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ABSTRACT

The Emergence of Central Banks and Banking Regulation in Comparative Perspective

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Banking is among the most heavily regulated industries in the world. On the national, and increasingly international, level the rules governing all aspects of bank behavior have proliferated. These include entry restrictions, capital requirements, reserve requirements, auditing and reporting requirements, and restrictions on the types of assets banks are allowed to hold. Although bank regulation is ubiquitous, there is no consensus view on which institution—or combination of institutions--should be responsible for banking supervision; at present, bank supervision is typically undertaken by central banks, government ministries (e.g., finance, economics), independent commissions, or by a combination of two or more of these.

The current policy debate over the identity of the appropriate banking regulator has focused on two issues. First, should all financial sector (banking, securities markets, and insurance) supervision be concentrated in the hands of a single regulator? In 1986 Norway became the first country to establish such a unified system; since then, more than a dozen countries have adopted the single regulator approach. Second, to what extent should the central bank take the lead role in banking regulation? Rather than try to develop a policy position on the issue of the identity of the supervisor, this paper attempts to explain what factors have historically accounted for the choice of regulator.

I find that younger central banks were more likely to be called upon to become banking supervisors than their older counterparts. I also find that, among central banks that were entrusted with banking supervision, younger central banks were typically given this task sooner than older central banks. These results may reflect the fact that younger central banks were more flexible and were perhaps better able to adapt to the dual role of monetary policy maker and banking supervisor than older central banks. I speculate that countries in which banking supervision is not conducted by the central bank are more likely to adopt a unified financial regulator.

1. Introduction

Banking is among the most heavily regulated industries in the world.[1] On the national, and increasingly an international, level the rules governing all aspects of bank behavior have proliferated. These include entry restrictions, capital requirements, reserve requirements, auditing and reporting requirements, and restrictions on the types of assets banks are allowed to hold. Although bank regulation is ubiquitous, there is no consensus view on which institution—or combination of institutions--should be responsible for banking supervision. At present, bank supervision is typically undertaken by central banks, government ministries (e.g., finance, economics), sub-national jurisdictions, independent commissions, or by a combination of two or more of these. The goal of this paper is to determine what factors historically have accounted for the choice of regulator.

Determining the reasons for assignment of regulatory authority is important for both historical and policy reasons. First, the forces that lead to the selection of one institution over another as regulator may also be responsible for determining other features of national regulatory systems: hence, the exercise will help us better understand the evolution of bank regulation in general. Second, if certain institutions are better suited to carrying out the supervisory function, the factors that explain the choice of supervisor may also help to explain the record of soundness and stability of a financial system, and therefore may have implications for national differences in long-run economic growth. Finally, the fact that a number of countries have instituted far-reaching changes in financial regulation during the past two decades suggests that the appropriate regulator is still very much a matter of debate. Hence, the current paper may

[1] Möschel (1991).

both help explain policymakers' past choices and may indicate the direction of future policy.

Briefly, I find that younger central banks were more likely to be called upon to become banking supervisors than their older counterparts. I also find that, among central banks that were entrusted with banking supervision, younger central banks were typically given this task sooner than older central banks. These results may reflect the fact that younger central banks were more flexible and were perhaps better able to adapt to the dual role of monetary policy maker and banking supervisor than older central banks.

The remainder of this chapter is outlined as follows. The next section discusses theories of banking regulation. The subsequent section considers the advantages and disadvantages of unified financial supervisory authority and of making the central bank responsible for banking regulation. Section four discusses the emergence of central banks and central banking practices, along with the evolution banking regulation. Section five presents and analyzes data on the choice of regulator. Conclusions follow.

2. Banking regulation

Commercial banks have long been subject to government regulation and supervision. The earliest commercial banks were established by government charters which frequently specified in detail the conditions under which these institutions could conduct business, including the scope of supervision by state authorities. The earliest comprehensive national banking codes were adopted by Britain (1844) and Sweden (1846); Canada, Finland, Japan, Portugal, and the United States established banking codes in the second half of the nineteenth century; other advanced economies established banking codes in the first half of the twentieth.

Although the form and specifics of banking *regulations* have long been a popular topic for debate among journalists, policy makers, and legal and economic scholars, until recently there has been very little discussion—academic or otherwise—about the identity of the preferred *regulator*. Discussion of this issue has been spurred by moves by several countries to establish unified financial supervisory authorities with powers to oversee the insurance and securities, as well as banking, industries. Norway was the first to enact the unified regulatory model in 1986; Denmark (1988), Sweden (1991), and the UK (1997) followed, and a number of other countries have recently either adopted that framework or are considering doing so. Table 1 illustrates the relatively sharp increase in the number of countries with unified financial sector supervisors during the period 1999-2003.

Two central questions have emerged from this discussion over the identity of the supervisor. First, should financial system regulation be consolidated into one regulatory agency? Second, to what extent should the central bank take the lead in bank supervision? (Llewellyn 2003)

As noted above, the trend in recent years has been towards unified supervision. In a survey by Barth, Capiro, and Levine (2001) of 118 countries, approximately two thirds place some or all authority for banking supervision in the hands of the central bank. Among the advanced industrialized countries of the OECD, the proportion of countries in which central banks take the lead in banking regulation is much less—on the order of one third.

What factors should motivate legislators in choosing a regulator? The remainder of this section will discuss the motivation for regulation in general; the next section will discuss the potential advantages and disadvantages of moving to a unified financial regulator and of placing the central bank at the head of such a regulatory apparatus.

Why should firms, either bank or non-banking firms, be regulated? The impetus to regulate has a variety of sources, which can be separated into: (1) traditional, purely economic motives, and (2) political-economic motives. Purely economic reasoning has long guided economists in their study of regulation and has led to the conclusion that, in the presence of market imperfections such as monopolies or imperfect information, government regulation can result in superior (i.e., more efficient) outcomes.[2] Thus, regulation is merely a response by the authorities to an imperfect world. In the case of banking, purely economic motives for regulation center on promoting stability and efficiency. Because of banks' unique role in money creation, in the form of transactions deposits (banknotes, in earlier times), bank regulation may also be motivated by the government's desire to exert monetary control.

An alternative literature focuses on the political-economic motives for regulation. This literature concentrates on the incentives faced by, and political power of, different political and economic actors, and views the evolution of regulation as the outcome of the interplay between different interest groups.[3] Groups with greater numbers, financial resources, and cohesion will successfully support regulations that are favorable to them and will have the advantage in competition between different interest groups. This literature also considers politicians and regulators as interest groups that may be

[2] Scherer (1980).
[3] Stigler (1971), Peltzman (1976), Becker (1983). Kroszner (1999) focuses specifically on banking and financial regulation.

motivated by the desire for such non-economic goals as larger budgets, staff, and authority, or to advance a particular ideological agenda.

Although the reasons for regulation described above are distinct, in practice it is difficult to disentangle multiple motivations for a particular reform. For example, the National Banking Acts in the United States (1863-64), which established a new type of bank (national bank), a new regulatory authority (the Comptroller of the Currency), and a bond-backed bank-issued currency (national bank notes), could have been passed on any of the grounds cited above. Since the National Banking Acts established uniform and relatively strict guidelines for granting bank charters, they could be viewed as stability enhancing. Since the law also required publication of bank balance sheets, it could be viewed as ameliorating an information asymmetry and therefore be viewed as an efficiency-enhancing reform. Alternatively, since the Acts both established a new national currency and drove notes issued by state banks out of circulation, it could be viewed as enhancing the government's monetary control. Finally, since banks chartered under the act were required to secure banknote issues with holdings of government bonds, the law could be viewed as serving the political-economic motive of providing a guaranteed source of demand for federal government bonds during the fiscally demanding Civil War.

The difficulty of disentangling the motives for major legislation is not unique to the US National Banking Acts, but could be equally applied to many banking reforms, including, Belgium's Banking Decree of 1935, Japan's National Banking Decree of 1872, Sweden's Banking Code of 1846, and the UK's Joint Stock Bank Act of 1844.

Nonetheless, despite the difficulties in ascribing specific motivations to individual pieces of banking legislation, some patterns do emerge. For example, it is clear that countries in which the central bank was granted a monopoly on note issue relatively early waited much longer to enact banking codes; countries in which the note-issue was in the hands of private banks tended to enact banking codes much sooner, suggesting a monetary control motive for such banking codes.[4]

3. Arguments for and against unified regulation and a leading role for the central bank

What are the desirable attributes of a system for bank regulation? According to the Basel Committee on Banking Supervision's (1997, 13) Core Principles for Effective Banking Supervision:

> An effective system of banking supervision will have clear responsibilities and objectives for each agency involved in the supervision of banking organisations. Each such agency should possess adequate resources. A suitable legal framework for banking supervision is also necessary, including provision relating to authorisation of banking organisation and their ongoing supervision; powers to address compliance with laws as well as safety and soundness concerns; and legal protections for supervisors. Arrangements for sharing information between supervisors and protecting the confidentiality of such information should be in place.

Given these objectives, what are the advantages and disadvantages of a system of unified financial regulation?

One advantage of a unified financial regulator might be greater efficiency of supervision if the skills required to oversee different parts of the financial system are similar, and might command greater resources than separate agencies.[5] Another advantage is that a single regulator may be better able to supervise large, complex

[4] Grossman (2001).

[5] See Briault (1999), Abrams and Taylor (2000), de Luna Martinez (2003), and Llewellyn (2003) for a summary of arguments in favor and against a unified financial regulator.

financial conglomerates that span more than one area (banking, securities, insurance) of operation than separate regulators. Given that cross-sector mergers have been common in recent years, this motivation has taken on additional weight.[6] A further advantage, given regulatory competition, a unified financial regulator would prevent firms from "forum shopping," that is, seeking the most lenient of all possible regulators, and would eliminate the need for coordination and information-sharing among different regulators, since a single regulator would have authority for overall supervision. Additionally, it would prevent unhealthy competition between regulators, who might be tempted to be more lenient in order to attract more firms into its regulatory orbit. Finally, a unified regulator would be solely and fully accountable for any and all failures of supervision.

A disadvantage of a unified financial regulator is that each component of the financial sector may require different expertise; hence, forcing all supervisory personnel to come from the same agency might lead to a reduction in regulatory efficiency. Opponents to unified financial regulation might also argue against the presence of scale economies and, in fact, would argue that the establishment of a unified regulatory authority concentrates too much power in the hands of one agency. Finally, a disadvantage of unified financial regulation may be that such a regulator would suffer from a lack of clear objectives. Specifically, a unified regulator might pressure stronger elements of the institutions it supervises to come to the aide of weaker members (i.e., banks to insurance companies or vice versa), whether or not that was a desirable end from a public policy perspective.

What are the advantages and disadvantages of having the central bank at the head of the supervisory system?

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[6] Group of Ten (2001).

Goodhart, Schoenmaker, and Dasgupta (2002) find that central banks tend to hire more economists and fewer lawyers than non-central bank supervisors. They argue that, to the extent that banking instability results from macroeconomic causes, the skill-set of central bankers may be better able to prevent crises. Central banks are also typically well-funded and relatively prestigious institutions, and hence may well be suited to a powerful role in banking supervision as well as macroeconomic policy, due to their ability to attract and retain highly qualified staff. One could also argue that there are synergies between macroeconomic policy-making and banking supervision: Peek, Rosengren, and Tootell (2001) argue that the detailed bank-level information gathered by financial regulators could provide central banks an advantage in making monetary policy; additionally, one could argue that the goals of macroeconomic and financial stability are reinforcing.

Of course, the flip side to the synergies-based argument is that the combination of macroeconomic policy-making and banking supervision may lead to a conflict of interest between a central bank's objectives. For example, potential trouble in the banking sector may cause the central bank to conduct a more expansive monetary policy to aid banks than it would otherwise undertake. Goodhart and Schoenmaker (1995), for example, find that during the 1980-91 and 1980-87 periods, countries in which banking supervision was undertaken by the central bank had higher rates of inflation than those in which monetary policy and bank supervision were conducted by separate institutions.[7] Yet another potential downside is the fact that an institution that combines monetary policy and

[7] They also point out that monetary policy should, in theory, be counter-cyclical, while the consequences of banking regulation tend to be pro-cyclical (i.e., capital requirements become more biding when the economy slows), again suggesting a conflict in objectives.

banking supervision could become too powerful; this argument has even greater force if all financial regulation is combined into the central bank.

4. The emergence of central banks

Prior to the last quarter of the nineteenth century, there was no accepted concept of a central bank. Although the modern notion of a central bank can be traced as far back as Baring (1797 [1993]) and Thornton (1802 [1939]), it was only with the publication of Bagehot (1873 [1924]) that the concept gained widespread acceptance. In most cases central banks, or the institutions that would evolve into central banks, were merely the first government-chartered banking institutions in the country.[8] For example, the central banks of Sweden (1668), England (1694), Finland (1811), Norway (1816), Austria (1816), and Denmark (1818) were the first chartered banks of any sort in these countries.[9]

Frequently, these banks were chartered with a public purpose in mind: clearing up monetary disarray (e.g., Denmark, Norway), raising funds for the government (e.g., England), or facilitating trade by extending banking services (e.g., Sweden, the Netherlands). And the new institutions frequently acted as the government's fiscal agent. Despite these public purposes, sometimes combined with provisions granting the government the right to appoint some of the management team, the first central banks

[8] This was not universal, however. The establishment of a system of commercial banks in predated the establishment of the Bank of Japan by a decade. Australia and Canada did not establish central banks until about a century after the foundation of their first commercial joint stock banks.

[9] In some cases, they remained the only bank for a considerable period of time, quite possibly because the demand for banking services was s low. Following the charter of the Riksbank (1668) in Sweden, no other bank was chartered for more than 150 years; in Finland and Denmark, additional chartered banks were not established for several decades after the founding of the central banks. Following the estabslihment of the Bank of England, no other joint stock bank was chartered for 132 years, although this delay was due to legislation that specifically forbade the establishment of joint stock banks.

were typically private profit-maximizing institutions, albeit private institutions with special privileges and/or responsibilities.

A key motivation in the founding of many central banks was to clear up monetary disarray. The Bank of Finland, for example, was founded shortly after the country was annexed to Russia in order to alleviate the problems caused by the side-by-side circulation of several currencies (including Russian and Swedish). The Austrian National Bank was established following several decades that had been characterized by an over-issue of government currency. And the establishment of central banks in Norway (1816) and Denmark (1818) followed a period of monetary confusion, particularly the Statsbankerot (state bankruptcy) in Denmark. Later in the nineteenth century, following unification, the German Reichsbank (1876) and the Banca d'Italia (1893) were positioned to consolidate several preexisting note-issuing institutions.

In addition to any role central banks may have been given in sorting out monetary confusion, they frequently were created to provide government finance. The classic case of this is the Bank of England, which was granted a charter in return for a loan of ₤1.2 million. Napoleon's creation of the Bank of France in 1800 was intended to both provide war finance, in addition to establishing monetary order following the collapse of the Revolution's inflationary assignat regime. Selling points of both the First (1791-1811) and Second (1816-36) Banks of the United States included enhancing the government's ability to raise funds, as well as promoting credit creation and monetary stability.

Other central banks' primary obligation was to provide credit to the economy and to act as a stimulus to commerce. The Netherlands Bank, for example, was created during a period of slack economic activity. In part, it was established to replace the Wisselbanken of Amsterdam and other cities, which had provided credit to merchants and had begun to decline in the 1790s. The National Bank of Belgium was similarly founded to contribute to domestic commerce following revolutions and monetary disturbances of 1848, as well as to issue notes and handle public moneys.

The functions that we associate today with those of a central bank were largely absent during the early years of most central banks. Although, as noted above, a number of the early central banks were founded in order to clear up monetary disarray, only a minority were, in fact, given a monopoly of domestic note-issue at the time of their founding.[10] The development of the central bank as a banker's bank and keeper of the reserves of the banking system was also a later development. And central banks did not adopt the role of lender of last resort until well after their founding.

The role of banking supervisor was assuredly not in the minds of the founders of the various national banks. First of all, these banks were often the first chartered commercial bank of any sort established in a country, frequently, the first for many years. It is therefore extremely unlikely that the founders would have been foresighted enough to envision a situation in which there would be a banking "system" to regulate and supervise. Any pre-existing private banks, typically partnerships which operated without explicit government sanction or charter, would have been well outside the purview of any regulators. Second, as noted above, these central banks were private, profit-maximizing institutions. Hence, it is unlikely that governments would have put them in charge of

[10] Austria, Belgium, Denmark, and Norway's central banks were given monopolies on note-issue at or near the time of their founding. By contrast, the central banks of France and the Netherlands (50 years), Finland (75 years), England (150 years), and Sweden (230 years) were not granted note-issuing monopolies until some time later.

supervising their competitors. It is to the evolution of central bankers into regulators that we now turn.

5. Central bankers as regulators

How did central banks, ostensibly private, profit-maximizing institutions, evolve into the public institutions we know today? Although the story of this evolution is too long and varied to be sufficiently dealt with here, three factors can be briefly mentioned.

Among the first tasks that central banks undertook was the discounting of financial instruments, primarily bills of exchange. As domestic and international commerce grew, banks and other financial houses became more involved in issuing and discounting bills of exchange, and central banks became convenient re-discounters. This had implications for the central bank's relationship with other market participants. For example, the Bank of England maintained a close relationship with discount houses, institutions which financed their holdings of acceptances (bills of exchange) with call loans from the joint stock banks. Because these discount houses normally had recourse to the Bank of England to discount bills in their portfolios—an especially useful move when required to repay call loans to the joint sock banks--although the Bank of England did not have formal supervisory responsibility over any financial institutions, in practice the discount houses—and, indirectly, the joint stock banks--were answerable to the Bank.

Similarly, because of the growth of new credit institutions in the Netherlands in the 1840s, the Netherlands Bank's rediscounting facilities grew substantially. By the time of the passage of the Bank's charter renewal in 1863, which established a number of new branches throughout the Netherlands, the Bank began to interact more with banks, and less with non-financial firms.

Second, as banking systems developed, informal, then formal, clearing networks developed to settle accounts between individual banks. Since central banks were large, often well-branched institutions, they were well-placed to be a key member of these clearing systems. The development of clearing systems further strengthened the role of central banks in holding the banking reserves of the country and acting as a bankers' bank. The earliest known clearing house was established by London private bankers, probably around 1770.[11] London joint stock bankers were admitted in 1854, country bankers in 1858, and the Bank of England in 1864.[12] The Swedish Riksbank established a clearing institution in 1899, the Bank of France helped to found one in 1901, and the Bank of Finland established an inter-bank clearing in 1906.

Finally, perhaps most importantly in terms of discouraging central banks from active competition with commercial banks, was their development into lenders of last resort.[13] The evolution of central banks into lenders of last resort was pioneered in England. During the course of a series of panics, starting with 1793 and culminating with the rescue of Baring Brothers in 1890, the Bank of England gradually evolved into a lender of last resort, providing liquidity to the market when the banking system was subject to a number of crises (e.g., 1825, 1836, 1847, 1857, and 1866). The notion of the

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[11] According to Cannon (1900, 321) the origin of the London clearing house "seems to be shrouded in doubt and uncertainty." The first written evidence of the clearing house dates from 1773.
[12] Clapham (1945, II, 250-51).
[13] In discussing the evolution of central banks into lenders of last resort, I will not distinguish between bailouts (rescues of individual firms) and lender of last resort actions (providing ample, if expensive, credit to holders of sound collateral). I plan to elaborate on this distinction in future work.

central bank as lender of last resort was popularized by Walter Baregot's 1873 (1924) publication of *Lombard Street*.

Capie et al's (1994) catalogue of brief central bank histories lists a number of instances during the late nineteenth and early twentieth centuries in which central banks first engaged in lender of last resort activity. For example the Swedish Riksbank, which was explicitly prohibited by law from prohibiting or supporting private banking by legislation of 1824, nonetheless engaged in lender of last resort activities in 1897. Capie et al chronicle similar lender of last resort actions by central banks in France (1889), Norway (1899), Denmark (1908), and Spain (1913-14).

Table 2 presents two pieces of information on each of 18 central banks from Europe, Australia, Canada, Japan, and the United States: the year of establishment and the year in which the central bank was given supervisory responsibility for some part of the banking system. The data presented in this table are problematic for a number of reasons.

First, the table does not include the date from which a central bank took informal responsibility for banking supervision. One could argue that the Bank of England, through its supervision of the discount houses, was their supervisor in all but name from the later part of the nineteenth century, despite the fact that the Bank was not granted formal supervisory authority over the banking system until 1946. The Netherlands Bank presents an even more complicated case: the Bank acted as informal supervisor of the Dutch banking system as early as 1900. By 1920, banks had regular consultations with the Bank about lending activities, and by 1931 began voluntarily submitting quarterly returns to the Bank. Formal supervisory authority, however, was not granted to the Bank until 1948. Similarly, the Bank of Portugal had informal supervisory responsibility from 1925, but no formal responsibility until 1975.[14]

Second, the table merely includes the date at which supervisory authority was legally granted to the central bank, and does not take into account any change—increase or decrease--of supervisory authority from the central bank. For example, the Reichsbank was granted supervisory authority over the German banking system under the commercial banking code of 1934 (Gesetz über das Kreditwesen). Five years later, however, most supervisory and regulatory authority was transferred to the Ministry of Economics under a revised banking law.

What can explain the timing and pattern of countries in which the central bank became the main banking supervisor? The first thing to notice is that in no country did the central bank gain formal responsibility for banking supervision until the twentieth century. In fact, aside from the Federal Reserve in the United States, which assumed some supervisory functions upon its establishment in 1914, no central bank was given supervisory authority prior to the end of World War I. Thus, by the time supervisory authority was entrusted to the central banks, most had already acted as lender of last resort and were no longer in active competition with the institutions that they would regulate.

Considering the countries in which the central bank never had responsibility for banking regulation, two patterns stand out. First, none of the Nordic countries (Denmark, Finland, Norway, and Sweden) ever entrusted banking supervision to their central banks. Second, central banks that did become banking supervisors were, on average, founded 20

[14] Capie et al (1994), Appendix B.

years later than central banks that would not become banking supervisors. What can explain these two phenomena?

The Nordic experience can be partially explained by the history of the evolution of the Swedish Riksbank, the world's first central bank. The Riksbank had its origins in a private bank, Stockholms Bano, founded by Johan Palmstruch in 1656. At the time he granted the charter, King Karl X Gustav also established an office of the Chief Inspector of Banks to supervise the new institution.[15] In 1660 the king died and was succeeded by his four year-old son, Karl XI. During Karl XI's regency, the balance of political power shifted from the monarch to the Diet of the Four Estates (i.e., the Parliament): when Stockholms Banco failed in 1664, the reconstituted bank, Riksens Ständers Bank, or Estates of the Realm Bank was taken over by the Diet. The eighteenth and much of the nineteenth century saw a power struggle between the Diet, which controlled the Riksbank and the national budget, and the king and his bureaucracy, which maintained a monopoly on financial legislation. One result of this struggle was the reluctance of the executive to cede financial power—including the power to supervise banks—to the Riksbank. The next Nordic central bank to be founded, the Suomen Pankki (Bank of Finland), was very much patterned on the Riksbank (Capie et al 1994 136ff), and it is not surprising that, like the Riksbank, it took no important part in bank regulation.

Another factor that contributed to the lack of involvement of the central bank in banking regulation in the Nordic countries was the development of strong savings bank systems. These were established early in the nineteenth century. Later in the century, both Denmark and Norway had adopted systems of savings bank regulation, including

[15] Finansinspektionen (Swedish Financial Supervisory Authority) web site (http://www.fi.se/Templates/Page____3127.aspx).

the establishment of a savings bank inspectorate. Neither country, however, had adopted any commercial bank regulation, so when a banking act was passed in Norway (1924), the bank inspectorate was given authority to supervise commercial banks in addition to savings banks.

As noted above, central banks that eventually became banking supervisors were founded, on average, 20 years earlier than those that did become supervisors.[16] What can account for this? One possibility is that younger institutions were more flexible and better able to adapt to the role of banking supervisor. This might explain why a new institution, the US Federal Reserve, was given some supervisory powers upon its establishment. Following a severe banking crisis of 1907, Congress created the National Monetary Commission to investigate the working of the banking and monetary system and suggest ways of making the banking system more stable. This led to the establishment of the Federal Reserve System. By contrast, the Bank of Canada, also established in the aftermath a severe crisis (the Great Depression), did not come into being with any supervisory powers. This was most likely the case because the Canadian banking system—if not the economy as a whole-- was quite stable during the Depression.[17]

Of the next three youngest central banks, Switzerland (1907), Italy (1893), and Japan (1882), those of both Italy and Japan were eventually given responsibility for banking supervision, while the Swiss National Bank was not. Switzerland's experience may be explained by the failure of an earlier attempt to establish a central bank. A proposal for a publicly-owned central bank was defeated in a referendum held on

[16] The difference is not, however, statistically significant.
[17] Bordo and Redish (1987) discuss the motivation for the foundation of the Bank of Canada.

February 28, 1897 (by a vote of 255,984 to 195,764).[18] Among the reasons for the defeat of the referendum included fear of creating a centralized and too-powerful institution.[19] Hence, when the Swiss National Bank was eventually created by less ambitious legislation enacted in 1905, it was created with relatively circumscribed powers.

Does this pattern of younger central banks being more likely to be granted supervisory powers obtain when we consider all countries in the sample that eventually did grant supervisory powers to their central banks? The data from Table 2 displayed in Figure 1 suggest that it does. Younger central banks were typically granted supervisory powers earlier than older central banks.[20] Is it reasonable to suggest that differences of a matter of decades in central bank age led to much smaller differences in the date of granting the central bank supervisory powers? Without more detailed analyses of the political and economic processes in each country, we cannot conclusively answer this question. Nonetheless, the data presented in Figure 1 on those countries that eventually did grant their central banks supervisory powers, combined with information on those countries where the central bank was not given a role in banking supervision, is suggestive.

6. Conclusion and extensions

The evolution of central banks and banking regulation was a long and slow process in most countries. Without a detailed country-by-country analysis, it is difficult to definitively conclude which were the diving factors in that evolution. The goal of this

[18] Landmann (1906)
[19] Sandoz (1898), p. 304.
[20] The coefficient on the estimated trend line has a p-value of 0.0855. If the UK data point is omitted, the trend remains negative, however, the p-value rises to 0.171.

chapter has been to take a comparative approach to the evolution of central banks and banking supervision in a sample of 18 developed countries in order to discern any patterns among countries that entrusted banking supervision to their central banks and those that did not.

The results suggest two conclusions. First, younger central banks were more likely to be called upon to become banking supervisors than their older counterparts. Second, among central banks that were entrusted with banking supervision, younger central banks were typically given this task sooner than older central banks. These results can be explained by the fact that younger central banks had less entrenched operational organization, and were flexible enough to adapt to the dual role of monetary policy maker and banking supervisor. Older central banks were less adaptable and required more time to be brought into this new role—indeed, some were not brought in at all.

It is worth addressing two questions that were raised earlier in the chapter but only tangentially addressed in the analysis presented here. First, why are less developed countries more inclined to have the central bank involved in bank supervision than more developed countries. Second, do the results presented here suggest which countries have establish adopted (and will establish) single financial regulators? Although the answers to these questions await more rigorous analysis, the results presented in this chapter suggest some plausible answers.

One possible reason for the prominence of central banks in commercial banking regulation among less developed countries is the importance of central banks themselves. Among newly independent countries, central banks are typically among the first official economic institutions formed, since political independence and monetary independence usually go hand-in-hand. By virtue of their position, they are powerful, prestigious, well-funded, and have highly professionalized staffs, and hence are in a good position to take the lead in financial regulation. They frequently enjoy some degree of autonomy, which may be seen as an advantage in a financial regulator. Although some of these countries have developed, and others will develop, independent, professional banking regulators, central bankers may well retain their advantage in this area.

A cursory glance at the list of countries that have moved to a unified regulator suggests that history may shed some light on the subject. Among the first countries to move to the unified framework have been the Nordic countries—countries in which the central bank has never held supervisory authority over the banking system. Austria, another country where the central bank never had supervisory authority, has also moved to a unified regulator. Prominent among countries that have taken supervisory authority away from the central bank and given it to a unified agency is Britain—suggestively, among the last of the countries in the sample to grant the central bank supervisory authority.

One conclusion that can be drawn from the above analysis is that central banks, like many official institutions, are reluctant to give up powers that have already been granted to them. The prestige of central bankers—and their ability to resist political power to strip them of the role of banking supervisor--is not limited to the developing world. If this is the case, we would expect to see unified regulators appear sooner where banking supervision is currently outside the purview of the central bank.

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Table 1: Single, Semi-Integrated, Multiple Supervisory Agencies

	1999		2003	
	number	percent	number	percent
Separate Supervisors	**35**	**48%**	**31**	**40%**
Two-sector Regulators, of which:	**25**	**34%**	**24**	**31%**
Combined Securities and Insurance Regulators	3	4%	7	9%
Combined Bank and Securities Regulators	9	12%	6	8%
Combined Bank and Insurance Regulators	13	18%	11	14%
Single Supervisor	**13**	**18%**	**22**	**29%**

Sources:

1999: Abrams and Taylor (2000), relying on How Countries Supervise Their Banks, Insurers, and Securities Markets (London: Central Banking Publications, 1999).

2003: de Luna Martinez and Rose (2003), relying on How Countries Supervise Their Banks, Insurers, and Securities Markets (London: Freshfields).

Table 2. Central Banks: Establishment and year designated banking supervisor

Country	Year		Bank Name
	established	supervisor	
Australia	1911	1945	Commonwealth Bank of Australia (1959: Reserve Bank of Australia)
Austria	1816		Oesterreichische Nationalbank
Belgium	1850		Banque Nationale de Belgique
Canada	1934		Bank of Canada
Denmark	1818		Denmarks Nationalbank
Finland	1811		Suomen Pankki
France	1800	1945	Banque de France
Germany	1876	1934	Reichsbank
Italy	1893	1926	Banca d'Italia
Japan	1882	1928	Nippon Ginko
Netherlands	1814	1948	De Nederlandsche Bank
Norway	1816		Norges Bank
Portugal	1846	1925	Banco de Portugal
Spain	1856	1921	Banco de España
Sweden	1668		Sveriges Riksbank
Switzerland	1907		Swiss National Bank
United Kingdom	1694	1946	Bank of England
United States	1914	1914	Federal Reserve System

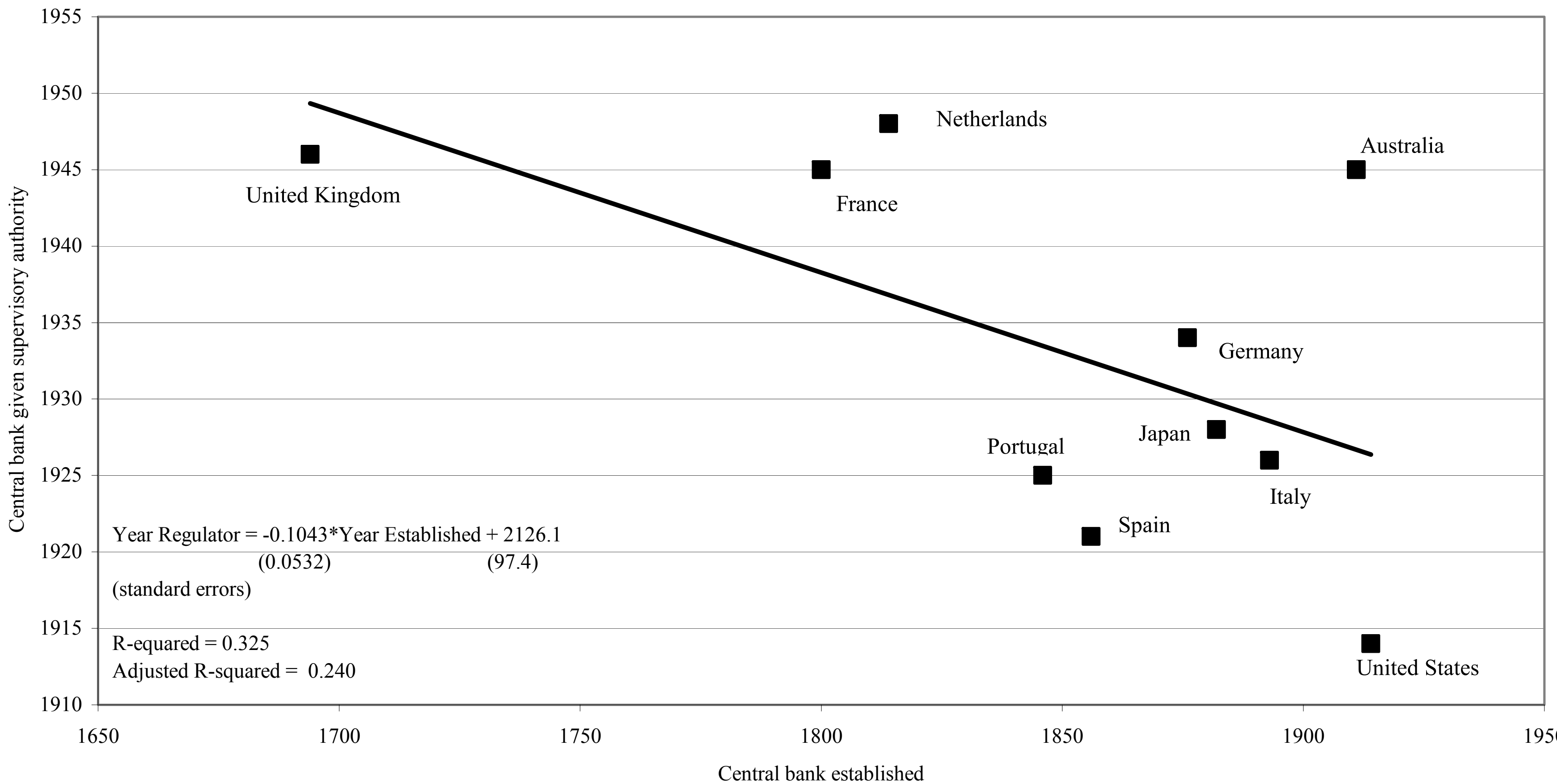
Average year of establishment

Central banks that did not become supervisors: 1828

Central banks that did become supervisors: 1849

Source: Capie et al (1994), Appendix B.

Figure 1
Central banks: Establishment and designation as banking supervisor



Sources: See text.