (privately organized in 1891) began regular supervision of banks. The Bank Act of 1900 then gave the Association,which was then incorporated by a special act of Parliament, oversight of the issue and destruction of bank notes. In the event of a bank suspension, the Association was given the authority to appoint a curator for the suspended bank. Commenting on this supervision, Willis and Beckhart (1929) wrote:

> All the banks are contributories to this fund and in case of the failure of a bank and subsequent depletion of the fund the remaining banks are obliged to restore the fund. Thus every bank has an interest in the regularity of the note issues of every other bank, and it is important that there should be some control by a properly authorized body of the printing and distribution of notes to the banks and their destruction.

Colombia

Although considered an economic laggard, compared to the U.S. or Canada, the history of regulation and supervision of banking reveals some common New World attributes. Free banking arrived in Colombia in 1865 after the Civil War that brought to power a new liberal government that produced a federalist constitution in 1863 for the United States of Columbia. Under the Banking Law of 1865, the Colombian states were granted the authority to set bank regulations. Typically, banks were simply subject to the commercial code that applied to all firms and there was free entry, plus some minimal regulations. By 1880, there were approximately 40 chartered banks of issue in Colombia. Political volatility and the fluctuating prices of tobacco and coffee, led these banks to concentrate on short-term credits, so that they could quickly wind down their operations and withdraw notes from circulation in response to a shock. Nevertheless, banks had to suspend payment twice in response to crises (White, 1998).

The Civil War in 1885 ended the experiment in free banking, when the new government in Bogotá suspended convertibility of the note issue of the Banco Nacional, its fiscal agent and made its notes legal tender, eliminating the privilege of note issue for all other banks. Continued political instability and the financial needs of the government led to an expansion of the Banco Nacional's note issue, its liquidation, and a direct issue of currency by the government. Inflation soared during the War of a Thousand Days (1898-1903), and the remaining banks shrank. Peace brought the establishment of a new monopoly bank of issue, the Banco Central and put the peso on the gold standard in 1907. With note issue tied to the gold reserves of the Banco Central, other banks were left largely unregulated and unsupervised. In 1918, a new banking law reaffirmed the wide powers of banks, enumerating them at length; these included the authority to serve as investment banks, hold stocks and bonds, develop and organize railroads, canals and industry, and handle contracts for public service (White, 1998). Thus, while Colombia had started with a system similar to the United States and Canada, it transited to one more familiar in Europe.

4. The Challenge of Deposit Banking to Financial Stability

The financial stability of both European banking regimes, where there was a monopoly bank of issue, and American banking regimes were there were competitive banks of issue were gradually undermined by the growth of deposits Deposit banking had a long history, but as Dunbar pointed out, it had long been restricted to the large and well-informed customers of banks.[9] Given the limited quantity of coin and the restrictions on the volume and denomination of banknotes, it is not surprising that deposits began to emerge as a substitute means of payment in the late nineteenth century with economic expansion and rising incomes. The public began to lay "claim upon the sympathy and guardianship of the legislature" (Dunbar, 1893) to expand the FSM. How this evolution played out in different countries depended heavily on their banking structure. Moving beyond Bagehot's policy recommendations, the failure of major financial institutions were managed with lifeboats in Europe, with a growth of supervision in Italy. .

The United Kingdom

The Act of 1844 protected the means of payment but at a price. Curzio Giannini (2011) has described the system, as showing "excessive zeal":

> The combination of ceilings on issue, reserve requirements, separation between issue and rediscount operations, as well as financial reporting obligations (the Bank of England was required to publish a fortnightly statement of account) created a framework of draconian restrictions, the purpose of which, as we have seen, was to reduce banknotes to a mere surrogate of precious metal, with no identity of their own." (p. 86).

Limiting the creation of the means of payment led to an expansion of the financial system through deposit banking, as non-issuing banks were subject to few restrictions. Banking crises then took the form of panics to convert deposits into notes and coin—presenting a direct challenge to the FSM in extraordinary times. In 1847, the failure of a number of provincial

[9] Cavour held a different view and believed that deposits had a higher risk of creating instability as they were on average large and in hands of few people. The contrast with Dunbar is similar to the division between those who see panics arising from the withdrawals of the uninformed versus the informed. For the stability of the system, Cavour deemed supervision of banks of issue necessary for the protection of both notes and deposits (Rossi and Nitti, p.1848)

banks provoked a liquidity crisis. Discounting liberally, the Bank of England saw its reserves drop. Rather than see the Bank cut off credit to the market the Chancellor of the Exchequer sent the Governor of the Bank a letter inviting him to continue to discounting at 8 percent, promising that the government would send a bill of indemnity to Parliament if the currency in circulation exceeded the legal limits. Issuance of this "Treasury letter" calmed the panic and did so again in 1857 and 1866. Recent research (Bignon, Flandreau and Ugolini, 2012) has confirmed that the Bank of England did not take full advantage of Treasury letters until after 1866 and rationed credit during crises, exacerbating them. At this point, the Bank of England became, in the view of most writers, a true LOLR, placing the interests of the banking system ahead of those of its shareholders.

In addition to the growth of deposit banking, the wave of mergers concentrated the banking industry in the last quarter of the nineteenth century, creating large institutions that posed a new problem. When Overend Gurney failed in 1866, it was a very large bank with wide-ranging activities. Its insolvency occasioned a liquidity crisis and the Bank followed what became Bagehot's recommended policy. Yet, when Baring Brothers failed in 1890, liquidity was supplied to the market by the Bank; but a lifeboat rescue was also constructed, in cooperation with the central banks of France and Russia, to prevent the collapse of Barings from creating a greater shock. In modern terms, Barings was regarded as a "systemically important financial institution," a "SIFI." At the outset, the Chancellor of the Exchequer, George Goschen thought that the crisis of 1866 would appear to be a "trifle" if Barings collapsed in run; and he offered a Treasury letter to the Bank. The letter was declined on the grounds that it signaled weakness. When the demand for liquidity surged, the Bank reached an agreement with the government to absorb half of any losses from the Bank's holdings of Barings bills, while the Governor assembled banks to provide a £17 million lifeboat rescue for Barings The panic ended, but the process of liquidating Barings was drawn out until the mid-1890s. While the Bank was praised for its prompt action, it was also attacked in the Economist, setting out the moral hazard peril for the whole of the banking system (Clapham, 1945). Nevertheless, there was no effort by the Bank of England to develop a policy of supervision in response to this crisis and there was no legislation forthcoming from Parliament.

France

As in the U.K., in France, there was no policy or institutional change in the FSM in response to the trends in the banking industry arising from the expansion of deposit-funded commercial banks. The collapse of the large Union Générale and other smaller banks in 1882 presented the Banque with the question of how to intervene. Although it may have been influenced by political considerations, the Banque and the government decided to let these banks fail, while providing liquidity to the general market (White, 2007). But, the imminent collapse of the Paris Bourse---the Lyon Bourse was allowed to go under---was halted by the formation of a lifeboat operation, where the big banks intermediated a loan from the Banque to the Bourse. A shutdown of the Bourse threatened the means of settlement for the securities market---thus the Banque expanded its implicit FSM mandate to prevent a broader crisis (White, 2011).[10] However, the fallout from the bank insolvencies contributed to the sharp recession of the next several years.

[10] The Bourse was primarily a forward market with twice monthly clearing and settlement periods that created high temporary demands for liquidity.

The next time a large and a more highly connected bank was on the brink of failure, the Banque intervened. In 1889, a run on the Comptoir d'Escompte was feared would lead to a banking panic. At the prompting of the Minister of Finance, the Banque organized a lifeboat operation to rescue the Comptoir. The Banque supported the market by providing additional liquidity based on sound collateral, even as it took over all of the assets of the insolvent Comptoir as collateral for a loan (Hautcoeur, Riva and White, 2014). The depositors of the Comptoir were promised payment in full and an orderly liquidation was allowed to proceed, and shareholders were given a deal to recapitalize the bank, with the directors suffering significant losses. In modern terms, a resolution mechanism was devised to guide the process. When a bank, the Société de Dépôts et Comptes Courants, failed in 1891 it was provided a similar rescue. While there was no other large bank failure before World War I, the Banque had shifted its policy and appeared ready to protect the deposits of "SIFIs", though perhaps not smaller banks. However, there was no change in the supervisory regime for the next forty years. As seen in Beckhart and Willis report in 1929 above, there was no movement to impose new regulations on the banking industry or efforts to set up a supervisory authority to monitor and discipline these banks. When the Governor of the Banque was interviewed for the American National Monetary Commission in 1910, he forcefully told his audience that in crises abundant credit had been and would only be provided for the highest quality collateral, omitting any reference to the lifeboat operations that had been deployed in 1882, 1889 and 1891 (Aldrich, 1910).

Italy

In Italy, the shift to deposit banking occurred much more rapidly than in France. Notes rapidly replaced coins but deposits grew even faster, accounting for approximately 45 percent of the means of payment in 1893, contributing to the instability of the Italian banking system that experienced five major banking crises, coinciding with international crises, 1866, 1873, the early 1890s, the early 1920s and 1931.

In the early 1890s, seeing a danger of contagion from the real estate sector to the financial sector, the government insisted with the banks of issue to act as LOLRs to *both* large construction companies and banks. Concerned about profitability, the largest bank of issue, the Banca Nazionale nel Regno argued that these banks had already stepped in to provide liquidity to the real estate sector that had previously relied on now departing foreign capital and that the extraordinary note issue requested by the government should not be subject to a supplementary tax of two percent instead of the normal one percent. Prime Minister Crispi refused to rescind the tax and therefore the banks of issue did not provide liquidity. This episode reflects the fact that policy makers already viewed banks of issue as having the power to halt financial crises, though they still behaved as private institutions, and the government felt that it could only apply moral suasion to induce the banks to act. Ultimately, the government-mandated merger of three banks of issue into the Banca d'Italia (which also took over the liquidation of a fourth bank of issue) in 1893 tackled these problems; although by 'inheriting' the bad assets of the previous banks, the new central bank was saddled with illiquid assets that it took almost a decade to liquidate.

The Banca d'Italia's first crisis management took place in 1907 with the collapse of the Società Bancaria Italiana (SBI), the country's third largest bank. The Banca organized a rescue of SBI, inducing the two largest commercial banks to share in its liquidation. As in the case of France, a resolution mechanism for insolvent banks was in place before the advent of a formal regulation-supervision system. No contagion ensued and fallout to the real economy was minimal, with the Banca d'Italia providing liquidity and engineering a loan from the Treasury. Throughout the crisis the lira remained within the gold points. This episode parallels the Bank of England's 1890 intervention in the Barings Crisis and the Banque de France's actions in 1889. As in these cases, there was no change in the Italian FSM for ordinary times, although the mandate for extraordinary times had expanded to rescue SIFIs.

The United States

Until the 1860s, banknotes and capital were the primary sources of funding for banks. However in the second half of the century, the share of banknotes plummeted and banks became more leveraged. Deposits had become the dominant source of funding for banks and the bank-generated means of payment. Two factors played key roles. First, while the 10 percent tax on state banknotes imposed in 1865 induced many banks to join the National Banking System, the revision of state banking codes in the 1880s encouraged new banks to take out state charters, funding their operations by issuing deposits (White, 1983, 2013). Secondly, the 1864 Act had imposed various regulations limiting the issue of national banknotes, most importantly tying them to the dwindling supply of U.S. government bonds. Consequently, national banks as well as state-chartered banks turned to deposit creation to grow, expanding the means of payment, outside of the "safety net."

Conditioned by regulation, the evolving American banking had a greater potential for financial instability. The almost universal prohibition on branch banking created thousands of small relatively undiversified single office banks that were very sensitive to local economic shocks. Coupled with reserve requirements that induced country banks to hold deposits in city banks, the need to clear check, collect payments and make investments produced huge interbank deposits liable to be withdrawn in the event of a liquidity shock. "Competition in laxity" between federal and state governments served to further reduce reserve, capital and loan regulations, with some bank engaging in "regulatory arbitrage," switching charters to gain regulatory advantage, with states creating their own supervisory authorities (White, 1983).

These weaknesses appear to have been mitigated by the imposition of double liability on the shareholders of national banks and many state banks, inducing them to more closely monitor management and shut down several unprofitable banks before they became insolvent. Losses to depositors from failed banks were relatively modest. For national banks, they totaled $44 million for the period 1865-1913, a fraction of one percent of a year's GDP (White, 2013). Nevertheless, regulatory choices reflected trade-offs with growth. Grossman (2001, 2007) has documented that states that favored growth over stability were more likely to choose double or triple liability than single liability for the shareholders of state-chartered banks.

To many contemporaries, the most lamentable characteristic of the American banking were its banking crises, more frequent than those experienced by other industrializing nations. In the absence of a central bank, the LOLR was partially filled by the clearing houses in large cities, issuing clearing house loans certificates; ultimately panics could be stopped by a costly suspension of payments by the banks (Friedman and Schwartz, 1963). These crises were primarily liquidity events—generated by a panic-driven search for a safe means of payment rather than widespread insolvencies of financial institutions. The panics of the early 1890s and 1907, appearing ever larger and more costly, were followed by three responses---changes in bank supervision, state deposit insurance schemes, and calls for a central bank. All of these implicitly or explicitly recognized that protecting the means of payment had to include deposits.

At the federal level, the OCC intensified its efforts at supervision. Instead of yearly surprise examinations for each bank, two examinations per year became the norm. These examinations became more thorough and the Comptroller issued new instructions to examiners to challenge boards of directors. At the state level, bank superintendents were appointed in states that had lacked them and examinations increased in number and vigor (Barnett, 1911; Jaremski and Michener, 2014). The focus of these examinations was no longer the relatively limited role initially envisioned to ensure that banknotes were protected but a broader one, more concerned with the general solvency of a bank to protect its depositors.

In spite of its very mixed experience, the antebellum idea of deposit insurance re-emerged; it became a favored remedy of bankers in rural states dominated by small single office banks that found it hard to assure their customers of the safety of their deposits. Between 1886 and 1933, bills were introduced to Congress to establish a system of deposit insurance. Given their narrow constituency at the federal level, these failed (Calomiris and White, 1994). However, at the state level, the Panic of 1907 induced seven states to establish mutual guarantee systems for state-chartered banks (White, 1983, Calomiris 1990). Nevertheless, difficulties with moral hazard and adverse selection plagued these state funds, which wound down over the next two decades. The key innovation was the passage of the Federal Reserve Act in 1913.

Canada

In Canada, the stability provided by the diversified nationwide branching banks helped to prevent any major banking crisis before 1914, even as deposits became an increasingly important component of the means of payment. Nevertheless, there was increased concern because deposits were outside of this safety net, though double liability added some protection. Between 1900 and 1935, eight banks failed with a capital of about C$9 million. Shareholders were assessed and paid C$3.6 million, which was sufficient to cover depositors' claims in all but three banks. In those three banks, depositors lost slightly over $2 million, with losses to other creditors totaling $15 million (Allen, et.al., 1938).[11]

As, in the other cases, Canada's FSM in this era focused on protection of currency. Supervision was conducted through the Canadian Bankers Association rather than an explicit agency as in the U.S. The small number of banks perceived an interest in mutual supervision, much as in the clearing houses in the American cities. While Parliament showed increased concern for depositors, no attempt was made to give them the same guarantee as banknote holders. Depositors had to rely on the market incentives, amplified by the imposition of double liability of shareholders to protect them.

Colombia

The political upheavals in Colombia in the twenty years prior to the First World War hindered economic growth. After the inflationary issues of paper money, a new regime for price stability was legislated in 1907. Yet, although the peso had been tied to gold, a monopoly of note issue was conceded to a single bank, and broad powers given to the banking industry,

[11] By comparison, losses to depositors and other creditors in the larger U.S. national banking system totaled $44 million from 1865 to 1913 (White, 1913).

Colombia did not fully enjoy the prosperity of this period. Banking remained limited, and the questions about how the growth of deposit banking threatened bank stability were not raised. Only with the boom of First World War and Colombia's radical reforms in 1923 did the country begin to rapidly develop a modern banking sector.

5. Central Banks and the Shock of the First World War

The First World War had two effects on the evolution of the FSM. First, to cope with the huge initial shock and financial crises, there were innovative responses. Their success gave a green light to the use of increased discretion to supervisors. The second effect arose from the need to transfer resources from the public to the state. The magnitude of this transfer and the degree to which banks facilitated it entangled state finance and the balance sheets of the banks, intertwining the solvency of the state with that of the banking system. While the leading central banks had previously balanced their public purposes with private profitability, the war emphasized the pre-eminence of the former, shifting them towards completely public institutions.

While military plans were well-developed at the outbreak of the war, relatively little attention had been given to financial contingency plans (Horn 2002). As payments and settlements systems were threatened by banking and stock market panics and the international finance system edged towards collapse, policy makers recognized that financial stability was essential to the war economy. Finance Ministers coopted their central banks to manage the shocks and direct the war economy, entrusting them with new tasks and discretionary authority. Besides an accommodative monetary policy, central banks managed moratoria on payments and exchange rates, underwrote and led consortia for the issue of government bonds, served as government paymasters, and dealt with requisitioned assets.

The United Kingdom

During the Great War, the Bank of England became a close collaborator of the Treasury. The Bank of England briefly tried to manage the crisis at the outbreak of the war by traditional means, raising the discount rate briefly to 10 percent, but the convertibility of banknotes was quickly suspended, as were the Bank Acts that set limits to the outstanding circulation (Horn 2002). The liquidity crisis that hit the London remittance houses threatened to spread to money market, prompting the introduction of a bank holiday from August 3 to 7 (Sayers 1976). According to Brown (1940), the main aim of the moratorium was to safeguard "the strength of Great Britain as a creditor nation (which would have not been) possible without suspending temporarily the basic operations of international finance."

Controls during World War I were relatively minimal and fiscal policy was governed by the "McKenna Rule," where the objective was to raise enough tax revenue to pay for ordinary peacetime expenditures plus interest on war loans. However, bond finance with low interest rates maintained by the Bank of England led to rapid inflation, as the pound was allowed to float (Broadberry and Howlett, 2005). In the 1920s the deflationary policy for the return to gold hit the banks not because they were directly financing the government finance but because they were imperiled but by their credits to industry. The old industries of the First Industrial Revolution—textiles, iron, steel and coal---had expanded during the war and now had excess capacity. The Bank of England intervened, departing from its narrowly defined pre-war role. Sayers (1976) explained this change as "partly to help the cotton industry, partly to keep the question away from politics, but more especially to relieve certain of the banks from a dangerous position."

Resistance to radical downsizing in textiles and shipbuilding took the form of collusion to raise prices, which surprisingly found support among Liberal, Conservative and Labor politicians alike who emphasized the destructive side of competition. Aid did not come directly from the government but the Bank of England and the Bankers Industrial Development Corporation (BIDC) established in 1929, which Hannah (1983) has argued was an attempt to prevent direct government intervention. The BDIC's most prominent venture was the formation of the Lancashire Cotton Corporation in 1929 to reorganize the industry and scrap inefficient mills. The Bank of England also supported the formation of the National Shipbuilders Security Ltd. for similar purposes (Bowden and Higgins, 2004) World War I had pushed the Bank of England to become a guarantor of the financial system and by extension industrial stability. Yet, while the Bank provided credits to support an industrial policy, there was no change in its supervision of financial institutions and its formal FSM.

France

World War I forced the government to use discretionary authority to confront the unexpected crisis at the outset of the war and find the means to fund its extraordinary costs. French wartime finance did not co-opt the banking system, which appears to have insulated them from the postwar shocks that created banking crises in other countries.

Increasing geopolitical uncertainty rattled markets and during the late Spring of 1914, rumors circulated that Société Générale was in a precarious state, leading to substantial withdrawals of deposits (Horn, 2002). In response, the Ministry of Finance issued a communiqué on June 7, reassuring the public about the state of the bank---an innovation in communication. Accommodating liquidity demands, the Banque of France expanded discounts, while quickly raising its discount rate from 3.5 to 6 percent. After Austria's declaration of war on Serbia and fearful of a run on the franc, the Banque suspended convertibility of its notes on July 31 and began to issue small denomination, 5 and 20 francs notes. To halt a banking panic, a partial moratorium of withdrawals from deposit and current accounts was announced on August 2nd, lasting until January 1, 1915.[12] As the threat of a panic was ended, the Banque cut the discount rate to 5 percent on August 20 where it would remain until 1920.

Chastened by the suspension, deposits did not recover and the public shifted to buying short-term government debt. The share of deposits in the means of payment shrank between 1910 and 1920, and coin disappeared. The banks' role in finance declined, as government financing accessed the bond market directly, assisted by the Banque de France, which kept the interest rate on the *bons de la Defense Nationale* pegged at 5 percent. Meanwhile French enterprise heavily relied on self-financing (Feinstein, Temin and Toniolo, p. 21). Banks did not regain their 1914 level of deposits in real terms until 1928 and total loans fell from 33.4 percent of national income in 1913 to 18.6 percent in 1926. As loans shrank, banks increased liquidity, by buying the *bons*; their very short maturities ensured that banks' balance sheets were not imperiled as they might have been if they had been buying long-term bonds in an inflationary

[12] Société Générale asked for line of credit from the Banque of 80 million francs in September 1914 but it was refused then and again in February 1915 on the grounds that it had a weak balance sheet. What is unclear is whether the bank was insolvent and if so, was there forbearance in closing the bank. Some critics believed that the general provision of more liquidity probably saved Société Générale and other weak institutions (Blancheton, 2014).

environment. The banks were thus not tied to government finance and their solvency was not dependent on the government's solvency. Combined with their wartime downsizing, there was no banking crisis immediately after World War I---and hence no need to reconsider the FSM.

After the war, the government's optimistic plans for reconstruction were supported by bond-financed deficit spending, where if the public failed to buy the bonds, there was recourse to the Banque, leading to inflation. Although the Banque de France provided credits to the banks so that they would buy government debt, banks did not over-expand in the perilous early postwar years (Bouvier, 1998). Banks role in reconstruction was also limited by the establishment in 1919 of Crédit National, a semi-public institution that issued bonds to finance long-term investment. Lescure (1995) concludes that the banking sector did not keep pace with the growth of the economy in the postwar inflation year from 1917 to 1926, although the largest banks expanded their branching networks. The end result was that the underlying regulatory and supervisory regime remained unchanged.

Italy

With the outbreak of World War I, novel discretionary power was used by the Italian authorities, and the role of the Banca d'Italia, which had accepted de facto responsibility for financial stability in 1907, expanded. Even though Italy had remained neutral, in August 1914, a run on deposits prompted the Banca d'Italia to act to prevent financial panic. A law providing for a moratorium on the withdrawal of deposits was drafted by the Banca and rushed through Parliament by the government.

At the same time the Banca d'Italia increased the provision of liquidity to the financial system, and acquired, through its branch system, more information about the solvency of individual banks. Yet, there were no legal grounds for the Banca d'Italia to demand that the banks disclose private information. It was gathered informally and by moral suasion, to which smaller banks more readily agreed. Behind the scenes, Prime Minister Salandra wrote Bonaldo Stringher, the Banca d'Italia's general manager, "If information cannot be privately gathered, do not hesitate to use any other means, *even by ordering an inspection* [our italics], which the banks, though private, cannot refuse given the advantages they draw from the present moratorium" (Toniolo 1989: 21). Salandra thus articulated a clear justification for supervision, based on the special advantages extended by the state to the banks that gave the authorities the right to request disclosure of private information and supervise the banks.

The efforts to supply the Italian army were assisted by the Banca d'Italia. When the First National Loan was issued in 1915 and the public failed to take the whole issue, the Banca stepped in to purchase the remainder. Afterwards the Banca continued to support bond prices and offered liberal discounting, enabling banks to extend credits to war industries. The central bank soon became directly involved in industrial finance. In 1914, the Consortium for Industrial Finance was created to lend on easy terms to industry, continuing its assistance in the immediate postwar period. Although it was funded by private capital, it was governed and financed by the Banca d'Italia. In general, the war increased the close collaboration between the government and the bank, which continued in the years after the armistice.

The postwar slump hit Italian industry and its banks hard. The heart of Italy's problem was excess capacity in heavy engineering sectors, such as shipbuilding. Not only did banks provide credits and invest in this industry's securities, they had interlocking shareholdings and directorship with large industrial companies. The crisis erupted when one of the largest conglomerates, Ansaldo, had its parent bank, the Banca di Sconto, commission the construction of ships at a time when demand for tonnage was sharply declining. The government executed a *de facto* take over Ansaldo, while the Banca d'Italia was given the task of liquidating the Banca di Sconto. It was kept on life-support by liquidity provided by the Banca d'Italia, with a guarantee from the newly-formed Mussolini government, until it was merged with another bank (Gigliobianco, Giordano, Toniolo 2009: 54-55, Guarino and Toniolo 1993).

In response to the postwar financial crisis, a new banking act was prepared with the assistance of the Banca d'Italia. Although opposed by many economists and the Association of Limited Liability Companies who claimed that it would increase moral hazard and infringe upon the basic freedoms of individuals and firms, the Bank Act was passed in 1926, giving the Banca d'Italia a monopoly of note issue, sanctioning the *de facto* situation. In addition, there were new rules for the authorization of new banks and new branches by existing banks. The law also prescribed a minimum capital/deposit ratios, credit ceilings to individual clients and disclosure rules. Supervision was handed to the Banca d'Italia rather than to the Ministry of Finance. (Toniolo and Guarino, Gigliobiano, Santonocito 1993).

The short time between the Bank Act of 1926 and the banking crisis of 1931 did not allow the Bank of Italy to gain much experience and set up a supervisory structure. It was, however, able to prevent the mismanagement of a large number of "Catholic banks" from developing into panic. Inspections were carried out, capital requirements were imposed, and mergers were ordered. In spite of this success, the Bank Law of 1926's design reflected the regulatory needs of the pre-1913 banking system and did not take into account the changes in the universal banks portfolios that had taken place during and after the war, leaving them with large industrial holdings (Toniolo1995).

The United States

As in all countries, World War I presented two challenges. The first, at the war's outset was the banking panic and stock market crash. Although the Federal Reserve was not yet operational, the Aldrich-Vreeland Act of 1908 had established a procedure to inject additional currency that mimicked the clearing houses methods of issuing loan certificates but reached a greater number of banks (Friedman and Schwartz, 1963). A stock market collapse, precipitated by Europeans dumping their holdings of American securities, heightened the demand for gold, threatening the dollar. A crisis was averted by the Secretary of the Treasury shutting down the New York Stock Exchange, thus blocking these transactions, until the European demand for war materiel turned the balance of payments in favor of the U.S (Silber, 2008). Thus, both the means of payment and settlement were threatened, with the latter resolved by unprecedented action of discretion by the Treasury that would foreshadow the management of 1930s crisis. The granting of discretionary authority to the president was codified in the 1917 Trading with the Enemy Act.

The second challenge to the stability of the banking system arising out of World War I was the use of the banks as vehicles for the sale and absorption of government war debt. Banks were induced by a public campaign and the availability of credit at the new Federal Reserve banks to lend to their customers to buy war bonds. Although they added U.S. bonds to their portfolios, this indirect method of finance was more important. Fortunately, U.S. involvement in World War I was not as great as the European belligerents and the nation was able to quickly wind down its military operations and produce budget surpluses that ensured that banks' link to government revenue requirements was eliminated. However, many banks in rural areas failed after the collapse of the postwar international commodity boom.

Although the Federal Reserve Act of 1913 gave the Fed the power to provide additional liquidity to the banking system, Fed officials realized that there was a new challenge for the FSM because it was not so simple to draw a line between protecting currency and deposits. In describing the function of examination for the Federal Reserve banks, Burgess (1927) emphasized that its purpose was to "prevent too constant or too large use of borrowing facilities" by a member bank, recognizing a moral hazard problem that had led hundreds of banks to become dependent on discount loans by the mid-1920s. He offered a pointed example: rural banks loaded with doubtful farm paper which brought their good collateral to the discount window. If they failed the good assets would have been discounted at a Federal Reserve Bank, leading depositors with little for their claims. Burgess concluded that "The Reserve Bank must consider not only the safety of its loan, but the interests of the depositors" (Burgess 1927).

This soul-searching indicated an inclination towards discretion-based supervision. During the post-World War I downturn, some regional Reserve Banks, notably Atlanta began to roll over discounts whose repayment might have caused banks to fail. The hope was that by granting extensions, banks would recover their solvency as the economy improved (White, 2014). Other than showing more discretion in examinations, implementing a change in the FSM was another matter. Apart from jawboning, the central bank had no formal policy instruments to reduce the riskiness of a bank. Complicating matters further were the presence of multiple regulatory agencies—the Fed, the OCC and the state superintendents---that engaged in competition in laxity, inducing regulatory arbitrage (White, 1983).

Canada

In the absence of a central bank, Parliament responded to the crisis at the outbreak of the war by passing the Finance Act of 1914 that enabled the Minister of Finance to provide Dominion notes against approved securities to both chartered banks and savings banks and permitted the Government in Council to permit the banks to suspend redemption of Dominion notes in gold and establish a general moratorium (Royal Commission, 1933). These actions augmented the discretionary authority of the government, although they did not immediately alter the FSM that focused on the protection of banknotes.

Modest measures were undertaken to increase oversight; and in 1923, chartered banks were required to provide monthly reports to the Minister of Finance and to conduct annual audits with two approved auditors, selected by a bank's shareholders, plus a special annual report provided to the Minister of Finance and the directors of the banks. Ironically, shortly after this new legislation was passed, the Home Bank failed in 1923, leaving initial losses of $11 million, far exceeding any previous single bank failure. Concerned about this large failure, the Canadian Bankers Association advanced a "dividend" of 25 percent to depositors before liquidation of the Home Bank was complete. While this was an extraordinary action, it basically represented an extension of the Redemption Fund. However, the Government of Quebec used a $15 million off-balance sheet line of credit to assist the merger of the Banque Hochelaga with the Banque Nationale by taking over the former's questionable assets and slowly liquidating them to prevent a failure and a fire sale.

Kryzanowski and Roberts (1993, 1999) have argued that beginning in 1923, there was an implicit guarantee from the Canadian government of all deposits, largely by the Canadian Bankers Association or the government arranging for mergers of failing institutions. In contrast, Carr, Mathewson and Quigly (1995) claim that only solvent banks were merged and depositors still suffered losses in failed banks. While this debate focuses on how to value bank assets during an economic decline and how to interpret stock premia paid in mergers, there was a clear shift in public expectations as reflected in the testimony of a former Minister of Finance to the commission investigating the Home Bank's failure: "Under no circumstances would I have allowed a bank to fail during the period in question…If it had appeared to me that the bank was not able to meet its public obligations, I should have taken steps to have it taken over by some other bank or banks, or failing that, would have given it necessary assistance under the Finance Act, 1914" (quoted in Kryzanowski and Roberts, 1993, p. 366).

The legislative response to the Home Bank, which did not wait for the decennial cycle of Bank Act revision, was the 1924 Bank Act Amendment that created the office of Inspector General, which the Select Standing Committee described as having the aim to "better protect the interests of depositors and prevent similar occurrences in the future." While depositors were given no explicit guarantee, the inspector-general, an officer of the Ministry of Finance, was empowered to carry out yearly examinations and could request the Canadian Bankers Association appoint a curator if the bank appeared to be insolvent.

Colombia

During World War I, Colombia experienced a boom in its exports of coffee and bananas. Hit by a temporary postwar slump, the boom revived in the years 1919-1920, with exports doubling but imports increasing five-fold. The collapse in 1920-1921 caused a fiscal crisis for the government and threatened many banks with failure.

As part of a general plan of economic reform to stabilize the economy and attract foreign capital, The Colombia Congress invited an American mission, headed by Edwin Kemmerer, professor at Princeton University, to visit the country and provide advice on how to reform the banking and monetary system. Conducting missions in several Latin American countries, Kemmerer advised the adoption of an improved system of American regulation and supervision. Eight of Kemmerer's ten recommendations were adopted, with Ley 45 of 1923 creating a single supervisory authority, the Superintendencia Bancaria

In this new regime, entry was in principle free but subject to oversight by the Superintendencia; and branching was permitted. Concerned about leverage, Kemmerer added a capital ratio of 15 percent of liabilities. Banks had to submit five yearly call reports to the Superintendencia and they were subject to twice yearly examinations The superintendent had the authority to levy fines on banks that violated regulations, sue bank directors, and take possession of an insolvent banks, deciding whether it should be rehabilitated or liquidated.

Kemmerer also set up a new central bank the Banco de la República, modelled on the Federal Reserve System but where all banks were members. However, the agricultural elite was disappointed by Kemmerer's mandated limits on long-term lending. To meet their demands, an agricultural mortgage bank, the Banco Agrícola Hipotecario was created in 1924. Half the capital was provided by the central government and half by the public and local and state governments. Subject to the Superintendencia's oversight, this bank offered mortgage loans with maturities of up to 20 years. In 1927, private shareholders were bought out and the bank was nationalized, becoming an instrument for indirectly channeling credit to a special sector.

` Having reformed its fiscal and financial systems, Colombia gained access to world capital markets and experienced an extraordinary boom in the 1920s. Foreign capital flowed in funding public and private ventures, and the banking system rapidly expanded. The reports of the Superintendencia reveal a deep concern about risky loans that soon turned bad and were not written off. By the late 1920s, the independent superintendent found himself in conflict with the Banco de la República, whose swelling gold reserves had led it to expand its discounting to member banks so that they could expand and the Banco Agrario Hipotecario (White, 1998).

Behind these events, there appears to have developed an implicit guarantee for depositors that had not been manifest before 1923. With a central bank and supervisory agency working in close cooperation, failing banks were rescued. With only 13 national and 5 foreign banks in 1929, the loss of even a single bank was perceived as a potential threat to stability. One notable example was the failure in 1924 of the Banco Dugand of Barranquilla. When began losing deposits, the Banco and Superintendencia engineered an assisted takeover by the Banco de Colombia. This approach to closing an insolvent bank in a concentrated industry resembled the late nineteenth century interventions of the Bank of England and the Banque de France and the Banca d'Italia in 1907.

6. The Great Depression and After: Supervision under Financial Repression

By 1930, only two of the three central banks in this study---in the United States and Italy---had been given formal supervisory authority. The Great Depression and the Second World War changed this picture: not only did the other central banks become bank regulators but controls on international capital movements, introduced in the thirties and strengthened in the wartime, resulted in the a "nationalization" of financial markets, enabling the state to intervene more deeply in managing credit flows, resulting in a system characterized by financial repression. Bank regulation was turned into tool for the management of credit flows, interest rates, and international capital mobility.

The United Kingdom

The U.K.'s experience in World War I and the troubled interwar years paved the way for greater intervention during World War II, when the government was anxious to contain inflation and channel credit to war industries and imposed a broad program of controls and rationing that continued after the war (Broadberry and Howlett, 2005). In addition to using controls to limit inflation, the Bank of England became directly involved in industrial finance after World War II. One vehicle was the Financial Corporation for Industry (FCI) and the Commercial Finance Corporation (ICFC) whose objectives were to provide financing to companies that found it difficult to raise external finance, with the Bank subscribing the largest share of their capital and providing advances. (Capie, 2010).

After World War II, the Bank of England was tasked with enforcing the Treasury's interest rate targets and controls on bank loans. Taking office as the Chancellor of the Exchequer in 1950, Hugh Gaitskell explained that the Bank of England should "give [banks] direct instructions about the level of advances, with perhaps some guidance as to the particular borrowers who should be cut," subject to the stipulation "there should be no increase in the rate at which the Government borrows short-term" (quoted in Wood, 2005).

Subordination of the Bank of England to the Treasury was formalized when it was nationalized in 1946. Although the government intended to include details of bank regulation in the nationalization bill this was successfully resisted by the Bank. Instead, of the "iron hand" of the Treasury supervising the banks, the Bank used its "velvet glove," relying on persuasion of the small group of cartelized clearing banks that dominated British finance (Capie, 2010). Consequently, the Bank felt no need to develop a supervisory organization within the bank itself and eschewed economic and statistical analysis. Supervision depended more on the "Governor's eyebrows" than a set of formal rules or principles.

Furthermore, the 1946 Act did not give the Bank a mandate with specific objectives; its tasks were implicitly understood. Basically the Treasury set policy and the Bank conducted the day-to-day operation. Sayers (1958) summed this arrangement as "the fundamental business of a central bank is to control the commercial banks in such a way as to support the monetary policy directed by the state." Capie (2010) describes banking supervision as "distinctly low key---to the point of invisibility. There were no formal mechanisms of control, and neither was there any statutory provision for oversight of the banking system." The 1946 Act allowed the bank with Treasury authorization, to give directions to banks but this power was not used and the bank preferred to discuss problems and issue private warnings. In the Bank of England's 1957 submission to the Radcliffe Committee, it stated that there was "no formal control over other banks and no duty of inspection" (Capie, 2010).

Characterized as "stop-go," British macroeconomic policy in the 1950s and 1960s stimulated growth with budget stimuli and cheap money until an exchange rate crisis forced an abrupt contraction. Key tools were credit controls, such as "hire-purchase" restrictions introduced in 1952 whose terms were set by the Bank of England. By 1968, the Bank's authority may be seen in the complex of set of 10 interest rates and maturities that the clearing banks agreed to for customers (Capie, 2010). These were largely eliminated in 1970 by the Act for Competition and Credit Control (CCC), that aimed at promoting efficiency and competition.

Although there was no statutory obligation, Capie (2010) argues that the Bank took on the responsibility for financial stability after the Second World War. The Bank closely monitored the city, chiefly through the Principal of the Discount Office, but this became increasingly difficult after CCC initiated a deregulation. The first postwar threat to financial stability came from the secondary or "fringe" banking sector, which had grown up in the late 1950s and early 1960s by borrowing on wholesale money markets and lending primarily on real estate . These banks were buoyed by the expansionary policies of 1971-1973 and the CCC's deregulation. When the economy slowed, the fringe banks found themselves facing large losses and withdrawals. Responding to this collapse, the Bank of England provided temporary liquidity with losses were shared out in successive lifeboats. Some banks went into liquidation, while were reorganized. The total cost was estimated to be approximately £1.2 to £1.3 billion, with the Bank of England absorbing 10 percent (Capie, 2010).

However, the informal discretion-based *cum* moral suasion approach to discipline remained; and when there were proposals to bring the licensing and supervision of all deposit-taking institutions under a comprehensive system, the Bank of England resisted. The Banking Act 1979 bowed to the Bank and set up a two-tier structure of supervision for the recognized and fringe institutions with prudential criteria that remained informal. This arrangement was soon collapsed in the wake of the failure of another bank, Johnson Matthey, in 1984 (Capie, 2010).

France

Between October 1929 and September 1937, 670 banks failed, 276 were joint-stock banks and the remainder partnerships. In these troubled years, there were banking crises in 1931 and 1934 when the Banque de France had to provide additional liquidity to the market. Most of the failing institutions were small banks, though there were some important regional banks: the Banque Adam in Boulogne, the Banque d'Alsance-Lorraine, the Banque Renauld in Nancy, and the Banque Carpenay in Grenoble. One large bank, the Banque Nationale de Credit (BNC) failed, but it was apparently the only bank that received assistance from the Banque de France and the government (Lescure, 1995). Although details of this intervention are somewhat obscure, it was provided with sufficient liquidity to survive and then was liquidated and recapitalized as the Banque National pour le Commerce et l'Industrie. Thus, it resembled the rescue of the Comptoir d'Escompte in 1889. The secondary literature indicates that mergers and takeovers were often encouraged to prevent losses to depositors.

The depression in France, a period of sharp deflation, was a systemic shock to the banking system, leading the government to implicitly become its guarantor, signified by the state's takeover of the Banque de France in 1936, effectively nationalizing it. Reflecting the Popular Front's philosophy of "republican corporatism" to ensure that decisions made were representative of the nation's economic and social interests, shareholders' elected members on the governing board were reduced to two in twenty, with the remainder appointed by either various government agencies or professional associations. This approach to control was then fully expanded under the Nazi-dominated Vichy regime (Monnet, 2012).

Formal supervision did not come from the creation of specific government institutions to monitor, examine and discipline banks---an American-style model that had evolved from having multiple banks of issue---but from a corporatist model, arising from the drive to reorganize the banking industry and channel credit flows. Persisting until the last quarter of the twentieth century, the state-directed banking system, allocating funds through financial repression, began under the Vichy regime. Banks came under the supervision of the Comission Bancaire, created by the Banking Act of 1941, to ensure that they complied with the rules imposed by the new regime. To provide the occupying Germans with the means to buy war materiel, occupation payments were imposed on France, paid for by money creation by the Banque de France. Seeking to minimize the inflationary potential of this action, the government imposed wage, price and interest rate controls and tried to absorb the monetary increase by massive bond sales. To support this activity, banks' bond portfolios swelled (Occhino, Oosterlinck and White, 2008).

Postwar French governments did not attempt to return to a market-based financial system but took over and expanded the institutional architecture begun under Vichy. In 1945, the Banque de France was formally nationalized and the Commission de Contrôle des Banques (Commission Bancaire) was reorganized and expanded. Headed by the Governor of the Banque and operating under its aegis, the Commission had four other members, the president of the Financial Section of the Council of State, the head of the Treasury Department, a representative of the Bankers' Association, and a representative of the trade unions. To complete this system, the largest commercial banks were nationalized in 1945.

For the nationalized banks the Comission Bancaire acted with the National Credit Council, in place of shareholders, to set policy for the banks, wielding considerable discretionary authority. Smaller banks were left in private hands but the state had authority over the allocation of and terms of credit. State financial institutions were divided into five groups: the postal savings system, savings banks (caisses d'épargnes), cooperative banks (caisses mutuelles), most of them affiliated with the Caisse Nationale de Crédit Agricole, the banques populaires, and the Banque française du commerce extérieur. These institutions had their collected funds allocated almost exclusively by the state. The French State took the role of intermediary, with a complex web of regulation governing commercial banks, insurance companies, finance companies and brokerages to distribute loans to households and firms.

For the period 1945-1963, fiscal deficits were largely financed through the banking system (Melitz, 1982). Issues of Treasury bonds were modest but state agencies dominated the market and their issues were placed with financial institutions. The Treasury decided the level and structure of interest rates, with the Caisse de Dépôts de Consignations ensuring that the rates stay on target. As rates were kept low in real terms there was excess demand for new issues and a queue for who will obtain funds beginning with the Treasury and ending with private firms.

State finance and banking were so intertwined that the solvency of the state and the financial system were not separate questions. For at least three decades after 1945, the FSM in a broad sense did not exist as it was assumed that capital controls and government direction would guarantee stability. Financial repression in France left no clear lines of delegation of authority over financial institutions and markets. Melitz's 1982 description of the confused authority over monetary policy is equally applicable to the complementary authority for financial stability:

> Exactly who the monetary authorities are is somewhat of a question since there is no tradition of central bank independence in the country, and the ministers of the Economy and Finance…..clearly have a large hand in monetary policy. Yet the weight of the Bank of France and the general power and prestige of the civil service is such that the ministers do not rule monetary policy alone. Monetary power may be said to be essentially divided between the Bank of France, these ministers, and to some extent also, the Treasury and some of the high officials in several of the satellite credit agencies in the sphere of the government.

The persistence of financial repression directing the flow of funds is striking. In 1960, the Treasury-directed financial institutions collected 53.2 percent of funding and offered 45.6 percent of credits Although its funding sources fell to 38.0 percent by 1980, the state's control of credit reached 60.8 percent of all financing. By 1993, it still collected 27.5 percent of funds and directed 48.1 percent of credits (Plihon, 1995). When inflation threatened, credit rationing was reinforced by a program of *encadrement du crédit* that set individual ceilings on the growth of credit for banks. First applied in 1958, it was repealed once inflation fell, then it was reimposed in 1963-1965, 1968-1970, and finally in 1972-1987 (Monnet, 2014), The rigid controls that had developed after 1945 began to slowly decline in response to three factors: the fiscal difficulties of the state, the breakdown of the Bretton Woods System's capital controls, and European economic integration.

Italy

The slump in industrial output that began in 1930 and consequent sharp declines in manufacturing and utility companies' stock prices damaged the portfolios of the three largest banks, leaving them illiquid and perhaps insolvent. When foreign deposits withdrawals accelerated in 1931, swift and secret lending by the Banca d'Italia with the backing of the government avoided a crisis like those of Germany and Austria, where universal bank-dominated financial structures were similar to that of Italy. The government took de facto control of the major banks and overhauled Italy's banking system. Bailed-out banks were then supplied liquidity deemed sufficient to operate as "ordinary" commercial banks (i.e limited to short term borrowing and lending), and they were forbidden to hold equities of in non-financial companies. The banks' industrial interests were taken over by the state, which created special ad hoc vehicles that led to the establishment in 1933 of the Istituto per la Ricostruzione Industriale (IRI), a state holding company that operated until the early 1990s.

As a result of the 1931 bailout, the three main banks fell under the indirect control of the state, while the fourth largest bank (the Banca Nazionale del Lavoro) was directly controlled by the government as were all long-term credit institutions. Government influence was exerted on savings banks, whose boards were appointed by local authorities and heads by the central government, which also owned the Cassa Depositi e Prestiti that received vast inflows of postal savings to invest in public works and state bonds. Only a handful of small private banks and the tightly regulated local cooperative banks were not under the central government's influence.

Firmly in control, the fascist government revised the regulatory and supervisory system in the Bank Act of 1936, which, amended in 1947, remained the defining bank law until 1993. By minutely regulating and repressing the financial sector the law sought to obtain financial stability. It ensured a strict separation between long and short-term credit and between investment and credit institutions. Treasury was given broad regulatory and supervisory powers over the financial system, which, in turn, delegated supervision to the Banca d'Italia. The Bank Act of 1936 set up an Inspectorate for the Safeguarding of Savings and for Credit Activity, reporting to a committee of ministers, headed by the Prime Minister. This inspectorate was given regulatory and supervisory authority over the banking system. Given explicit tasks to prevent crises and allocation credit, the Inspectorate was headed by the Governor of the Banca d'Italia and it never operated separately from central bank. (Guarino, Toniolo, Gigliobianco and Santonocito, 1993).

United States

During the Great Depression and its aftermath, the FSM changed dramatically in the United States, primarily because the banking panics of 1930, early 1931, late 1931 and most importantly 1933 eliminated the belief of most legislators and much of the public that the banking system was inherently stable and the means of payment could be protected by a combination of guarantees for currency and market incentives for deposits. The panics drove a vast shrinkage of deposits that was only halted on March 5, 1933 by the President's declaration of a bank holiday. What followed was the implicit assumption of responsibility for the solvency of all reopened banks by the government. Instead of guaranteeing a well-defined financial instrument—all currency—the government guaranteed the banks.

This shift was accomplished by the means the government chose to reopen the banks. On March 9, 1933, Congress passed the Emergency Banking Act of 1933, giving the Treasury, the Fed and the OCC extraordinary discretionary authority to reopen or close banks. Silber (2009) commented that this act, four days after the declaration of a bank holiday "combined with the Federal Reserve's commitment to supply unlimited amounts of currency to reopened banks, created de facto 100 percent deposit insurance." In a prelude to legislation that would follow later, the act gave the president the power to regulate all banking functions and transactions in foreign exchange, enabled the OCC to take control of any bank with impaired assets and appoint a conservator, let the Secretary of the Treasury provide capital to any bank via the Reconstruction Finance Corporation or make direct loans, and the Fed the power to issue emergency currency not backed by gold. Supervision was expanded and with vast discretion delegated to the regulators.

A sequential opening of banks began, with teams of examiners and auditors visiting closed banks (Friedman and Schwartz, 1963). Those that were judged to be clearly solvent were immediately re-opened, those whose position was unclear required further examination and those determined to be insolvent were liquidated. In essence, this was first "stress test" conducted by the government through all the supervisory agencies. Although we do not know, how the examiners carried out this operation, they probably erred on the side of caution and only opened banks considered clearly solvent. These actions appear to have sufficed to give the public an implicit guarantee for their deposits, and leading to the re-depositing of much of the currency that had fled the banks.

The New Deal in the Banking Acts of 1933 and 1935, as well as numerous policy changes instituted by bank supervisors, ended an era of competition. Entry was now subject to regulatory discretion, and branching barriers reaffirmed; protecting existing banks. Regulation Q banned interest on demand deposits and put ceilings on savings and time deposits rates. Commercial banks' range of products was limited, most notably by the Glass-Steagall Act that split commercial and investment banking. Senator Carter Glass, a true believer in the real bills doctrine and head of the Senate banking committee, insisted that separation of commercial and investment banking be included in the 1933 law and obtained it in exchange for establishing the Federal Deposit Insurance Corporation (FDIC) that Representative Henry Steagall, chairman of the House Banking and Currency Committee, had demanded at the behest of small bank lobby (Calomiris and White, 1994).

Deposit insurance was initially conceived of as protecting only small accounts, but was slowly expanded to cover most deposits in commercial banks over the next three decades, thanks to lobbying within the banking industry (White, 1997). What had been offered as a mutual guarantee system, paid for by bank premia; gradually came to look like universal deposit insurance, with an implicit government guarantee. This shift enlarged the FSM, making the regulatory agencies and ultimately the taxpayer guarantors of bank deposits. It appeared to be a costless shift to the public, as the bank failures ceased. Yet, this development was deceptive because the massive banking collapse of the early 1930s had eliminated all weak institutions. Furthermore, the scramble for liquidity during the banking panics had led banks to replace loans with cash and bonds. The 1930s collapse of the capital markets and wartime efforts led regulators to encourage banks to make more long-term loans, increasing the maturity mismatch.

To meet the broadened FSM, the practice of bank supervision was transformed. Before the collapse, bank examiners followed a general rules-based approach, where they priced a bank's marketable assets at market prices, and promptly closed banks that they deemed to be insolvent. The deflation and volatility of assets prices placed would have led to even larger bank closures if these practices were followed. Instead, market discipline was abandoned and supervisory discretion replaced mark-to-market rules (White, 2013). Assets were valued at what they would fetch in normal times, not the current crisis; forbearance to close a currently insolvent institution became a supervisory option. These actions were further justified in the name of protecting bank depositors---acknowledging the expansion of the FSM. The establishment of the FDIC created a third federal supervisory agency. With its explicit mandate to insure banks, the FDIC sought to restrain banks from taking risks that would draw on its guarantee fund.

During World War II, bank credit was diverted to purchase government bonds, and their portfolios were transformed, with bonds' share of total assets exceeding the share for loans (White, 1992). During the war, the Federal Reserve kept yields under a very low ceiling to ensure a cheap source of funds for the government, but this meant that after the war, interest rates would have to rise when wartime controls were lift. Considering the size of banks' U.S. bond holdings, the losses could have been considerable, threatening bank solvency. Only in 1951, were interest rates permitted to rise after the negotiation of the Treasury-Fed Accord.

By the 1960s, the FSM had been transformed---in the mind of the public and of Congress—from protecting a narrowly defined means of payment to the prevention of bank failures. This change can be seen in the oversight of the federal agencies by Congress. Very few banks had failed during the 1950s and this became the expected norm. In 1964, when a tiny Texas bank with \$3.7 million in assets failed, the Comptroller of the Currency was summoned to Congress for questioning. When two more banks failed in 1965, the House Banking and Currency Committee discussed whether the OCC ought to be dissolved, with the task of supervising all federal insured banks being transferred to the Secretary of the Treasury (White, 1992). The FSM mandate had been expanded, with inflated expectations for supervision, and the measurement of supervisory agencies' success became "zero tolerance" for bank failures, which was facilitated by financial repression.

Canada

Even though Canada suffered a monetary contraction approximately equal to that in the United States in the 1930s (Bordo, 1986), economists south of the border (Friedman and Schwartz, 1963; Bernanke, 1983) have argued that the absence of large bank failures and banking panics in Canada during was due to the strength of the large diversified Canadian banks. However, some research indicates that the solvency of the Canadian banking system was compromised but government intervention prevented a U.S.-style disaster. Kryzanowski and Roberts (1993) find that for the period 1929-1940, nine of the ten Canadian banks had several insolvent years.[13] None of these banks were closed, indicating forbearance. Notably, in October 1931, Orders-in-Council mandated that banks value securities at their book value or market value as of August 31, in spite of GAAP accounting rules. If there was not implicit deposit insurance in the 1920s, it was certainly adopted early in the Great Depression.

The 1933 Royal Commission began the overhaul of the banking system. In an Addendum to the 1933 Royal Commission's Report, Sir Thomas White recognized deposits as a "medium of exchange," attributing their fluctuation to decisions of banks to make loans and "confidence or lack of confidence, in the financial stability of the nation." Created in 1935, the Bank of Canada (Bordo and Redish,1987) began to accumulate supervisory authority and became ultimately the sole bank of issue. The Bank obtained some of the Minister of Finance's supervisory authority, gaining the power to require inspections of chartered banks first upon demand, then on a regular basis in 1936. In addition, the Bank received the monthly reports that were sent to the Minister who took over the power to appoint a curator for suspended banks from the Canadian Bankers Association.

[13] For the debate on this issue, see Carr, Mathewson, and Quigley (1995) and Kryzonowski and Roberts (1999).

Buying government debt, the Bank of Canada played an important role in financing Canada's war effort during World War II. After the war, the Bank of Canada was conscripted to channel the flow of credit. An Act of Parliament in 1944 established a subsidiary, the Industrial Development Bank (IDB) to stimulate investment in Canadian businesses, with the Governor of the Bank as its CEO. Its early mission was to assist small industrial enterprises to convert from military production to peace-time operations. Its role was expanded in 1952 to offer financing and advice to companies in the commercial airlines industry and eventually all industries across Canada. In 1975, the IDB was renamed the Federal Business Development Bank, and began to provide venture capital.

By the 1960s, the Bank of Canada was not viewed as an independent institution by the government. After conflict with the prime minister over lowering interest rates, the Governor of the Bank resigned, leading to a Royal Commission on Banking and Finance. Its report recommended reduced the financial repression and greater regulation of the near-banks that had been competing with the commercial banks. Although no commercial banks failed, there were numerous failures of trust, mortgage and savings companies with losses to their customers. Thus, when the Bank Act of 1967 created the Canada Deposit Insurance Corporation (CDIC), it covered banks and these new institutions. Originally, insurance was limited to $20,000 per account; this was raised to $60,000 in 1983 and then $100,000 for each eligible deposit account to per depositor in 2005. The FSM was thus expanded to include financial institutions that had slipped around the regulations that constrained commercial banks and cover most deposits.

Colombia

The collapse of export prices and the termination of foreign lending drove the Colombian economy into a deep recession in 1929. To remain on the gold standard, the Banco de la República kept interest rates high but did not restrict access to its lending facility. By providing massive liquidity to the banks, the central bank prevented a banking collapse and the contraction of financial intermediation was orderly, although like Canada, numerous branches were closed. The support of the government and the central bank gave the public assurance that their deposits were protected.

Following Britain, Colombia abandoned the gold standard in 1931, permitting the central bank to cut interest rates and increase credits to the government. While the resulting reflation eased conditions somewhat, banks found their shrunken portfolios filled with mortgages whose payments were in arrears or in default. Although the exact condition of the banking industry has not been accurately assessed, the Superintendencia may have exercise forbearance to prevent the closure of troubled banks. To ease the condition of debtors, new legislation in 1932 allowed them to repay their loans in cash or depreciated bonds. To offset the losses to the banks, the government promised to buy up to 25 percent of the bonds that banks received, writing off the rest of the bad loans.

Although the banking system had been cleansed of bad loans, it was weakened. When the economy began to recover, the banks were unwilling to expand credit, leading to intense criticism from the public and the government. The attempt by Kemmerer to keep banks limited to lending on “real bills” and the shock of the depression ensured that banks shied away from longer term credits. The Superintendencia that had been a bastion of the liberal regime shifted to promote direct intervention in the financial system.

Cut off from credit and buffeted by the fall in coffee prices, the coffee growers induced the government to create the Caja de Crédito Agrario in 1931, with the government providing a quarter of the capital for it, to provide loans up to two years. Supervised by the Superintendencia, it drew most of its capital from the federal government. In 1932, its operations were expanded to include five year industrial loans, and it was rechristened the Caja de Crédito Agrario, Industrial y Minero. The reports of the Superintendencia praised this new bank for expanded credit faster than all the other banks combined. The Superintendencia that had been a bastion of the liberal regime shifted to promote direct intervention in the financial system. In 1932, a new mortgage bank, the Banco Central Hipotecario was founded on a similar model; in 1939 the Institute de Crédito Territorial was organized to make loans for low cost housing for the poor; and to promote industrial development, the Institute de Fomento Industrial was created in 1940. To provide more resources to these quasi-governmental banks, a postal savings system was established in 1937.

The increasing role of the government to redirect credit gained a further boost in World War II when the demand for Colombia's exports produced a new boom, threatening another round of inflation. To soak up savings, the government issued national defense bonds, requiring forced subscriptions. Viewing the market as unable to allocate resources, the superintendent outlined a policy with three goals: (1) credit was to be democratized with a banking office established in each town, (2) the government would direct loans, and (3) interest rates would be controlled, with the lowest rates for the sectors that the government gave top priority. Given the influx of wartime dollars, leading to a monetary expansion the commercial banks also expanded under the government's aegis, focusing on import-substituting industrialization.

In the new post-World War II environment, Colombia's financial institutions were reshaped to foster the government's vision of growth. Although it took until 1973 for the Banco de la República to be nationalized, the Treasury began to dominate the bank beginning in 1931 when the Treasury Minister Ministro de la Hacienda y Crédito Público was madbecame member of the governing board. With its resources bolstered by its acquisition of the Stabilization Fund, the central bank began to grant development credits in the 1950s. Financing from the central bank and other banks supported import-substituting industrialization backed by tariffs and a system of licensing imports. Commercial banks were drafted into this system by laws focusing their investment.

Supervision was largely focused on increasingly complex regulations to channel credit and bank failures were administered to ensure flows of funds were not endangered. When the large Banco Popular, a bank mandated to have 55 percent of its loans in small industry, failed the Treasury decided to bail it out and recapitalize it, guaranteeing its deposits. To provide funding for the huge loss all government ministries were forced to reduce their spending for the year by 7 percent. However, when two small commercial banks failed in 1966 and 1967, they were not accorded the same consideration. They were liquidated, and although the depositors were paid in full, they had a long wait to receive payment.

7. Deregulation and the Globalization of Banking

Beginning in 1959, when European currencies became convertible for current account transactions, there was a steady growth of the Eurodollar market that contributed to the relaxation of controls on international capital and ultimately, to the re-internationalization of financial markets. After the collapse of Bretton Woods, floating exchange rates, inflation, and international capital flows helped to undermine national systems of financial repression resulting in market-driven financial systems (Padoa-Schioppa amd Saccomanni 1994). Mastering macroeconomic management in this new environment enhanced central banks' visibility and respect, yielding them greater independence from national treasuries. (Borio and Toniolo, 2008).

The United Kingdom

The deregulatory impulse, beginning with the 1970 act moved the U.K. in the direction of a market-driven financial system. Nevertheless, British financial institutions continued to lag behind foreign competitors and London appeared to have lost its place as a center of world finance. In a major reform, the "Big Bang" of 1986, abolished fixed commissions and the distinctions between stock jobbers and stock brokers, and moved the London Stock Exchange to electronic, screen-based trading. Dismantling its system of financial repression, London experienced spectacular growth as a minimally regulated financial center.

Beyond the Bank of England's largely informal oversight, supervision was conducted largely by self-regulating industry groups overseen by the Financial Intermediaries, Managers and Brokers Regulatory Association (FIMBRA) which was recognized as a self-regulatory organization. Yet, the government retained oversight by the creation of an independent governmental supervisory authority in 1985, the Securities and Investments Board, to which the Chancellor of the Exchequer delegated some statutory regulatory powers. However, a series of scandals in the 1990s and the collapse of Barings Bank in 1995 ended the self-regulatory approach, terminating recognition of FIMBRA; and the Securities and Investments Board expanded its operations. Its name was changed to the Financial Services Authority (FSA) in 1997, gaining additional powers under the Financial Services and Markets Act of 2000. It operated with considerable autonomy, drawing its funding from fees and fines and governed by a management that was selected by the Treasury. The scope of the FSA was broad, covering most aspects of universal banking. It was charged with maintaining confidence in the financial system, promoting financial stability, consumer protection and a reduction in financial crime. It followed a principles-based rather than a rules-based regulation.

Failing to anticipate the spectacular collapse of Northern Rock in 2008, the FSA was pilloried for its weak enforcement and abolished in 2012. In its place, the Prudential Regulation Authority was set up within the Bank of England, taking responsibility for financial stability and supervision of banks, building societies, credit unions, insurers and investment companies. The remaining financial services, including asset managers and financial advisors were placed under the supervision of the Financial Conduct Authority, outside of the Bank of England.

France

Beginning in the 1960s, the French state began to reduce its role as financial intermediary and regulator, increasing the independence of state enterprises and banks, while trying to balance its budget. Reforms gave banks and other institutions more control over their interest rates and balance sheets, yet the state retained wide-ranging powers of regulation and continued to direct substantial flows of credit.

Financial problems arising from the oil price shock of 1974 caused the state to take increased control of the banking sector. In an effort to revive the French economy and stabilize exchange rates in the late 1970s, the government devised a system of bank loan subsidies to spur investment and exports. To manage inflation, the *encadrement du crédit* was reintroduced in 1972, strengthening the government's authority to ration credit and protect bank financing (Bertrand et.al., 2007). Melitz (1982) commented, "In fact, the commercial banks are so secure in the current arrangements that they do not hold any capital market assets at all for their protection."[14]

Integration into the European Union posed a challenge for the repressed French financial system. With the formation of the European Monetary System (EMS) in 1979, the slow growing French economy created a problem for the franc that was supposed to remain within a tight band set by the EMS. When the franc weakened in early 1981, the government raised the intervention rate above 20 percent but kept bond rates lower. Interest rates on term deposits jumped and banks then saw profits collapse in a funding squeeze (Melitz, 1982). The election of a Socialist government in 1981 led to the nationalization of all domestic commercial banks with deposits above one billion francs in 1982. Nationalization spelled the temporary end to liberalization and a continuation of the *encadrement du credit*. The new Socialist government began an expansionary policy, strengthened by capital controls. Pressure was now put on the banking sector to support weak or failing industries, with new loan schemes to preserve jobs and firms. Interest rates ceased to allocate capital and the banks began to accumulate nonperforming loans. The failure of this effort led to a major policy reversal. The *encadrement du credit* was abolished and subsidized loans were phased out. Monetary policy switched to conventional central bank methods of setting legal reserve requirements and interest rates. Capital controls were fully eliminated by 1991. Between 1986 and 1990 10 percent of the banks with 20 percent of deposits were privatized. A second wave of privatizations, de-nationalizing the major banks and state enterprises, occurred in 1993. These reforms finally shifted the French financial sector towards a market based system, reducing the role of the Treasury's network. The Act of 1941 was finally repealed in 1984, and the Commission Bancaire was reorganized as an administrative body in the Banque de France to examine, monitor and sanction banks with the Banque providing staff and resources (Banque de France, December 2004).

Although the emerging privatized French banks gained control over their balance sheets, they remained subject to political influence, notably Crédit Lyonnais suffering huge losses beginning in 1991. The bank was bailed out in 1994 with the injection of new capital and the removal of bad loans from its balance sheet to a bad bank, where losses were absorbed by the Treasury (The Economist, April 7, 1994). Crédit Lyonnais was fully privatized in 1999, but problems with assets in the good bank resurfaced in 2001. In 2003, it was bought by Crédit Agricole, which reorganized the bank.

The approach of monetary union and the formation of the European Central Bank (ECB) began to transform the Banque de France and the system of regulation and supervision. Legislation in 1993 reformed its statutes, giving the Banque de France policy independence. In 1999, the Banque became a part of the European System of Central Banks, Eurosystème whereby it implemented the monetary policy decisions adopted by the ECB's Board of Governors. Regulation and supervision remained in French hands, with increased authority over a broad range of institutions granted in 1999. The Comité de Réglementation Bancaire et Financière was charged with the general regulation for all credit institutions, while the

[14] Melitz (1982) noted that official regulations do not permit banks to hold any open position in foreign currencies.

Commission Bancaire handled supervision. Although some limited protection for depositors had existed before, through the Association Française des Banques, a formal government institution for deposit insurance arrived with the advent of monetary union.

In the wake of the financial crisis of 2008, the French Prudential Supervisory Authority (Autorité de Contrôle Prudentiel (ACP) was organized in 2010 as an independent administrative authority under the auspices of the Banque de France, merging the Banking Commission, the Mutual Insurance Supervisory Authority (ACAM) and the Credit Institutions and Investment Firms Committee (CECEI). The ACP is not a legal entity and its President is the Governor of the Banque de France; however it has financial independence, receiving funds from contributions of regulated institutions. It cannot issue regulations but it has the power to monitor and issue sanctions. Supervision of financial markets remains separate under the Autorité des Marchés Financiers.

Italy

After World War II, the Bank Act of 1936 was modestly revised in 1947. The Inspectorate was suppressed and all its supervisory powers given directly to the Bank of Italy. No major changes were introduced as far as regulation and supervision were concerned. There were no substantial changes in the regulatory and supervisory architecture until the early 1990s. What did change were the priorities and objectives of the regulator, the Bank of Italy, reflecting changes in government policy and the international environment. For the nearly fifty years after the Bank Act of 1946, the elaborate post-war credit-policy tools offered an institutional and administrative framework to implement the government's industrial policies via credit allocation (Hogdman 1973, Forsyth 1997).

The underlying the rationale for these "industrial policies" was that the market had failed to efficiently allocate resources over the long run. It was more or less explicitly assumed that governments possessed more reliable information about the longer term growth prospects. In France, such policy was conducted within the framework of a formal economic plan (Monnet 2012). In Italy the main tool used to direct credit for reconstruction, industrialization, or the reduction of geographic income disparities was the so called *credito agevolato* (subsidized sub-prime credit) whereby banks were directed to provide credit below market rates to a number of "strategic" recipients. The state would then pay credit institutions the difference between market and subsidized interest rates. An inter-ministerial committee was in charge of deciding credit allocation priorities. To facilitate this allocation after the passage of the Bank Act of 1947, there was a "fast-growing secondary legislation, mainly rules set by the Bank of Italy. The vast panoply of instruments at the Bank of Italy's disposal included: authorization of loans; authorization to issue bonds; caps on interest rates; reserve requirements; rules on the composition of the banks' bond portfolios. Moral suasion was also largely used" (Barbiellini, Gigliobianco, Giordano 2913). At the same time, the central bank made sure that the banks, most of which remained under the direct or indirect control of the state, maintained a prudent stance in credit creation, thereby promoting the stability of the system. The Bank of Italy, therefore, had to walk a tight rope between guarding its independence as prudential regulator and facilitating the implementation of the government's credit policy directives (Cotula, 2000).

This dual mandate was facilitated by the Bretton Woods international monetary regime, which imposed controls on short term capital movements, insulating Italian and other continental banks (Hodgman 1973) from external shocks. By the 1980s, the postwar Italian regulatory and supervisory regime began to lose its underpinnings, as the Bank of Italy gained more independence in monetary policymaking, and looser controls on capital movements progressively undermined government-led credit allocation. Increased competition in the financial sector also arose from the integration of market in the emerging European Union: regulatory changes were introduced to abide by European directives and the so-called Basel soft laws.

The Italian banking system, sometimes defined as "petrified forest", was increasingly unable to serve the credit needs of an ever more market-oriented economy. Legislative recognition of this untenable position was finally recognized in a major legislative overhaul 1993 that took into account the new rules under the European Union and rapid globalization of financial markets. The Bank Act of 1993 set in motion a process of privatization and mergers for both state-owned banks and savings institutions that picked up speed during the decade.

The United States

Erosion of the New Deal's Banking regime was slow, giving the appearance of a durable financial stability. By protecting the established financial intermediaries from competition by entry, line of business, merger and branching, and placing a ceiling on interest rates. As inflation rose beginning in the late 1960s and peaking at the end of the 1970s, it wreaked havoc on the New Deal regime. Attempting to protect the regulated institutions and channel flows of credit, particularly to the housing industry, Congress first strengthened regulations and then unevenly deregulated. The result was a complete collapse of the Savings and Loan industry and a partial collapse of the banking industry in the late 1970s and early 1980s. (White, 2000). While banks, savings and loans, failed in large number depositors were protected by the FDIC. However, the FSM was significantly widened in 1984 with the failure of Continental Illinois of Chicago, the sixth largest bank in the U.S.—which was deemed "too big to fail." Having purchased massive oil loans from an Oklahoma bank that also failed, Continental was exposed as much of its funding was not FDIC-insured---and a run began. The Federal Reserve, the FDIC, and the OCC stepped in to quell the run, with the FDIC purchasing the bank's problem loans, and assuming its debts, with all creditors given protection This new FSM doctrine was used to bail out failing banks in Texas and the Northeast in the latter half of the 1980s

The elimination of many high risk banks and the tightening of regulatory standards virtually eliminated all bank failures by the mid-1990s. At the same time, the collapse of the financial intermediaries provoked a dismantling of much of the New Deal regulatory regime. To ensure that banking services did not vanish in the wake of numerous failures, state and the federal government eased the long-standing rules on branching, culminating in the granting in 1997 of full nationwide branching. The barriers to universal banking also fell; and in 1999 the Gramm-Leach Bliley Act permitted holding companies to combine commercial banking, investment banking and insurance.

Although capital requirements had been raised in 1981, a major change in how federal supervisors approached the implementation was made in 1991 with the passage of the Federal Deposit Insurance Corporation Improvement Act. Before this act, supervisors had followed the precedent set during the Great Depression and exercised considerable discretion in the examination of banks and during the last three decades considerable forbearance in deciding whether to close a bank or keep it in operation in the hopes that it would recover. The experience of the banking debacle of the 1980s led Congress to shift to a rules-based policy with the 1991 Act. A clear set of rules was created specifying exact remedies that were to be undertaken when certain capital ratios fell below certain levels, leaving supervisors with much less discretion in the hope that a repeat of the large losses of the 1980s could be avoided.

By the turn of the century, the absence of bank failures gave the impression that the new regulatory and supervisory strictures, coupled with the formation of larger more diversified banks, had done their job. What was unexpected by most observers was how the change in the supervisory regime would contribute to the next crisis in 2008. Given a rules-based system that, by necessity, depended on accounting definitions, banks would conform and supervisors would be able to demonstrate that it worked. When a bank was found to be deficient in some capital measure, it was forced to meet the rules. Formal compliance was met, but banks conducted a growing off-balance sheet business, beyond the rules of 1991, embodying higher risks and higher returns to enterprising management. Furthermore, the old problems of "competition in laxity" among the multiplicity of federal and state regulators allowed some bankers they pursue "regulatory arbitrage" and find the weakest set of regulatory constraints. Finally, there had been no change deposit insurance or the doctrine of too-big-to-fail that encouraged moral hazard.

Canada

Given the system of financial repression, new competition for Canadian banks sprung up on the fringe with the trust and mortgage companies. These fast-growing intermediaries were outside of the supervisory safety net. Although two of these institutions, the Commonwealth Trust Company and the Security Trust Company had failed in 1970 and 1972, there was no change in the supervisory regime. However, as Canada gradually open up to international markets and deregulated its repressed financial system, the sharp recessions of the early 1980s caused 22 trust and mortgage companies to fail between 1980 and 1987.

In response, the Estey Commission conducted an enquiry into these failures, highlighting the need to ensure a sound approach to handling the risks associated with the financial marketplace. In 1987, acting on the commission's recommendations, Parliament passed the Financial Institutions and Deposit Insurance Amendment Act and the Office of the Superintendent of Financial Institutions Act. This legislation created a deposit insurance fund and joined the Department of Insurance and the Office of the Inspector General of Banks to form the Office of the Superintendent of Financial Institutions (OSFI), which was given the powers to supervise and regulate all federally regulated financial institutions, providing a more comprehensive approach to supervision. Yet, a new wave of trust and mortgage company failures occurred in the early 1990s, prompting a new act, the 1996 Bill C-15, which clarified OSFI's prime responsibilities to minimize losses to depositors and shareholders, and to contribute to public confidence in the Canadian financial system. While the OSFI was not given a mandate specifically to prevent failures; it was directed to promote sound business practices to reduce the risk that financial institutions will fail. The mandate stressed the importance of early intervention to achieve OSFI's objectives.

Colombia

The boom years for Colombia ended with the shutdown of international capital markets in the wake of the Mexican debt crisis of 1982. Economic conditions led to a sharp deterioration in the portfolios of most financial intermediaries that had rapidly expanded during the 1970s.

The problem, as in other countries, was that rising inflation was frustrating the government's efforts to direct credit, even as it devised new schemes to channel credit, notably the National Development Plan of 1971. The regulation of interest rates was now the key instrument in development strategy, but the complicated interest rate structure could not guarantee that resources would be allocated to meet targeted goals. New financial intermediaries appeared to compete with those closely controlled by the government. To bring these institutions under government oversight, the Superintendencia Bancaria expanded its operations but strained under the increasingly complex government regulations and limited resources.

A crisis erupted in 1982 when a number of financial institutions tied to the Grupo Colombia, appeared on the brink of collapse. When depositors began to flee, the Superintendencia took control of the bank. When faced with the insolvency of the Banco del Estado, the government decreed a state of economic emergency on October 8, 1982 and authorized the government to nationalize failing financial institutions, replacing their management and adding to their capital with credits from the Banco de la República. Over the next three years, these powers were increased to handle the massive bad loans in bank portfolios.

In 1985, a deposit insurance fund, the Fondo de Garantías de Instituciones Financieras, was created. Although all banks had to subscribe to the fund, it was supplied with resources from a new windfall in coffee revenues. Instead of closing banks, the Fondo nationalized them by buying their assets for one centavo and replace their capital. As the banks slowly recovered under government control, the government dismantled the system of financial repression in favor of a liberalized banking system. The Ley 45 of 1990 gave banks a wide range of powers, along the lines of universal banking. The banking sector was opened to foreign competition with Venezuelan banks purchasing many nationalized banks, followed by American, Spanish, Dutch, and German banks. Colombia banks responded with a wave of mergers. At the same time the Superintendencia revised its operations, bringing its approach to supervision more in line with the international norms (White, 1998).

8. The Internationalization of Bank Regulation

After 1971, central bank cooperation in macroeconomic and monetary issues lost the role it played in upholding the stability of the Bretton Woods system and followed *ad hoc*, divergent, paths at regional level beginning in the 1970s. At the same time, after two decades of financial stability, bank failures and financial crises reappeared, bringing regulation and supervision back to the fore of the central banks' agenda: the focus of central bank cooperation shifted from monetary to financial stability, as capital mobility increased the risk of international contagion of banking crises. This new problem highlighted the inherent tension between the need to find a common international ground on prudential regulation, to avoid a race to the bottom in regulatory competition and the fact that legislation remained in the hands of national states. Over the years, tentative solutions consisted in attempts at to develop a system of internationally accepted "soft laws" to be "suggested" for adoption by individual states. Central banks became the main players in this process due to their expertise in a field that most politicians found esoteric and due to the strong links that had been developed among governors over the previous decades (Borio and Toniolo 2008).

The Basel Committee on Bank Supervision (BCSC)

From the late 1950s onward a market emerged in Europe for short-term deposits and credits denominated in a currency different from that of the country in which the deposit-taking and credit-giving bank was located (Schenk 1998; Battilossi, 2000 and Toniolo, 2005). Since most deposits were denominated in dollars, the term Eurodollars was created. At first central bankers took a benign neglect attitude with respect to the Eurodollar market. In a 1967 meeting of central bank experts, it was declared that "its undesirable side effects could be readily checked by ad hoc measures given the sophistication reached by central bank policies both in the field of domestic cooperation and in domestic matters" (quoted in Toniolo 2005, p. 461). By the end of the 1960s, however, the Euro-currency market had reached such proportions that central banks began to intervene in order to control its effects on domestic monetary aggregates.

In 1973-74, however, two events began to focus the attention of central banks on the unintended effects of capital market liberalization on financial stability. The first was the oil crisis of 1973, which raised the question about "the ability of the international banking system to recycle the flow of funds from oil producers (creditors) to oil importers (debtors). The second was the collapse of Bankhaus Herstatt in June 1974" (Goodhart 2011, p. 11). The two events raised the issues of the international banking system's efficiency and stability at a time when it was required to perform new crucial functions.

After several decades of relative financial autarky, central bankers and market participants alike faced the difficult process of learning how to operate in a liberalized and more competitive environment and how to price risk. According to Goodhart (2011, p. 32 ff) the Herstatt crisis acted as a catalyst for revising risk assessment. *The Economist* (3 August 1974) even wondered about a "World banking crisis?" and worried about increasing risk premia particularly for smaller banks and banks from weaker countries. These events led central bankers' to formally establish the Group de Contact as the Basel Committee for Bank Supervision (BCBS) (Goodhart, 2011).

The creation of the BCBS, which first met in Basel in February 1975, was a landmark episode in the history of bank regulation, making it a key item in the agenda of central bank cooperation. The BCBS included the G-10 governors and Switzerland, with Luxembourg holding a special seat. Membership included officials from the bank supervisory agencies if they were not part of the central bank. The Committee met for two days three or four times a year at the Bank for International Settlement in Basel, which provided support, and the first three BCSB chief secretaries, came from the BIS staff (Goodhart 2011, p. 60).

The members of the BCBS regarded themselves as advisors to the central bank governors who had the responsibility of lobbying their domestic constituencies in order to obtain supporting legislation passed by national parliaments. In practice, however, each delegate came to the negotiating table aware of the interests involved and the possible room for maneuver in his or her country. As described by Kapstein (2008), international cooperation within the BCBS can be seen as "two-level game" diplomacy *à la* Putnam (1988) where negotiators must strike deals not only with each other but also with their domestic policy makers, which in their turn must keep into account the relevant interests involved. Given the large number of countries involved, some of them with more than one regulatory agency, the domestic interests concerned, and each country's idiosyncratic law-making process, one may wonder how the BCSC came to any cooperative result at all, let alone to the significant ones reached over two decades, up to the Basel II agreement. Two factors are likely to have contributed to this result. The first is that not all the international players were of equal importance. The banking systems of the United States, and the United Kingdom were larger and more global; and when these two countries acted in concert, they could exercise a leadership role to manage the international part of the two-level game. The second factor for the success of the BSCS is to be found in the highly technical nature of the discussion and the familiarity of the committee members both with each other and with the matters at hand. Over time, BSCS members got to know each other well, both personally and in terms of their domestic concerns, making it easier to reach common resolutions. Even so, given the enormous macroeconomic, political and institutional challenges to cooperation, the results achieved in the 1970s and 1980s "took many observers by surprise" (Kapstein 2008, p. 126)

From the Concordat to Basel I

At its first meeting in February 1975, the BCBS selected four topics for future study and consideration: (i) the relation between banks and foreign exchange brokers, (ii) the responsibility for supervision of banks' overseas branches, subsidiaries and joint ventures, (iii) the support and rescue operations, and (iv) the definition of capital and its role (Goodhart 2011, p. 96-7). In the following years, the issue of cross border supervision and balance sheet consolidation, came to the fore, leading to the so-called Concordat, the first milestone in regulatory cooperation.

In the late 1970s the BCBS worked on improving the rules for the supervision of cross-border banks. These rules were eventually merged into a single code under the name of Concordat. According to Goodhart (2011, p. 102), "the (Concordat) title first surfaces in the archives of the BCBS in late 1979…it was coined …to indicate a set of understandings between sovereign parties, but without being based on a common legal authority or being legally binding". This framework would later be known as "soft law".

The crisis of Banco Ambrosiano in 1982 and so-called "Bank of Credit and Commerce International (BCCI) affair" in 1991 led to discussions within the BSBC about the need to revise of the Concordat. The two cases had quite a few similarities, the first and foremost being the existence of a non-bank holding company, registered in Luxembourg, controlling international affiliates in several countries. In the event, the BSBC circulated a questionnaire to the supervisory authorities, leading in May 1992 to the issue of a paper on *Minimum standards for the supervision of international banking groups and their cross-border establishments* (Goodhart 2010) sent to supervisory agencies in a number of non-BCBS member countries. On the basis of this experience, the Concordat was eventually revised. Goodhart (2011, p. 113) summarized this experience. "The continuing exercise of the Concordat showed the work of the BCSC to best advantage. The basic principles involved, that every banking establishment should be supervised and that parental (home) should do so on the basis of consolidated accounts, were largely uncontroversial and incontrovertible. What was needed was attention to detail, patient negotiation, and advocacy at high level. The BCBS had these qualities"

If two relatively minor bank failures led to the definition of principles for the supervision of international banks, the first "systemic crisis" of the postwar re-focused the attention of regulators on "the international financial architecture". The crisis came to a head in August 1982 when Mexico declared it was unable to service its debt, mostly owned to North American banks. Contagion affected most Latin American countries and threatened the very survival of some large US intermediaries. When the Mexican debt crisis erupted, the BCBS had already been discussing measures and criteria for capital adequacy, but convergence among members was stalling (Goodhart 2010:154). The pace of decision-making was accelerated by the crisis. When

US president Reagan asked the Congress for additional IMF funding to provide liquidity to distressed Latin American economies, thereby indirectly supporting US banks, some of which were close to bankruptcy, Congress asked for capital ratios to be raised unilaterally. The banking community voiced its fears that such measures would put the industry at competitive disadvantage vis-à-vis foreign banks. To maintain level international playing field, Paul Volker flew to Basel in 1984 on a mission to revive negotiations about capital adequacy. Reaching an agreement, however, proved to be difficult as both measures and standards of capital adequacy reflected the peculiarities of each country's financial systems, and accounting practices (Kapstein 2008: 131). For another three years it seemed that agreement would be impossible to make. The standstill was broken in 1987 when the United States and the United Kingdom announced a bilateral agreement on bank capital adequacy, threatening lesser players with being marginalized. In December 1987, the BCBS announced an agreement on a proposal for international convergence of capital measures and standards, which came to be known as the Basel Accord (later nicknamed Basel I).

Basel II

The Basel Accord was received with scathing criticism. Most commentators charged that the "Accord's approach to risk management was too crude and hardly reflected best practices" already adopted by the leading money centers (Kapstein 2008:132). Critics from the private sector argued that it would lead to a credit crunch, a charge repeated thereafter against every measures aimed at increasing banks' capital. A number of scholars argued that, contrary to its stated objectives, the Basel Accord and its subsequent revisions would have a pro-cyclical impact, increasing systemic risks, as intermediaries would move along the risk/return line in order to compensate for higher capital requirements (Friedman and Kraus 2011). Even though other scholars held the opposite opinion (Aghion and Kharroubu, 2013), there were urgent callas for revision.

By the early 1990s, controls on capital movement, steadily reduced in the 1980s, had almost entirely disappeared in the developed market economies and global credit expansion followed. Both Western intermediaries and regulators felt increasingly confident about their risk management techniques. Soon, however, the second Mexican crisis (1995) and the ensuing contagion focused attention on the global risks posed by the banking systems of emerging markets. In response, the BCBS drafted an agreement in 1997 called *Core Principles for Effective Banking Supervision*. The *Core Principles* "were designed as a model for banking supervision regardless of the specifics of individual banking systems" (Borio and Toniolo 2008). In subsequent years, they were adopted by a large number of supervisors worldwide. The Asian crisis provided a new stimulus to review and strengthen the Basel principles and their dissemination. The result was the June 2004, the BCBS agreement on *International Convergence of Capital Measurement and Capital Standards. A Revised Framework*, better known in short as Basel II (BCBS 2004). It is based on three pillars: (i) Minimum capital requirements, (ii) Supervisory review process, (iii) Market Discipline, it was designed to rein in bank risks in both advanced and emerging economies.

The European Banking Union

At the time of finalizing this survey, a European Banking Union (EBU) transferring regulatory and supervisory authority from member states to the European Union was in the process of formation. As in most of the cases discussed in this chapter, it was a financial crisis that exposed the need for changes in the existing national banking regimes and created the political conditions for their implementation[15]. When the financial crisis that started in 2008 turned into a sovereign debt crisis in 2010, it revealed a link between the stability of each member country's banking system and the market's assessment of their government's default probability. This situation has led to a partial "re-nationalization" of the national banking systems within the Eurozone, with banks of one country unwilling to lend to those of another, undermining the financial foundations of the EU's single market. Many observers attached a high probability to the end of the euro. The crisis also "exposed some weaknesses of the Central Bank position (which) surprised many observers with its large purchase of the debt of distressed governments" (Eichengreen et al. 2011, p.48). Soon, it was realized that emergency measures were no substitute for structural reforms to correct the weaknesses of the original design of the European Monetary Union.

To complete the EU's economic and monetary union, the European Council initiated a European banking union (EBU) in June 2012. Next in October 2012, the Council decided to create a Single Supervisory Mechanism, with federal supervisory authority entrusted to the European Central Bank (Barucci and Messori 2014). The Banking Union also included a Single Recovery and Resolution Mechanism and the Single Deposit Guarantee Scheme. Because of the complexity of the issues and the cumbersome EU decision-making process, details are still being hammered out in 2014-2015; but the creation of a banking union has proceeded relatively swiftly, reflecting the perception that the crisis threatened the survival of the monetary union.

The transfer and allocation of supervisory authority to the ECB has focused on three issues: (1) the division of responsibilities between the ECB and the national supervisory bodies, (2) the possible conflict of interest within the ECB between its monetary and regulatory tasks, and (3) the problem that arises from the EU Treaties that make the ECB's decisions binding on members of the monetary union but not countries outside of the monetary union, even though all EU states participate in the single market.

For supervision, a formula has been devised that allocates 130 of the largest banks to the ECB, leaving the smaller ones to national authorities. In addition, the ECB has been granted discretionary authority to request oversight of any additional bank. Erection of a federalized system of bank supervision, poses potential problems for the EU, as evidenced in our narrative by the historical experience of the US and to a lesser degree Canada, where competition in laxity between regulators and regulatory arbitrage has weakened the effectiveness of regulation and supervision (Nieto and White, 2013). Whether the added discretionary authority of the ECB and other features can overcome the dangers inherent when there are plural supervisors will only be adequately tested by the next crisis.

The debate on the pros and cons of conferring supervisory powers on a central bank resurfaced in the creation of the EBU, although the ECB's Statute had already granted it the

[15] The role of the crisis in shaping the new rules was officially acknowledged: "Since the crisis started in 2008, the European Commission has worked hard to learn all the lessons from the crisis and create a safer and sounder financial sector (…) so that future taxpayers will not foot the bill when banks make mistakes" (European Commission 2014)

power to “perform specific tasks concerning policies relating to prudential supervision of credit institutions.”[16] Those in favor of allocating supervisory authority to a central bank believe that it is essential for a central bank’s LOLR function to have the fullest possible access to financial intermediaries’ private information that is gathered by supervision. Those in favor of separating supervision from the monetary authority are concerned that a combination creates a conflict of interest where supervision may be compromised in the interests of monetary policy or visa versa (Zingales, 2009; Bini Smaghi, 2014).[17] Recognizing this potential problem, the Supervisory Board was made largely but not entirely independent of the ECB’s Governing Council, its policy making body. Again it is too early to say whether this arrangement will mitigate of the conflict of interest when monetary and supervisory authorities are combined.

The problem arising from the presence of monetary union member and non-member countries within the EU was addressed by making membership in the EBU compulsory for nations using the euro. Membership remains voluntary for countries in the EU but outside of the monetary union. However, the Banking Union’s effectiveness may be seriously undermined as the UK, home to the largest financial center and a number of systemically important intermediaries, will almost certainly not join the EBU.

In December 2013, EU finance ministers “laid out a blueprint for a new agency backed by a 55 billion-euro industry-financed resolution fund,” (Blumberg 2014) that would hand most decisions on resolution to a board of a board of EU authorities and national representatives. However, by the end of 2014, a final decision has not yet been taken on the details of the Single Resolution Mechanism (the central authority for resolving failing intermediaries). The thorny issue of a bail-in of ailing financial institutions---how losses should be borne by shareholders, bond holders, and possibly depositors, rather than taxpayers has not been resolved. Bail-in provisions represent, in part, a return to solutions of previous banking regimes, notably double or extended shareholder liability, for the resolution of bank failures. While the post-crisis political climate favors large bail-in provisions, this approach may not be the most effective way of fighting a systemic crisis, as was evidenced in the 1930s.

Unsurprisingly, the creation of a EBU is proving a complex technical, legal and political undertaking reflecting not only the magnitude of the institutional overhaul for the European Union but also the need to devise solutions for many of the same problems that institution builders struggled with in previous eras.

Conclusion

The histories of supervision in our six countries highlight patterns that are likely to be common in other European and New World countries. We observe the following evolution of supervision. Before World War I, the FSM was understood to protect the convertibility of banknotes into coin, anchored by a gold or bimetallic standard, requiring clearly delineated rules governing the issue of currency. The underlying assumption was that currency stability would also guarantee financial stability. Countries that restricted and later monopolized the issue of bank notes conducted supervision directly, with parliaments setting the rules and monitoring of issuing banks conducted by the executive branch of government and/or parliament. In countries,

[16] Art. 22.2 of the ECB Statute

[17] Ioannidou (2005) provides empirical evidence of how the Federal Reserve’s supervision of banks was compromised in comparison with the FDIC and the OCC.

typically in the New World, where there was a competitive note issue, two outcomes were observed. In Canada where large branching banks were encouraged and a concentrated banking industry developed, supervision could be managed by cooperation among the small number of banks, with modest direct government oversight and no central bank. In the United States, where regulation spawned a fragmented system of unit banks, independent agencies were delegated the task of supervision, complicated by a federal political system that created multiple agencies. Although Colombia began with competitive banks of issue, the need of the state to control seigniorage in a highly unstable political environment led it move to the European model.

By the end of the nineteenth century, all countries had defined their FSM; but the strict rules governing bank note issue contributed to the growth of deposit banking, leaving a key component of the means of payment potentially unstable. This problem was further complicated by mergers, branching, and financial diversification that created "systemically important banks"---SIFIs---in Europe and Canada whose insolvency could threaten the broader banking and financial system. These issues were first addressed by the execution of the FSM in extraordinary times by expanding the LOLR function as defined by Bagehot to include the rescue of insolvent SIFIs in Europe before 1913 and Canada afterwards. These countries were grappling with a perennial dilemma: how to maintain a competitive market-driven banking system and prevent large failures from disrupting the payments and settlements system without engendering moral hazard. However, in ordinary times, there were only modest or minimal changes in supervision, as there was resistance to an expansion of the FSM.

The enhanced role of governments in the economy during World War I brought central banks and governments into closer cooperation, with the former subordinated to the latter. The Great Depression and World War II forced the financial system to accept the government's direction of financial flows and the government to accept the need to prop up the financial system when subjected to large systemic shocks. Laws introducing stringent anti-competitive regulatory and supervisory regimes were introduced in every country, together with administrative controls on capital movements. The end result of the new regulatory regimes was financial repression in all countries and an extension of the FSM to the protection of established banks and other financial institutions from failure. Supervision shifted from rules-based to discretion-based systems that accommodated financial repression. Under such a broad FSM, banking systems enjoyed systemic stability.

Beginning in the 1970s, the end to international capital controls and the slow and partial dismantling of national systems of financial repression led to a growing series of bank failures, arising primarily from new financial institutions competing in the unregulated "fringe" of banking. Deregulation driven by increasing international competition in banking, demands to finance growth and a growing consensus on the market's intrinsic stability, created incentives to take risk by the established banks and their competitors in the 1980s. The failure of discretion-based supervision, in some countries, and more widespread forbearance, led to the adoption of a more rules-based supervision again with new or expanded agencies inside and outside of central banks. The globalization of finance, with the diffusion of cross-country banking, exposed the inconsistency of home-based regulation and supervision and the dangers of a regulatory race to the bottom. The Basel Accords represented an attempt at international coordination of the domestic drives to ramp up regulation and supervision of market-based banking by promoting "soft laws" aimed producing a level field regulatory environment.

The problems we face after the Crisis of 2008 are, in general terms, no different than the problems faced at the beginning of the twentieth century. In extraordinary times, liquidity must be provided during a crisis and an orderly process established for liquidating (resolving) failed SIFIs without bailing them out; while in ordinary times, the FSM and the institutions that receive the mandate must be credibly defined to protect the means of payment and settlement and ensure they grow and evolve to support the economy's financing needs. Now as in the past, the transition from extraordinary to ordinary circumstances is a complex process requiring discretion.

From the long-run perspective of our selected six countries, we saw that problems arose when supervision was bent to serve allocative policies. We also observed that supervision can support regulation but it cannot fix a flawed structure that requires reform to keep pace with financial innovation of the payments and settlement system. Financial innovation regularly advances ahead of regulatory updating, limiting the effectiveness of an exclusively rules-based supervision system to monitor financial institutions. Nevertheless, there is an important balance to be achieved, as excessive reliance on supervisory discretion often leads to inappropriate forbearance. Independent supervisory agencies were created for competitive financial systems where transparent rules-based supervision was established. However, when competition was limited by market developments or efforts of the state to channel the flow of funds, supervision was given to the central bank, with less transparency and more discretion being exercised. Our case studies reveal that most supervisory regimes successfully managed financial systems in ordinary times, sometimes preventing a troubled institution from generating a systemic crisis, but were less capable of dealing with extraordinary macro-systemic shocks, which they were not designed to confront. When macro-systemic shocks overwhelmed supervisors' capacity to meet the FSM, the shocks led to regulatory/supervisory regime shifts that primarily addressed past deficiencies, rather than focusing on reforms to ensure the stability of a continually innovating financial system.

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