2 A Survey of the History of Federal Involvement in Banking
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“[T]he study of history...not only provides knowledge indispensable to preparing political decisions, it opens the mind toward an understanding of human nature and destiny. It increases wisdom.”
—Ludwig von Mises

2.1 Introduction
As a practical matter, history provides the necessary context for understanding how U.S. banking evolved to its present state. History tells us, in short, where we are and how we arrived here. Moreover, the history of U.S. banking is unusual as compared to other developed nations. Calomiris (1993: pp. 20-21) suggests this fact makes U.S. banking history a rich laboratory in which to evaluate the outcomes of various “natural experiments” in regulatory and monetary policy.

One of the most persistent of those policy experiments has been, until recently, the highly fragmented organization of U.S. banking, with unit banking or at best limited branch banking. Breckenridge (1899: p. 6) noted that “...as compared with an international system which hurries capital across frontiers and over seas, for the sake of differences of often less than one percent, it might better be said that the United States has nothing in the way of arbitrage apparatus for domestic purposes, in any worthy sense of the name.” Calomiris (1993: p. 54) extends Breckenridge’s observation observing that, “By the criterion of tolerance for riskless interest rate divergence, one could argue that the Eastern United States was less integrated with the Western United States than it was with the rest of the world.”

The fragmented nature of U.S. banking is perhaps the most pronounced feature that explains why the U.S. banking system has been periodically prone to bank runs and full-fledged panics. Why the U.S. banking system suffered this unusual form of business organization when other U.S. industries and other nations did not, often results from a history of variegated policy responses directed at banks. There were, to be sure, other policy responses that contributed to the colorful history of U.S banking. This chapter surveys those responses and their consequences.

2.1.1 Recurring Themes in the History and Regulation of U.S. Banking
From the earliest days of the Republic, several themes repeatedly thread through the regulation and conduct of U.S. banking, including:

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1 As cited in Calomiris (1993: p. 54).
Fear, Self-interest, and War-induced effects.

Fear of inflation (especially, in the early days, fear of paper currency as against specie), fear of corporations, of banks, and of concentrated economic power can all trace at least some of their lineages to the disastrous French and British experiences with the Mississippi and South Sea bubbles earlier in the 18th century. Indeed, the British Parliament responded to the South Sea collapse with the Bubble Act, forbidding the creation of corporations. The French and British bubble experiences would later color colonial and constitutional responses to money and banking in the U.S.

Beyond fear, however, self-interest also figures prominently in the history of U.S. banking, and self-interest is not always limited to the economic action. In John Law’s Banque Generale (later, the Banque Royale), for example, which sat at the heart of the Mississippi bubble, the regent of France thought he saw a way to overcome the chronic shortages of specie that plagued France at the time—shortages that were themselves brought on by excessive spending and chronic indebtedness of the Crown. The finances of the country were in a state of utmost disorder. A profuse and corrupt monarch whose profuseness and corruption were imitated by almost every functionary, from the highest to the lowest grade, had brought France to the verge of ruin. The national debt amounted to 3,000 millions of livres, the revenue to 145 millions, and the expenses of government to 142 millions per annum; leaving only three millions to pay the interest on the 3,000 millions.

In 1717, the regent authorized Law to establish a bank, the notes of which could be used to pay taxes. Law, initially, backed his note issues firmly with specie and his bank was quite successful—so successful, in fact, that it was nationalized as the Banque Royale. “Amid the intoxication of success, both law and the regent forgot the maxim so loudly proclaimed by the former, that a banker deserved death who made issues of paper with the necessary funds to provide for them. As soon as the bank...became a public institution, the regent caused a fabrication of notes to the amount of one thousand millions of livres.” Law’s system began to collapse in 1720.

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2 See Hammond (1957: p. 4-5). Kareken (1986, pp. 6-8) also develops the idea that fear plays an important role in U.S. bank regulation. Attack and Passel (1994, p. 510) suggest that “Throughout much of American history there has been a deep and abiding mistrust of bankers and a widespread fear of a ‘money monopoly’—a fear that those needing to borrow would be taken advantage of by those able to lend.”

3 What do European financial bubbles that preceded by the founding of the U.S. by more than half a century have to do with U.S. banking regulation? Plenty, as we shall see shortly.

4 From MacKay (1852 [1967]: p. 6).

5 ibid., p. 12.
Simultaneously in England, the South Sea bubble grew spectacularly, depending as did the French scheme, on the avarice and cupidity of both ordinary and prominent people. When the South Sea bubble collapsed in 1720, more than a few members of Parliament would find unpleasant accommodation in the Tower. Parliament responded to the South Sea collapse by passing the Bubble Act, which forbade the creation of corporations. The South Sea Bubble and the Bubble Act, moreover, would have a far-reaching impact on America. More than a century afterwards, President Andrew Jackson would publicly remark that he derived his fear of banks from reading about the South Sea Bubble. The common Englishman's distrust of corporations transplanted easily to American soil.\(^6\)

Lastly, the Founders knew well the dangers of war, from personal experience as well as from observing European history. They were also aware of the fact that, in the prosecution of wars, governments often relied on deficits, inflation, and the banking system to finance them. Thus, apprehensiveness about war feeds back into a fear of currency debasement. Despite this knowledge, however, the U.S., from the beginning, would rely on inflation and the banking system to finance war.

The themes of fear, self-interest, and war will periodically recur in this excursion through the history of government involvement with banking. They help to explain the unusual organizational and other features of U.S. banking. (A timeline summarizing significant milestones in U.S. banking appears in Figures 2.1 and 2.2.)

### 2.2 Early American Experiences with Money and Banking

Early bank regulation does not fit the mold of what we customarily think of regulation. There was no formal bank regulator or FDIC. Federal officials did not travel from bank to bank counting gold coins or checking the books. Regulation of early banks predominantly came in the form of government chartering.\(^7\) In this respect, it would have been difficult for an eighteenth century Englishman or American to distinguish between the government and the bank. Calomiris (1993: 64) suggests,

> ...there was substantial resistance to the chartering of banks in the colonies and in England. The corporate form based upon limited liability was viewed with great suspicion—sometimes it was seen as a means for avoiding responsibility for debts incurred... Moreover, money-issuing authority for banks was sometimes viewed as a means to government-sponsored inflation, which was feared by creditors.

The fear of paper money meant that specie (specifically, gold and silver coin) would be the only lawful money of the United States.\(^8\) In the early days of the Republic, however, chronic shortages of specie meant that even people of means often found themselves

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\(^6\) See Hammond (1957: pp. 4-5).

\(^7\) Partly in consequence of the South Sea Bubble (and the resulting Bubble Act), and partly reflecting the continuing influence of Mercantilism, corporate charters were viewed in the 18th and early 19th centuries as privileges bestowed by the government to favored recipients.

\(^8\) See Article 1, Section 10, U.S. Constitution.
unable to pay their debts, not because of unwillingness or a lack of property, but because there was no lawful money to be had. Some states resorted to designating commodities and land as legal tender, but this created disputes over value and proved an inconvenient medium of exchange. In 1786, the lack of specie led to open rebellion in Massachusetts where Shay’s rebels demanded viable legal tender in order to pay taxes and protect farms from tax sales.9

A shortage of specie, however, was not synonymous with a shortage of paper currency. Indeed, the Continental Congress financed the Revolutionary War on a tidal wave of paper money inflation. The principal losers from the over-issuance of paper currency, called “Continentals,” were farmers and other suppliers of war materiel who had to accept paper money in exchange for valuable food, horses, and war supplies.10 The ill effects of government-issued paper money left such a negative imprint on the new nation, that delegates to the Constitutional Convention arrived determined to draft a document that would keep both the federal and state governments out of the paper money business.

Article I, Section 8 of the U.S. Constitution authorizes the Congress “To coin money and regulate the value thereof…” but the original draft of this section also included the power to issue bills of credit. The Committee of Detail struck out this language by a vote of nine to two, and it is quite clear from statements made by the committee members that the exclusion equaled prohibition. In the words of several delegates, the intent of removing the three words authorizing bills of credit was “to shut and bar the door against paper money”. One delegate remarked that “if not struck out, would be alarming as the mark of the Beast in Revelations”, while another thought it better “to reject the whole plan than retain the three words and emit bills.”11

The delegates were not only going to prohibit the Federal Government from issuing paper money, but Article I, Section 10 further extended the prohibition to the several states. The additional prohibition against state issues can be attributed, at least in part, to the states’ heavy reliance on paper currency issues emitted during the Revolution and Articles of Confederation period.

The controversy over paper money at the Constitutional Convention only extended to bills of credit, which were considered legal tender. It did not extend to privately issued banknotes, which were widely considered a money substitute but were not accorded legal tender status. Evidence collected by bank historian Bray Hammond (1957: 105), moreover, suggests that the volume of circulating bank notes did not exceed available stock of specie; that is, privately issued notes were not subject to excessive issue.

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9 See Hamoond (1957: p. 11)
10 ibid., p. 29. The phrase, “not worth a Continental” was a popular colonial-era epithet signifying worthlessness.
11 ibid., p. 93.
This distinction between privately issued banknotes and government-issued paper money persisted at the state level in subsequent case law. In 1830, the Supreme Court struck down invalidated so-called “certificates” issued by the state of Missouri, which bore a striking resemblance to the bills of credit once printed by the colonies. In his opinion, Chief Justice John Marshall begged the question whether “the Constitution, in one of its most important provisions, may be openly evaded by giving a new name to an old thing?” However, the question of banknotes issued by private banks incorporated by the states was treated quite differently. Decided in 1837 and after the death of John Marshall, *Briscoe v. Bank of Kentucky* held that banknotes issued by state chartered banks were not bills of credit and, therefore, not subject to the Constitution’s prohibition.

### 2.2.1 Addressing the New Nation’s Financial Problems

In winning the Revolutionary War, not only did the colonies succeed in humbling the world’s greatest military and financial power, but also they managed to do so with practically no hard money. The colonists had instead financed their freedom through a combination of inflation and debt. By 1790, the foreign and domestic debt of the United States amounted to more than $54 million. In addition, the states owed another $25 million in war debts. The nation’s total debt burden thus stood at $79 million, requiring $4.5 million in annual interest payments.

The first Secretary of the Treasury, Alexander Hamilton (a New York banker and lawyer) was determined to put the young nation on firm financial footing, which meant avoiding default on the War debts at all costs. He constructed a plan to fund the repayment of War debts, which was debated in Congress as the Funding Act. In Hamilton’s view, a prudently administered public debt (including its timely and full repayment) was a blessing. Sound public debt allowed for public improvements at lower cost, and permitted the current generation to pass along a legacy of improvement that would benefit subsequent generations. It probably did not hurt either that, being from New York, many of the bankers and speculators in his home state stood to benefit if Hamilton’s Funding Act passed.

Hamilton’s antagonists, on the other hand, (Jefferson chiefly among them) viewed a public debt as a curse. To Hamilton’s opponents, large public debts represented an unconscionable binding of future generations who had no say its creation, but were nevertheless bound to its repayment. More subtly, Jefferson’s position might have been influenced by the recognition that some states, such as Virginia, had been diligent about repaying their war debts; while others, principally Massachusetts and South Carolina had not. Under the circumstances, Jefferson was hardly keen to see citizens of Virginia pay the debts of other states, when Virginians had been so prudent in shouldering their responsibilities.

Hamilton’s plan faced other hurdles. Nearly a decade or more had passed since the debt was originally issued, meaning Revolutionary War debts had long since been reduced to

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12 The case was *Craig v. Missouri*, as cited in Hammond (1957: p. 107).

“junk” status. Fearing they would never see a dime from their bonds, many holders had sold them to speculators at steep discounts from $\frac{1}{6}$th to $\frac{1}{20}$th of their face value. James Madison railed against unscrupulous speculators preying on the plight of widows, orphans, and ex-soldiers. Hamilton, on the other hand, suggested that failing to pay the speculators would be a breach of contract and violate the rights of a fair purchaser.

In addition to consolidating state and federal debts, Hamilton designed a system to service and repay them through the use of existing import duties and new additional levies on wines, spirits, tea, and coffee, and the repayment would be facilitated with the creation of the federally chartered, Bank of the United States. Although the duty on spirits led to the famous Whisky Rebellion of 1794, most of the taxes were collected successfully. In fact, Hamilton’s system of debt consolidation and repayment proved so successful that the United States soon became a magnet for foreign capital. By 1794, the United States had the highest credit rating in Europe and became a welcome refuge for capital fleeing the French Revolution. Foreign capital flooded into the new republic at such a prodigious rate, that by 1795, foreigners owned $20 million of the United States’ domestic debt, and over $33 million by 1801.\(^{14}\)

The vigorous debate surrounding the passage of the Funding Act illustrates a recurring tension in the political economy of U.S. banking. Southern and Western agrarian interests, as well as populist interests elsewhere feared concentrations of political or economic power. The federalist composition of government, the checks and balances of the Constitution, and a relatively weak executive (at least initially anyway) were but a few ways this fear manifested in politics. In economics, the fear of concentrated financial power manifested in proposals to limit public debt, to prevent the emergence of a central bank, and to check the power of commercial banking interests.

Working against this strong suspicion (not to mention a healthy dose of self-interest), Hamilton managed to secure passage of the Funding Act. He did so by offering key Southern representatives and Senators to move the nation’s capital to a federal district straddling the Potomac River. The Compromise of 1790 established the District of Columbia, which would consist of 10 square miles carved out of the slave states of Maryland and Virginia. With this compromise, Hamilton won passage of the Act and along with it the repayment of War debts at par, and the establishment of the First Bank of the United States.

2.2.2 The First Bank of the United States

Calomiris (1993: p. 66) suggests, “The bank was founded by Alexander Hamilton with specific purposes in mind: to facilitate the marketing of government debt, to facilitate the collection of government revenues, and to make loans to the government in times of need at subsidized interest rates.” Beyond matters of practical finance, Calomiris reminds that there was also a measure of self-interest involved; in that, “…the government also owned a substantial stake in the bank and profited greatly from it.”

Incorporated by the federal government, the first Bank of the United States would function as a central bank on the model of the Bank of England. The originally authorized capital for the bank was $10,000,000, of which, $2,000,000 came from the federal government. The remaining $8,000,000 was opened to public purchase and was heavily subscribed within the first hour of offering. Subscribers included 30 members of Congress (more than a third of total membership at the time) as well as the State of New York. (Hammond, 1957: p. 123) Ownership of bank stock by politicians today might be viewed as a conflict of interest. Back then, it never aroused much concern. In fact, George Washington had gained Bank of England stock through his marriage, which he kept throughout the Revolutionary War, only finally selling it in 1786. (Hammond, 1957: p. 104).

The federal government sold half of its holdings in the bank's capital stock by 1797 and the rest by 1803. After 1803, the bank was neither owned nor operated by the U.S. government, and, more interestingly, most of its shareholders were not even U.S. citizens. The majority, in fact, appear to have been British, and the federal government apparently thought little of selling about half of its shares to the Baring brothers of London. In any event, most of America's working capital came from Great Britain, leaving U.S. citizens prone to think they had been reinvaded. In fact, the bank probably owes its demise to being successfully branded as a “British bank” by its opponents in the 1811 debates on charter renewal. (Hammond, 1957: pp. 224-225)

Although the first Bank of the U.S. was not formally a central bank, it was in some ways similar to today's Federal Reserve. The ability of the Bank of the United States to influence, and hence, “regulate” national banking activity came from two principal sources: (1) it was a very large bank with a lot of capital, and it could influence the volume of money and credit outstanding by its redemption activities in the notes of other banks; and (2) its number one client, as with today's Federal Reserve, was the federal government, which was also the nation’s largest banking customer.

When citizens paid their obligations to the federal government, they often did so in the currency of state chartered banks. The Bank of the United States could then press the state banks for payment on their notes. If the Bank of the U.S. felt conservative, then it had only to demand convertibility to pull in specie from the state banks. With their stocks of specie diminished, the state banks would curtail lending. The process also worked just as easily in reverse. If the bank decided to hold onto the notes of other banks, rather than press for conversion, the state banks could lend more easily, and the nation's credit would expand.\footnote{ibid., pp. 198-200.}

Following a 20-year run, Congress allowed the bank's charter to lapse in 1811. The bank's opponents insisted that the bank was unconstitutional, but, there may have been other forces at work. If the Bank of the United States were closed, then state banks would have the banking services field to themselves. Furthermore, the federal government

\footnote{See Hammond (1957: p. 207).}

\footnote{ibid., pp. 198-200.}
would still need banking services (to process tax collections, pay bills, and so on) and those services would be provided by the state banks.

2.2.3 The Growth of Banking Under Jefferson

Initially, the federal government had been in the hands of the Federalists—a moneyped minority with extensive commercial interests to whom a national bank was necessary and proper to the political and economic strength of the nation. Thomas Jefferson, by contrast, dreamed of a nation of yeomen farmers, whose rugged individualism and self reliance would minimize the need for banking and commerce. When the Bank of the United States received its charter in 1791, there were three banks in the U.S. By the time the Bank’s charter lapsed in 1811, the number of banks stood at ninety. Ironically, five years later this number had multiplied to 250 and rose to more than 300 by 1820. Thus, American banking may have gotten its start under the Federalists, but it grew much faster under the Jeffersonians.

Part of the answer to this puzzlingly rapid expansion rests in the democratization of business. While not quite the nation of shopkeepers that England was, America was nevertheless growing a new generation of business owners, who discovered that the spirit of enterprise squared nicely with Mr. Jefferson’s notions of rugged individualism. Moreover, the mercantilist grants of monopoly privilege represented by the first Bank’s charter were less compatible with notions of individualism. In that, Jefferson’s Democratic-Republican Party was probably not as opposed to banking per se, as it was opposed to privileged Federalist banks. Perhaps as importantly from a political perspective, if the Federalist banks could not be eliminated, then their power would be diluted by creating Democratic-Republican competitors.

Beyond political rivalries, bank chartering represented an important potential source of revenue for state governments. “All chartering systems helped to finance their respective state governments. In some cases, states taxed banks; in others (notably Pennsylvania and South Carolina) governments owned substantial shares in the banks; and in still others (free banks) governments forced banks to hold their bonds as security for notes.” Moreover, Sylla, Legler, and Wallis (1987) show that from 1811 to 1860, state revenues rested heavily on state-chartered banking for support. “The trend over time was to rely increasingly on taxation and bond reserve requirements, rather than direct ownership or control, as a means of rent extraction for the government.”

Despite the persistent national shortage of specie, suspension of banknote redemptions was unusual. The first general suspension occurred in 1814, when the British sacked Washington, leading to the first nationwide run on the banks. Suspension may have

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18 Loc. cit.
19 ibid., p. 146.
21 ibid., p. 66.
been new, but it was not catastrophic. The banks merely stopped paying out specie and otherwise remained open for business, which is precisely the same thing the Bank of England had been doing since 1797. Indeed, New England banks were so conservatively managed that they maintained conversion and rode out the suspension.\textsuperscript{22}

Although some failures due to bad business acumen or criminal activity were inevitable, dangerous banking practices appear to have been the exception rather than the rule. Most banks had conservative reserve requirements written into their charters. In fact, the bank with the most leeway in its lending practices was the national bank chartered by the federal government. Hamilton had limited the amount of money the bank could loan out to not more than ten million dollars in excess of what was deposited at the bank. Although the exact ratio was not explicit in the charter, ratios did appear in the charters of contemporary banks. For example, the charter of the Bank of New York prohibited it from lending more than three times the sum of capital stock subscribed and actually paid into the bank. (Hammond, 1957: 131)

2.2.4 The Suffolk Bank and Private Coordination
Conservative bank-management practices were not the only means of managing the risks attendant with the business of banking. Bankers always had the incentive (and often the ability) to coordinate activities with each other, especially by coordinating the presentment and clearing of banknotes. In the absence of coordinated clearing, the further a banknote circulated from its issuing bank, the higher the discount a potential recipient (banker or merchant) would customarily apply to the note's face value. The discount reflected the risk of non-payment as well as the transactions costs associated with returning the note for redemption to its bank of issue.

Profit on banknote issuance depends crucially on wide circulation, and there were two ways of ensuring this. The first was to make it hard for the notes to return home, which was the method employed by so-called wildcat banks (more about wildcat banks appears below). The second, and more prevalent method, was to ensure the convertibility of notes at all times. Belief that a bank's notes were always convertible worked to limit redemption. Certain and easy redemption, in other words, meant limited or no redemption.

In 1818, the Suffolk Bank in New England began to coordinate redemption of banknotes issued by country banks in the New England area. Either country banks could leave deposits with Suffolk to cover redemption of their notes, or Suffolk could stockpile the issuing bank's notes and present them periodically to the issuing banks for redemption. The first option (keeping a deposit at Suffolk) meant the country banker's notes traded at closer to face value than they otherwise would have, and it reduced the likelihood of a surprise redemption visit from a Suffolk banker. In this way, the Suffolk Bank thus was able to act like a central bank; in that, it could expand credit by allowing country banks to overdraft, or it could contract credit by pressing the country banks for redemption.\textsuperscript{23}

\textsuperscript{22} See Hammond (1957: pp. 227-228), who equated the war-induced suspension to a person going to bed when he/she has a fever.

The Suffolk example would serve as pattern for the clearinghouse model of coordination that would emerge in New York during the 1850s. As we shall see too, bankers devised other methods to overcome coordination problems. Before discussing these in detail, however, we consider next the emergence of the second Bank of the United States.

2.2.5 The Second Bank of the United States

The second Bank of the United States was similar to the first one, except its capital was larger at $35,000,000. The misfortunes caused by the suspension of specie payments by the state banks combined with the federal government’s difficulties in financing the War of 1812 provided impetus for chartering the second Bank. The issue of its constitutionality did not arise this time in congressional debate, and even ardent opponents of the first Bank, such as James Madison, voiced support.

After some initial difficulties selecting a reputable bank president, the Second Bank of the United States appointed Nicholas Biddle, a genteel and well-traveled person who had graduated from Princeton at sixteen. Although not a businessperson, Biddle understood banking and central banking. Biddle, for example, directed the bank’s different branches to either press the state banks on their notes or hold off on collection, but whatever their course of action it was to be conducted gently. The world of banking is one of multiples and exponents and pulling the bank’s strings steadily and subtly lessened the rippling effects throughout the system.

Biddle was not a politician, and thus seems to have had little inclination to believe that President Andrew Jackson and his “Kitchen Cabinet” were out to destroy the Bank. Biddle naively thought that General Jackson’s rhetoric arose from his solidly agrarian distrust of banks and bankers. Of course, this was true, but some of the President’s advisors, including Martin Van Buren, harbored other motivations. Destroying the second Bank of the United States would again free the state banks, but, most importantly, it would wrest control away from the bank’s headquarters in Philadelphia to New York City, where Van Buren thought it rightfully belonged.

In 1832, with four years remaining on its charter, President Jackson vetoed the Bank’s charter reauthorization bill. Not content to wait four years, in October of 1833, Jackson ordered that monies owed to the federal government were to be deposited at seven so-called “pet banks”—six of which happened to be run by Jackson supporters. The director of the seventh bank, the Bank of America in New York, had not been a Jackson supporter.

The Second Bank, however, would give rise to a famous Supreme Court Case, McCulloch v. Maryland (1819) in which “the U.S. Supreme Court held that the Constitution authorized the chartering of banks by the national government and the Second Bank was immune from a tax the state of Maryland sought to impose on it (and all other banks).” From Huber (1989: 1-3).

Calomiris (1993: p. 67) cites Martin (1974) and Schweikart (1988) to show that, “...Jacksonian opposition to the Bank mainly was fueled by a desire to reduce the connection between bank lending and bank currency issuing and to curtail the Bank's monopoly power, not by an opposition to federal chartering or branching per se (see also Duncombe 1841). Indeed, the branching south was a Jacksonian stronghold.”
supporter, but he had been instrumental in persuading the other six banks to accept the government’s offer.

Government money would not be withdrawn all at once, but all of it would be withdrawn; and the number of “pet banks” (and the associated patronage) grew to ninety-one by the end of 1836. The removal of government funds from the Bank had an immediate effect. In order to meet the withdrawals, the bank sharply curtailed its discounts and called in or shortened its loans. The credit contraction brought financial hardship and precipitated the Panic of 1837.

2.2.6 The Panic of 1837
In July of 1836, Treasury Secretary Levi Woodbury issued the “Specie Circular”, which required that only gold and silver could be used to purchase federal lands. The Specie Circular was intended to reduce the sale of land to speculators and, thereby, to protect small purchasers of land from fraud. However, speculators were more likely to have access to specie than were small land buyers. Moreover, the policy concentrated specie in the west when it was needed in the more populous east. (Hammond, 1957: 455-456)

Alone, the Specie Circular might not have had detrimental effects, but it could cause difficulty when combined with other policies of the Jackson and Van Buren administrations. By 1835, the federal government ran a surplus. A combination of land sales and tariffs had finally paid off the Revolutionary War debts as well as the debts incurred for the War of 1812. Congress decided to return the surplus to the states. However, remitting the money required drawing and transporting large sums of specie—specie that had been placed with the Jacksonian “pet banks”. The pet banks, however, had previously increased their lending in concert with their increased (government) deposit base. They were thus in a weak position to meet a sudden increase in remittance demand from their chief depositor. Still, all might have gone well had it not been for the Bank of England.

British investors, attracted by the growth opportunities in the U.S., invested significant capital here. Especially poor weather conditions in 1837, resulted in British crop failures. The Bank of England responded by raising interest rates in an effort to draw capital back home where it was urgently needed to finance food imports. In addition, British textile mills, facing stiff foreign competition, curtailed demand for U.S.-grown cotton. All of these factors coalesced to create banking problems in the U.S. When pressed for remittances by the federal government, banks had to suspend convertibility. In such a bind, U.S. banks turned to London, but London was not in a lending mood.

27 ibid., p. 430.
28 Atack and Passel (1994: p. 101), in contrast to Hammond (1957), suggest that there is no evidence that eastern banks lost specie reserves to the west because of the Specie Circular.
30 ibid., pp. 502-503 and 461-463.
Higher “…interest rates on both sides of the Atlantic and, in combination with a fall in the price of the major American export crop, cotton, changed banknote holders' views on the security of their assets.”31 Thus, a mix of factors seems to have conspired to bring on the Panic of 1837, but this time the response was not to call for more regulation, but instead to free banking from its privileged and thus relatively closed organizational structure.

2.3 “Free” Banking, Voluntary Coordination, and “Wildcats”

Jackson’s belief that all banks should be eliminated would, ultimately, clash with his belief in limited government, and ironically, the clash would lead to the proliferation of banks. The issue of free banking arose in part as a response to the Panic of 1837 and the ensuing depression, but it also traces to an unlikely alliance of those opposed to all banking and those in favor of much wider banking. In the first four decades of the country, banking had traditionally been viewed as a privilege. The business of banking required a state (or federal) charter. In contrast, however, Rockoff (1974: p. 141) indicates that “free” banking meant something quite different:

The term free banking meant something very specific at the time: it meant a banking system with free entry and a bond-secured note issue. Free entry provided that any potential banker who could raise a certain minimum of capital could start a bank wherever he chose. Under the old system of chartered banking, the potential banker had to secure a special grant from the state legislature. …[U]nder free banking, designated government bonds had to be deposited with a state authority as security for all circulating notes issued by a bank. The bank, so long as it remained solvent, was entitled to the interest on the bonds. But should it fail to honor its notes, the state would sell the securities and reimburse note holders out of the proceeds.

The existing state chartered banks, were not about to cede their power and privilege willingly. This was perhaps no where more vividly illustrated than in New York. Hammond (1957: p. 583) recounts how the New York banks put up a terrific fight in the state legislature. Their credibility crumbled, however, after they suspended specie convertibility in 1837. New York passed a free banking bill in March of 1838; though it was not the first state to do so That honor goes to Michigan in 1837 (Huber, 1989: p. 1-4).

2.3.1 Free versus “Wildcat” Banking

Michigan was first to pass a free banking bill, and, because of the defects in the bill, it was also first to experience the ill effects of so-called wildcat banking.32 In Michigan’s


32 Described briefly, a “wildcat” bank received a charter under state provisions. It would offer the requisite bond collateral and be allowed to issue banknotes in exchange for specie deposits. Wildcat bankers would typically establish operations in remote areas (with the wildcats) to discourage note redemption and they would either abscond with the specie deposits or invest it in risky projects that did not repay. Further descriptions of wildcat operations appear below.
case (as in several others), there is a connection between free banking and wildcat banking, but it is not as direct as some historians have alleged. Free banking provides only the necessary condition for the emergence of wildcat banks (ease of entry). It does not also provide, by itself, a sufficient condition.

Whether a wildcat bank emerged, depended on how the state banking authorities structured the bond (note collateral) provisions. “In Michigan (in 1837) mortgages on land were eligible [collateral] and they were accepted at part. It was thus possible to create a mortgage on a worthless piece of property, have it certified as being valuable by some friends, and then transfer it to a wildcat bank in exchange for a mass of bank notes. This seems to be the process by which many of the Michigan wildcats issued currency. Others were simply frauds which operated in violation of the free banking law.”

Michigan learned from its early experience with free banking and strengthened the eligibility requirements substantially in its second free banking law passed two decades later. Under the modified law, the state experienced no wildcat banks (Rockoff, 1974: p. 146). Rockoff also points out other states that suffered from wildcat banking had problems similar to Michigan’s original design, or had bond provisions that in other ways, imparted a significant differential between the collateral’s market and par values.

2.3.2 Coordination Successes and Problems
Several states, most notably New York avoided the problems created wildcat banks by structuring their free banking laws with incentive-compatible provisions. Even without wildcat banking problem, however, free banks still faced coordination problems stemming from the need to redeem each other notes, and from the obstacles created by unit or limited branch banking.

The ability of banks to coordinate redemptions was reflected in the market values of their banknotes (i.e., the degree to which the notes traded at a discount to their face value). Calomiris (1993: p. 27) argues that, “Markets for bank notes reflected these differences in coordination through lower discounts on the notes of Indiana, Ohio, and Southern banks before and during the [Panic of 1839].” Indiana and Ohio had variations of a mutual guaranty system in which banks who participated in the system were jointly liable for (and thus had incentives to monitor) the quality of each other’s notes. In fact, Golemebe and Warburton (1958) suggest that Indiana system worked so well that its banks were able to weather the Panic of 1839 without suspending convertibility.

Banks in the antebellum South, by contrast, generally were free to branch statewide, and thus had built-in internal incentives to maintain banknote quality. Statewide branching, it seems, provided coordination benefits similar to the clearinghouses that would develop in states like New York and Pennsylvania in the 1850s. Calomiris (1993: p. 28) contrasts the differing northern and southern responses by noting that, “...formal clearinghouses never developed in the branching South during the antebellum period.

34 See Rockoff (1974: Table 1, p. 144) for pertinent examples.
Understandably, the small number of branching banks had a lesser need to coordinate clearing and were able to respond to panics effectively without the formal rules and enforcement mechanisms of the clearinghouse.” Klebaner (1990: p. 51) also provides evidence that banks in South Carolina and Virginia (two states that permitted and had well-developed bank branching) experienced no failures during the Panic of 1837.

2.3.2.1 The Clearinghouse

Another way to overcome the coordination difficulties, especially in unit bank (or limited branching) states was for the banks in a given area to coordinate clearing and settlement through a clearinghouse. Sixty New York banks cooperated to form the first such clearinghouse in 1853. Before the advent of the clearinghouse, sixty specie porters traveled every Tuesday from bank to bank, dropping off and collecting specie along the way. The process required the men of not only considerable trust but also equally considerable brawn. As Timberlake (1984: p. 3) describes the clearinghouse innovation:

Instead of each bank establishing a transactional relationship with all other bank, every bank sends a representative to one place—the clearinghouse—where its debt items are cleared against its credit items. Then the balance is struck, and payment is due from debtor banks to creditor banks. Originally, one bank in the association was assigned the ‘central’ administrative role for clearing the other member banks’ accounts. Each bank kept part of its specie (and later greenback) reserve as a deposit with this bank, which in turn issued clearinghouse certificates of an equivalent amount to be used in settlement of daily balances... The certificates were only a technical expedient for economizing the payments system.

Besides increasing efficiency, the self-policing nature of the voluntary association meant that the clearinghouse had a tempering effect on members’ behavior. Failure to settle promptly meant expulsion from the clearinghouse and an immediate call on the expelled bank’s notes. In later bank panics, use of clearinghouse certificates (essentially scrip), would offer a way for the member banks to stretch a limited reserve base in a way that would tide them over until the panic subsided.

2.3.2.2 Independent Treasury System

Despite the variety of coordination tools available to antebellum bankers, they still had to contend with changes in the institutional fabric that affected their operations. One such change was the arrival of the independent Treasury System, established by Congress in 1846. Under the system, the federal government would take and make payment in only gold and silver.

Although by today’s standards, the federal government in 1846 was quite a bit smaller, it was still the largest economic actor. Its actions exerted considerable influence on individual banks. Payment of obligations due to the federal government, such as tariffs at

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35 Here the word “institutional” is used in the sense of North (1990) or Brennan and Buchanan (1985) as in the rules of the game, or legislative and regulatory framework within which banking is conducted.
a port, removed specie from local banks near the port, restricting their lending and note circulation (unless the government redeposited locally). On the other hand, banks near federal installations, such as an Army post or Navy yard, would frequently find themselves awash in specie from federal wages payments to soldiers and sailors. Credit availability was thus sensitive to the government’s spending and taxing activities.\textsuperscript{36}

Monetary policy, in short, was partly a function of where the government decided to collect or spend its money. Like a central bank, Treasury could thus influence the expansion or contraction of credit, but unlike a modern central bank, it would do so without any meaningful direction.\textsuperscript{37}

In spite of technological obstacles (transportation and communication to name two) and institutional obstacles (such as the independent Treasury system), the antebellum free-banking era proved remarkably resilient. There were losses to be sure, but most modern observers now view the free banking era as a success, at least insofar as loss minimization is concerned. Even in states, such as Michigan and Indiana where some of the larger losses to banknote holders occurred, such losses were comparatively small by either contemporary or modern standards. Rockoff (1974: p. 150) estimates the total losses suffered by holders of free bank notes to have been less than $2,000,000, measured from the first year of free banking through 1860. As he points out, “...by 1860, note holders had probably lost less through the failure of free banks, including the wildcats, than they stood to lose in that year from a 2 percent inflation.”\textsuperscript{38}

Beyond the relatively small losses to note holders from failed redemption, there were wider costs associated with individualized banknote issuance. Each bank issued its own notes, and as discussed above, was required to redeem its notes on demand. The distance from acceptance to presentment meant redemption (i.e., conversion into lawful money, specie) was costly. In addition, “there were thousands of spurious notes in circulation, fifty-four hundred by one count: counterfeits, and notes with forged signatures or altered denominations….This chaotic money and banking system in America increased costs of doing business [and gave rise to] an information industry of ‘bank note reporters’ to help merchants evaluate the probable worth of notes offered in payment.”\textsuperscript{39} The next era in the development of U.S. banking, would see changes that sought to bring order to this currency chaos, but that also brought other problems.

\textbf{2.4 The National Bank Era}

It is no coincidence that the first two federally-chartered banks would be created in response to the Revolutionary War and the War of 1812. Wars are expensive and thus difficult to finance out of current tax revenues. President Lincoln, and his Treasury Secretary Salmon Chase, rediscovered this fact in connection with the Civil War. Although the federal government imposed the country’s first income tax, federal tax

\textsuperscript{36} Hammond (1957: 543-544).
\textsuperscript{37} Hession and Sardy (1969: p. 276).
\textsuperscript{38} Rockoff (1974: p. 151).
\textsuperscript{39} Atack and Passel (1994: p. 493 and passim).
revenues still lagged significantly behind rapidly increasing war expenditures. The administration and Congress had already turned to borrowing in the thinly-developed bond market. There, they would discover another fact about war finance: increased government financing demands are eventually met by investors who require higher interest rates, assuming a bond issue can be floated at all.

Instead of opting for a central bank, however, Lincoln’s administration favored changes in the existing monetary and banking arrangements, through the introduction of a national currency and federal bank chartering. According to Huber (1989: p. 3-3), “Federal chartering of commercial banks…reflected a need for income to finance the war effort rather than a judgment about the propriety of national control over banking.”

The National Currency Act of 1863 and the National Bank Act of 1864 (NBA) were to be the principal instruments of war finance. The first act authorized the Treasury to issue legal tender in the form of inconvertible paper currency, “greenbacks.” The second act created the Office of the Comptroller of the Currency (OCC) within the Treasury Department and authorized it to charter and regulate national banks (i.e., banks operating under a federal rather than state charter).

The National Bank Act provided a mechanism for floating a potentially large amount of federal debt at attractive rates. It would accomplish this by requiring each nationally-chartered bank “…to purchase government bonds in an amount equal to one third of its capitalization, but in no event less than $30,000. These bonds were then deposited with the Comptroller of the Currency, who issued national bank notes [greenbacks]\(^{43}\) against

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40 For fiscal year 1861, Treasury Secretary Chase estimated $319 million in expenditures against $79 million in taxes, including the new income tax revenues. The deficit was to be borrowed. (Atack and Passel, 1994: p. 494)

41 Just prior to secession, the federal government tried to float a short-term bond issue with a coupon of 5 percent. Only $7 million of the $10 million principal was subscribed. Another $10 million offering was successfully floated shortly thereafter, but at a 12 percent interest rate. (Atack and Passel, 1994: p. 494)

42 The nickname, Greenbacks, came from the fact the Treasury notes were printed with green ink on the reverse. This helped to distinguish them more easily from the state banknotes, which were printed with black ink on both obverse and reverse.

43 The law declared that Greenbacks were legal tender despite the Constitution’s explicit provision that only gold and silver were to be so considered legal tender, and previous Supreme Court opinions affirming gold and silver’s exclusive role. Sturges v. Crowninshield. As cited in Hammond (1957: p. 108).

The constitutionality of greenbacks came to a head in Hepburn v. Griswold in which Hepburn attempted to satisfy a debt in 1864 by paying Griswold in greenbacks—even though the 1862 debt had been in specie. Although the notes correctly reflected the nominal dollar amount of the original loan, their actual purchasing power was less than half their original value. Decided in 1869, the court condensed the use of paper money as a means of financing the war, but it reinforced the traditional view of the Constitution as a hard money document. The government, as a wartime expedient, could print paper money, but it could not declare it legal tender. It was unconstitutional to force people to accept reenbacks for debts previously contracted. Thus, Mr. Griswold did not have to accept Mrs. Hepburn’s greenbacks. (Hammond, 1957: pp. 108-109)

This seemingly solid reassertion of traditional constitutional doctrine lasted about a year. In 1870, the Supreme Court reversed itself, finding greenbacks constitutional. Their issuance had been an act of sovereignty—a seemingly elastic term that managed to skirt the fact that the power to print paper money
them for 90 percent of their value." In this way, the NBA created a ready market for federal debt as well as a mechanism for conveniently placing greenbacks into circulation.

2.4.1 Banking Changes Under the National Bank Act
Huber points out that Congress and the administration expected many state banks to switch to a national charter, but that, initially, this expectation "was not borne out, because compliance with state regulations was less onerous than meeting the more stringent national requirements." Congress responded to the state banks' lackluster interest with a combination of carrots and sticks. The carrots consisted of eased capital and reserve requirements for national banks, while the sticks included, first, a 2 percent tax on state banknotes, later raised (in 1865) to 10 percent when the original stick proved insufficiently encouraging.

The 2 percent tax on banknotes worked slowly, inducing only a fraction of state banks to convert to national charters. However, from that sluggish start, national chartering would grow apace with the increase in the banknotes tax. Table 2.1 shows the rapid change in fortunes for state and nationally chartered banks between 1863 and 1866.

Table 2.1
Number of National and State Banks, 1863-1866

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>State</th>
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</thead>
<tbody>
<tr>
<td>1863</td>
<td>63</td>
<td>1,466</td>
</tr>
<tr>
<td>1864</td>
<td>508</td>
<td>1,089</td>
</tr>
<tr>
<td>1865</td>
<td>1,513</td>
<td>349</td>
</tr>
<tr>
<td>1866</td>
<td>1,644</td>
<td>297</td>
</tr>
</tbody>
</table>

The federal government's initial foray into bank chartering holds several lessons. First, state banks may have been knocked down, but there were not out of the game. The had been expressly omitted from the Constitution. The Supreme Court went further, declaring that paying debts originally denominated in specie with depreciated greenbacks did not impair contracts and could be authorized by the federal government even if it did. These findings came down in a series of cases decided in the same year known as the Legal Tender Cases.

Even the constraint on greenbacks as a wartime expedient lasted just 14 years. In 1884, the Supreme Court reversed itself and found that greenbacks were legal tender. Justice Field was unsparing in his dissent: “If there be anything in the history of the Constitution which can be established with moral certainty, it is that the framers of that instrument intended to prohibit the issue of legal tender notes both by the general government and by the states; and thus prevent interference with the contracts of private parties.”

45 loc. cit.
46 In Veazie Bank v. Fenno, 75 U.S. 533 (1869), the U.S. Supreme Court upheld the constitutionality of the tax on banknotes. Ironically, the author of the Court’s opinion was the Chief Justice, Salmon Chase, “the original architect of the Union’s financial plans, including the National Bank Act and the tax on the notes of states banks, when he was secretary of the Treasury under President Lincoln.” Huber (1989: 1-5)
presence of both a federal and state chartering apparatus set up a dual or competitive chartering system in which federal and state regulators competing for the allegiance of bankers. This dual chartering system set up a potentially dangerous form regulatory competition that bankers could exploit. Historically, banks have switched from state charters to federal and back to state again as economic and other motivations warranted.48

Second, the formal entrance of the federal government into banking upset existing arrangements in U.S. banking. Calomiris (1993: p. 94) suggests, for example, that the pre-war systems of self-coordination (such as the mutual guaranty systems in Indiana, Ohio, and Iowa) “were brought to an end not by insolvency, but by federal taxation of bank notes designed to promote the National Banking System.” The war also spelled the demise of the southern branch banking that had functioned so well in the antebellum period. Moreover, “…the absence of a branching provision in the NBA soon led to the virtual disappearance of branch banking.”49 The inability to branch “also meant that much of the increased demand for banking services had to be met by opening new banks rather than opening new offices of existing banks.”50

Third, the tax on state banknotes may have driven privately issued banknotes from circulation and pushed many state-chartered banks into a national affiliation, but the tax could not stop financial innovation. One innovation that emerged at the time was the checking account. Redlich (1968: p. 120), for example, estimates that within a decade of the National Bank Act’s passage, 95 percent of commercial transactions in New York involved check payments. The checking account substituted the depositors’ personal check for the bank-issued note as a payment medium, and was an important catalyst that ignited resurgence in the number of state banks.51

Finally, national banks also faced two types of lending restrictions that did not encumber state banks. The first prohibited loans to any one borrower exceeding 10 percent of the national bank’s capital. This limitation (coupled with the size constraints imposed by branching restrictions) had the effect of capping the lending capacity of national banks. Calomiris (1993: p. 69) suggests “…the fragmented unit banking system in the United States was ill-suited to finance the new corporate giants, and because of existing limitations on branching and mergers, competing methods of corporate finance arose that began to erode bank profitability, thus compounding bank distress and encouraging consolidation.”

48 Felsefeld (1997: p. 21) relates the more recent story of how the Marine Midland Bank, a New York state-chartered bank changed to a national charter when, in 1979, the New York superintendent of banking tried to block a badly needed infusion of capital to Marine Midland by the Hong Kong and Shanghai Bank Corp. Fifteen years later, it shifted back to a state charter.

49 Huber (1989: p. 1-8). In addition Huber (1989: p. 1-9) notes that “the NBA was silent on the matter of branch offices, but successive Comptrollers of the Currency consistently treated this silence as amounting to a prohibition on branching.”


51 loc. cit.
National banks were also prohibited from lending against real estate. However, as Atack and Passel (1994: p. 505) point out, “...real estate was the principal asset in rural areas.” Thus, on the one hand, national banks were ill-equipped to finance agriculture and enterprise in small town, rural America—leaving the door open to this market for state-chartered banks. On the other hand, national banks were also poorly situated to finance the emerging large-scale enterprises of the late 1800s—leaving the door open for the emergence of capital market finance.

2.4.2 Competitive Chartering (Dual Banking)

Dual banking refers to the overlapping state and federal regulatory frameworks. Though the Constitution may place the federal government in a superior position relative to the states, the states still hold sway over some aspects of even federally chartered banks. Similarly, today, federal banking regulations apply much more uniformly to both state and federal banks. In the early decades of the national bank era, however, there was much less uniformity, and much more competition between state and federal chartering authorities.

The checking account innovation has already been mentioned as a way in which state banks persevered in the face of strong competition from national banks. State chartering authorities also helped by establishing reserve requirements and capital standards that were more attractive than those applicable to national banks. Nearly two dozen states had minimum capital requirements for (small) country banks that were less than the equivalent federal requirement of $50,000. “In California, for example, the minimum was $25,000. In others such as Arkansas, Mississippi, Oklahoma, and South Carolina, it was effectively zero.”

In states where reserves were required, the requirements tended to be more liberal in terms of which assets qualified as reserves. Even as late as 1895, thirty-one states had no reserve requirements at all, as compared to reserve requirements for national banks that ranged from 15 to 25 percent of deposits that had to be held in lawful money. Thus, although individual national banks tended to be larger, the total number of state banks and the total dollar value of their assets would exceed those of the national banks by 1890.

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52 “The state and federal governments’ responses to increased demand for banking in rural areas, and to the bank failures of the 1890s, were to decrease capital requirements and thereby promote bank expansion through small, unit banks.” Calomiris (1993: p. 74).

53 For example, banks are subject to the criminal laws of the state in which they operate.

54 For example, state-chartered banks are now subject to reserve requirements established by the Federal Reserve, and they also have access to the Federal Reserve’s Discount Window.


56 ibid., p. 507.

57 Hession and Sardy (1969: pp.429-430). This does not mean that state banks held no reserves, only that they were able to set reserves more accurately to reflect business requirements.
The Congress could have responded by ending its silence in the National Bank Act with respect to branching. This would have given national banks a competitive advantage at the same time it would have enhanced asset and liability diversification. It chose instead to respond in kind to the states with a provision in the Gold Standard Act of 1900 that lowered minimum capital requirements for national banks in small towns to $25,000. Nine states responded by lowering their capital requirements below the new national level, while ten others passed “free banking” laws that set capital standards between $5,000 and $15,000.58

Whether banks would have voluntarily chosen higher or lower reserves and capital levels in a free market, under the system of competitive chartering, all participated in a race to the bottom. This was a competition, moreover, where regulatory treatment, rather than the preferences of a bank’s customers, was the primary influence on a bank’s behavior.

Despite the dual nature of U.S. banking, a large number of costly bank failures did not mark the (pre-Federal Reserve) national banking era. “From 1870 (shortly after the end of the Civil War) to 1914 (when the first federal safety net was introduced in the form of lender-of-last-resort facilities of the Federal Reserve), the annual average bank failure rate in the United States was slightly lower than for nonbanks. Moreover, losses to depositors at failed banks were proportionately smaller than losses to creditors at failed nonbanks.”59 Even though banking’s overall performance was not that bad, Kaufman explains at least one motivation for the deep concern that singled out banks: “…the annual variability in bank failures was higher, so that the failures came in clusters. And cluster scare people, just as they do for airplane crashes, food poisonings, or fires.”60 The twin Panics of 1903 and 1907 were especially significant in this regard.

2.4.3 The Panics of 1903 and 1907

The Civil War and the National Bank Act undermined previously existing coordination mechanisms devised during the free banking period (the guaranty system and the southern branching networks have already been discussed). The other significant coordination mechanism, the clearinghouse systems, remained largely intact, but its ability to function was seriously weakened by provisions in the National Bank Act.

The NBA’s tiering and pooling of reserves (different reserve requirements for country banks, city banks, and reserve city banks) meant that reserves tended to concentrate in reserve centers like New York City. However, the reserve requirements of the NBA (25 percent in the case of central reserve city banks like New York City), meant that these national banks had to produce profits with just three-fourths of their asset base. At the same time, reserve center banks competed among themselves for the interbank reserve deposits of the lower tier banks. Other things equal, these two facts implied a squeeze on bank profitability unless the reserve center banks were willing to take more risk, which they did by placing money at call with brokerage firms. While this practice could

60 loc. cit.
boost profits in a rising stock and bond market, it inextricably linked a bank’s fortunes to Wall Street’s volatility.\footnote{See Atack and Passel (1994: pp. 516-517 and \textit{passim}). See also, Mishkin (2004).}

A break in the stock market in 1907, triggered runs against several New York banks, five of whom were members of (and bailed out by) the New York Clearinghouse Association. The Knickerbocker Trust Company, however, was not a member and collapsed after it was unable to meet depositor withdrawals demands. Further interventions by J.P. Morgan and the Clearinghouse (using clearinghouse certificates to fill the gap created by a shortage of lawful money), coupled with exceedingly tight credit market conditions (call loan rates exceeded 100 percent) eventually stemmed the panic, but not without damage to the finances and reputation of New York banking.\footnote{loc. cit.}

Congress responded with the \textit{Aldrich-Vreeland Act of 1908}, which for the first time officially sanctioned the Clearinghouses’ use of certificates (scrip) as an “elastic” currency for use during emergencies.\footnote{Clearinghouses had been, for decades, using certificates to stem runs and panics, even though the use of certificates as an emergency form of money had never been officially approved.} The act also established the National Monetary Commission to study conditions in U.S. monetary and banking policy and to make recommendations for reform. The Commission would later recommend, and Congress would adopt in broad outline, what would eventually become the Federal Reserve System.

2.5 The Early Federal Reserve

Democrats opposed the recommendations of the National Monetary Commission but were hopelessly divided over an alternative. Progressive Democrats favored a reserve system with a currency owned by the government, while conservative Democrats advocated a decentralized, private system. With the Republicans similarly divided, President Wilson had only to engineer a compromise within his own party. The reserve system that emerged would be owned by its member banks who would also appoint the majority of the system’s directors, but currency would be supplied by the government and distributed by the Reserve Banks.

In order to alleviate fears of centralization and dominance by Wall Street, the system was divided into twelve district banks. There would be some centralization, as the system would be supervised by a Federal Reserve Board (now called the Board of Governors), consisting of seven members, five of whom were chosen by the President (who, on the advice and consent of the Senate, would serve for 10 years), and two of whom were \textit{ex officio} members, the Treasury Secretary and the Comptroller of the Currency. However, most of the daily operations of the system were conducted by the District banks (still true today), and the District banks separately executed discounting policies including the determination of the discount rate (no longer true today).\footnote{See Huber (1989: pp. 1-6 to 1-8).}
The composition of the 12 district bank boards reflected political desire to divide power. Of the nine directors at each bank, three were to be selected from the member banks of the district (Class A directors), three would to represent the commercial, industrial, and agricultural interests of the district (Class B), and three directors would be public interest or community representatives (Class C). The chairman of the district bank would then be chosen by the directors from among the Class C directors.\footnote{See Huber (1989): 1-7. Huber also describes the method for choosing Class A and B directors that survives still. The Fed was to “divide the banks in each district into three groups of equal size according to capitalization. Each of these groups then selected one class A and one class B director.” \textit{Ibid.} See also Mishkin (2004) and Cechetti (2005).}

National Banks were obliged to become members of the system, and state-chartered banks could do so if they wished and could meet certain standards. Member banks were required to purchase district bank stock equal to six percent of their capital (3 percent payable immediately, and 3 percent subject to call). Shareholders, in return, received a cumulative six percent dividend.\footnote{Huber (1989: 1-7).}\footnote{See Atack and Passel (1994: p. 519, and \textit{passim}).}

The purpose of the Federal Reserve was to provide an elastic currency, and this would be accomplished through the discounting of commercial paper both at the respective district banks. The Federal Reserve was also to establish a system for clearing checks at no cost to the payee or payer.\footnote{loc. cit.}\footnote{Hession and Sardy (1969: p. 598). Such a system can be pro-cyclical. That is, banks are most likely to have eligible paper to discount during upswings in economic activity and less commercial paper during downturns.} Thus, the Federal Reserve served as the banker for the member banks and assumed some of the role previously filled by the clearinghouse associations. It would also serve as the federal government’s banker by acting as its fiscal agent (collecting income and excise taxes, helping to float debt issues, and so on).

The system’s currency (Federal Reserve notes), was to be backed by strong collateral—a 40 percent gold reserve and short-term commercial or agricultural paper. The inclusion of commercial paper, moreover, allowed for a flexible (elastic) money supply, which could expand and contract according to the needs of trade. Eligible paper for discounting at a Federal Reserve Bank included short-term commercial paper (up to 90 days maturity), and agricultural obligations (of up to 6 months maturity).\footnote{loc. cit.} Member banks, in other words, could sell (rediscant) their commercial paper to their district bank if they needed to augment their reserves.\footnote{Hession and Sardy (1969: p. 598). Such a system can be pro-cyclical. That is, banks are most likely to have eligible paper to discount during upswings in economic activity and less commercial paper during downturns.}

2.5.1 The Federal Reserve and War Finance

The Federal Reserve began operations in 1914, just three years before U.S. entry into the First World War. Although the United States had possessed two quasi-central banks during its history, the Federal Reserve would be the first such to carry on operations during wartime rather than as an ex post response to war.
The outbreak of World War I in 1914 precipitated a short-lived run against the dollar and U.S. bank deposits, as foreign and domestic savers sought the safety and certainty of liquidity (i.e., of gold). The Fed was not fully operational at this point, however, and so the clearinghouses would step into the breach one last time, issuing roughly $400 million in emergency currency (equivalent to about an eighth of the legal tender stock). This would be the last exercise of voluntary coordination as the clearinghouse associations and elastic emergency currency “passed into the history books at the end of June 1915.”

Despite the newly enacted income tax (1913), when the U.S. entered the war in April 1917, the government still had to rely heavily on borrowing to finance the war. Although U.S. participation in the War lasted less than 2 years, it nevertheless resulted in a 30-fold increase in public debt. The Federal Reserve, as banker to the federal government, assisted in floating this debt on the market in an orderly fashion. The federal government, at first, issued short-term floating rate debt, with the intention (later carried out) of rolling it over into longer-term gold-backed bonds. Part of the Fed’s assistance also consisted of pursuing “an easy money policy to keep interest rates low and facilitate the Treasury’s conversion of short-term war debt into longer-term obligations.”

Easy money eventually lead to a dramatic increase in currency in circulation. At the end of the War, “Federal Reserve notes in circulation amounted to less than $1 billion, but by December 1918 almost $2.8 billion was in circulation. Much of this increase resulted from monetization of federal debt.” The heavy increase in money and credit, moreover, fueled price increases. Wholesale prices would more than double between 1915 and 1920. The enormous increase in Federal Reserve assets combined with reductions in reserve requirements (reduced because of an increased faith in the [untested] abilities of our lender of last resort) resulted in a post-war boom.

The Fed recognized it was in a difficult position in 1920. If it raised interest rates, it would jeopardize the balance sheets of the banking system (heavily laden with U.S. securities as their contribution to the war effort). On the other hand, if it did not act, its gold holdings, which had been flowing out of the U.S. (partly in response to repatriation by foreigners after the war, and partly in response to low U.S. interest rates), could fall below the statutory minimum requirement for backing its notes. The Fed defended its notes by sharply raising rates.

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70 This action was authorized under the still-functioning Aldrich-Vreeland Act of 1908. See Atack and Passel (1994: p. 555), and Friedman and Schwartz (1963).
72 Hession and Sardy (1969: p. 571)
74 loc. cit.
75 Samuelson and Hagen (1943: p. 13).
76 See Phillips, McManus, and Nelson (1938) and Anderson (1949).
The result was a rapid liquidation by commercial banks. Banks dumped bonds (depressing bond prices and raising market interest rates), banks also called loans, and restricted lending. The result was depressed asset values, a contraction in the money and credit supply, and a sharp increase in bank failures.\(^{77}\) The resulting 1921 depression was one of the sharpest and deepest on record (that is, until the Great Depression). Atack and Passel (1994: pp. 565-566) suggest, in fact, that the sharp and immediate contraction in 1921 may have misled bankers and policymakers nearly a decade later; inasmuch as the immediate declines in 1929 and 1930 were relatively shallow compared to those in 1921.

### 2.5.2 Agricultural Depression and The McFadden Act of 1927

The Fed’s policy accommodation did not stimulate U.S. agriculture, which was in the midst of a shakeout and depression that would last nearly two decades. Increasing productivity from mechanization, better fertilization and pest control practices (each of which increased the cost of farming as well as the farmer’s debt load), combined with slackening worldwide demand (first when the war ended, and again later as a consequence of the Smoot-Hawley tariff) lead to lower output prices and higher costs. Consequently, farm foreclosure rates rose steadily throughout the 1920s and into the early 1930s: averaging 3.2 per 1,000 between 1913 and 1920, rising to 10.7 between 1921 and 1925, and to 16.7 per 1,000 between 1926 and 1930. Foreclosures peaked in 1933 at 38.8 per 1,000 farms in 1933. One obvious consequence of farm foreclosures was falling rural land values that in turn hurt the balance sheets of rural banks.\(^{78}\)

One remedy to poorly diversified banks, like the numerous small unit banks that dotted rural communities, was to allow these banks to be merged into larger banks. The formerly independent but small unit bank would become a branch of a larger, more geographically diverse banking enterprise. The politics of branching, however, were quite different from the economics. “Opportunities for the diversification of risk, coordination in response to shocks, and a superior allocation of capital across regions should have been irresistible to a competitive banking system, which should be governed by the principles of cost minimization of banks and utility maximization of depositors. From this perspective opposition to branching seems inexplicable on economic grounds and instead appears to be the result of irrational populist distrust of large, big-city bankers.”\(^{79}\)

\(^{77}\) See Anderson (1949) and Atack and Passel (1994).


\(^{79}\) Calomiris (1993: p. 79). It was not only populist distrust, but self-interested protection of quasi-monopoly rents (as Calomiris notes elsewhere; see note 82 below). Calomiris also adds, “the failure rate for branch banks was roughly 4 percent for the entire period 1921-1929. The bank failure rate for this same period for the country as a whole was upwards of 20 percent.” ibid. p. 45. See also Wheelock (1992) for a case study of the effects branching restrictions had on failure rates among unit banks in Kansas during the 1920s agricultural collapse.
In fact, when debating the McFadden Act of 1927, Congress was aware of the benefits of branching and even considered allowing all banks to branch.\footnote{Calls for branching liberalization dated in some cases to the 1890s. Kareken (1986: p. 7) suggests, “Evidently, the [1927] act is best viewed as an anti-branching statute (Golembe and Holland, 1983: p. 119). The meagerness of the victory achieved by those favoring branching by national banks reveals not only the political power of their opponents but also, among those not just interested in preserving local monopolies, the depth of the fear of bigness in banking.”} However, branching “proposals were rejected because the object of the legislation was to restrain the growth of branching by eliminating the incentive for states to give their banks a competitive advantage by adopting permissive branching laws, not to expand the scope of federal power of state banks.”\footnote{Huber (1989: pp. 1-10).} Thus, the self-interest motive once again comes to the fore with respect to branching. “Bank regulations, and branching laws in particular, clearly were determined in large part by the lobbying of special interest groups. Indeed, the mercantilist partnership between banks and government often gave the interests of existing banks special weight.”\footnote{Calomiris (1993: p. 79).}

2.5.3 Buildup to Disaster
In 1922, the Fed conducted an open market purchase of $400 million in U.S. government securities. The main purpose was not to provide monetary relief, though it certainly did that; rather, it was to offset “the low volume of rediscounts received by the Fed at the current high [discount] rates, which had depleted the Fed’s income-earning assets.”\footnote{Atack and Passel (1994: p. 369 and passim) point out, New York Fed President Benjamin Strong and other Fed officials “believed that price deflation and credit contraction were both necessary and desirable in 1921, [but] Strong’s attitude had completely changed by 1924. ...He recommended an open market policy be used together with a reduction in the discount rate to stimulate domestic borrowing and foreign lending.”\footnote{Wicker (1966) suggests the first major open market operation in 1923 was also an attempt to help Britain’s return to the gold standard after its war-induced suspension. See Anderson (1949), Phillips, McManus, and Nelson (1938), and Friedman and Schwartz (1963) for varying interpretations on the consequences of this dramatic shift in the Fed’s stance.} With this change in Fed policy, the roaring twenties really began to roar.

Following its third open market purchase in 1927, the Fed promptly reversed course in 1928, raising the discount rate from 3.5 to 5 percent and selling $405 million of government securities. It had become concerned about a buildup of speculation on Wall Street and what it believed was the unproductive application of credit to brokerage loans. The collapse in securities prices in the fall of 1929, following the tightening of the credit market, brought the financial system to the forefront of the peoples’ and the policymakers’ attention.
2.6 The Banking and Regulatory Responses to Depression

There are myriad and conflicting explanations for the initiating and propagating forces of the Great Depression. Our concern here is less with identifying the precise causes of the Depression, than it is with one of its most important effects: the near-total collapse of the U.S. banking system within three years of the stock market collapse. After 1929, there would be three major waves of U.S. bank failures. The first began in the fall of 1930 following on the collapse of the inaptly named, Bank of the United States. (Figure 2.3 shows the pattern of U.S. bank failures from 1894 to the 2004.)

The second wave of failures coincided with Britain’s abandonment of the gold standard in the fall of 1931. Britain’s action triggered widespread panic that the U.S. government might be forced to the same action, though domestic gold stocks were substantial. This fear was later intensified by the passage of the (first) Glass-Steagall Act of 1932 (not its more famous 1933 incarnation as the Banking Act of 1933). The 1932 Act allowed government securities to serve as a larger component of the Federal Reserve’s reserve base thereby fanning fears that the U.S. might be preparing to leave gold.

The third, final, and most devastating wave of bank failures had a distinctly political odor to it. In the summer of 1932, following his nomination for Vice President, Democratic Senator John Garner of Texas forced publication of the banks on the troubled bank list of the Reconstruction Finance Corporation (RFC). The political calculus of the Democrats was to paint the RFC as a patronage tool of the eastern financial establishment and of Republican cronyism.

Publication of the troubled bank list had its intended effect. It tarnished the RFC and the Republicans, but it also damaged the banks on the list and brought the banking and payments system to the brink of collapse. Bank runs, however, did not begin in earnest until after the November election. During the late fall and winter of 1932-33, President-elect Roosevelt left his intentions with respect to the monetary standard and inflation in flux. He neither repeated his campaign assurances to keep the dollar as “good as gold,” nor did he repudiate those promises. Instead, FDR’s vagueness aggravated a problem that was, at its core, a lack of confidence. By February 1933 (the month before inauguration), the U.S. banking system was hemorrhaging gold reserves at the rate of

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85 In this connection, see, for example, Keynes (1930 and 1936), Hayek (1933 and 1984), Robbins (1934), Phillips, McManus, and Nelson (1938), Anderson (1949), Freidman and Schwartz (1963), Rothbard (1963), Temin (1976), and Eichengreen (1992).

86 The Bank of the United States was not related to the two previous national banks of that name, but was rather a New York state-chartered bank. It was a very poorly diversified bank that was heavily weighted toward illiquid real estate loans. See Anderson (1949) for a full discussion. In addition, Wicker (1966) notes that the first wave of bank failures coincides also with the collapse of Caldwell & Co., a Nashville banking chain that, despite the safety its branching should have afforded, was nevertheless illiquid.

87 The RFC was a response of the Hoover administration to widespread business and bank failures. In the case of banks, it was supposed to provide loans against slow, but otherwise sound assets especially in cases where the Federal Reserve was unable to discount. The RFC maintained a list of the troubled banks to whom it had been lending and, for obvious reasons, kept that list confidential.

88 See Anderson (1949) and Flynn (1949).
$100 million per day.\textsuperscript{89} Bank failures in the first two months of 1933 peaked at an average 193 per month (compared to average monthly failure rates in 1930, 1931, and 1932 of 91, 191, and 121 respectively).\textsuperscript{90}

2.6.1.1 Emergency Responses

On taking office in March 1933, President Roosevelt declared a Bank Holiday, closing all banks nationwide and suspending transactions for one week. In addition, under the authority of The Trading with the Enemies Act, FDR (by Executive Order 6103) ordered American citizens to surrender private gold holdings. He also repudiated the gold repayment clauses in Liberty Bonds and other credit instruments. The Emergency Banking Act of 1933 would (ex post) ratify the power Roosevelt had assumed under the Trading with the Enemies Act.\textsuperscript{91} The Supreme Court, in turn, narrowly upheld both the confiscation and the gold clause repudiations, handing down its (5-4) decision in early 1935.\textsuperscript{92}

One purpose of abandoning the gold standard and eliminating the requirement for gold repayment in bond contracts was to permit a greater increase in the supply of money and credit than was possible under the tight constraints of a gold standard. To this end, Anderson (1979: pp. 314-315) cites that (1) the President was empowered to compel Federal Reserve to monetize of up to $3 billion in U.S. government bonds; (2) he could also issue up to another $3 billion in “greenbacks,” (3) he could establish bimetallism at any ratio he found necessary, (4) he could, on his own authority, devalue the gold content in a dollar by up to half, and (5) he could accept foreign government payments in silver at fifty cents an ounce for up to $200 million.

The restraint imposed by the gold standard—or “golden fetters” to use Eichengreen’s (1992) colorful phraseology—had been slipped as far as the monetary standard was concerned. The bank holiday, on the other hand, had postponed the problem of an unstable banking system but it had not solved it.

2.6.1.2 The Banking Act of 1933

In the 1930s, many believed that the collapse in securities’ prices contributed to the banking collapse. Moreover, the fact that banks underwrote securities offerings may have also played a role in increasing bank risk, and, therefore, a linkage between commercial banking and the stock market presented undue risk to ordinary depositors. These beliefs lead the authors of the Banking Act of 1933 to separate commercial banking (i.e., retail deposit taking) from investment banking (i.e., securities underwriting). The act further called upon the Fed to deny “reserve credit to banks that made unduly

\textsuperscript{89} loc. cit.

\textsuperscript{90} NBER Macrohistory Database series M09036, “Monthly Number of Suspended Banks, 1921-1933.”

\textsuperscript{91} FDR had received advice from his Attorney General designate as well as the Attorney General’s predecessor that, according to Flynn (1998: p. 26), the bank closure and seizure of gold holdings was unconstitutional.

\textsuperscript{92} Kurland and Casper (1994).
speculative loans." In addition, Senator Glass sought compulsory Federal Reserve membership for all banks in order to overcome the Fed’s inability to regulate non-member bank activities effectively.

Representative Steagall added a provision for temporary federal deposit insurance in response to the recent waves of bank failures. Initially, depositors would be insured up to $2,500 per institution. The Treasury and the Federal Reserve each supplied half of the Federal Deposit Insurance Corporation (FDIC) capitalization, and insured institutions subscribed to the FDIC’s capital at rate equal to half a percent of their insured deposits.

By far, deposit insurance was the most controversial feature of the bill, and one that, given the poor state-level experiences with deposit insurance, was not widely supported by either party. Huber (1989: p. 1-2) relates:

Some critics contended that deposit insurance would protect incompetent management and encourage unsound banking practices. It was even argued that deposit insurance would impoverish the federal government in the event of widespread bank failures. Since the government was far smaller at the time and thousands of banks had recently failed, this argument was more plausible than it would be today. Critics also noted that the uniform premiums violated the fundamental insurance principle that premiums should reflect risk. The Roosevelt administration opposed creation of the FDIC, viewing it as a subsidy to small and often incompetently run rural unit banks.

The 1933 Act also banned payment of interest on demand deposits as way to prevent costly (and presumably destructive) competitions for deposit funds among banks. Moreover, the imposition of a price ceiling on deposit funds, mad the law more palatable to larger banks. The price ceiling, in other words, sought to offset some of the transfers to small banks that flat-rate deposit insurance had provided.

To correct other perceived flaws in the banking industry, the 1933 act raised capital requirements for national banks back to a minimum of $50,000. In addition, the Comptroller of the Currency was authorized to permit national banks to branch to the extent permitted to state banks. Lastly, to better-coordinate the conduct of monetary policy, the act established the Federal Open Market Committee (FOMC) in Washington, composed of one representative from each of the district banks.

Further

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96 Observe that Huber is writing in the late 1980s, before the S&L crisis would be fully underway. Losses during the modern bank failure episode would approximate those seen in the Great Depression, equating to roughly 3 percent of national income in each episode.

focus on the composition of the Federal Reserve would come two years later with the Banking Act of 1935.

2.6.1.3  The Banking Act of 1935

The 1935 Act made deposit insurance permanent and raised the insurance coverage to $5,000 per depositor per institution. The stock subscription assessment on insured banks was changed to 8.3 basis points, levied against a bank’s entire deposit base rather than just insured deposits. Furthermore, the FDIC could terminate coverage for unsound banks and could facilitate mergers, lend to or purchase assets from troubled institutions if doing so would protect the insurance fund.  

The 1933 Act had prohibited interest payments on demand deposits. The 1935 Act went further by directing the FDIC and the Fed to establish interest rate ceilings on time and savings deposits. It also eliminated double liability on owners of national bank stock.

The biggest changes, however, occurred with respect to the organization of the Federal Reserve. The 1935 Act centralized the Fed’s power in Washington, in the renamed Board of Governors of the Federal Reserve System. This had the effect of demoting the District Banks to the role of administrative organs. Appointments of district bank governors, for example, (now renamed presidents) had to be approved by the Board in Washington. The Board also had to approve the District Bank’s discount rate setting. The Treasury Secretary and Comptroller were eliminated from the Board as *ex officio* members, while the terms in office for the governors were increased to 14 years, without the possibility of reappointment. Lastly, the Fed was given substantially wider latitude over setting reserve requirements—a responsibility it would apply vigorously before the end of the 1930s.

2.6.1.4  Changes in Reserve Requirements

During the bank panics, and especially the second bank panic in late 1931 and early 1932, it became apparent to bankers and depositors that the Federal Reserve was not going to fulfill its responsibilities in a crisis. Consequently, banks began voluntarily to hold

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98 *ibid*, p. 1-15. Dwyer (1981) finds evidence that the Banking Acts of 1933 and 1935 induced bankers to substitute deposit insurance for capital. This is consistent with interpretations that find deposit insurance increases moral hazard among bankers, as it represents a shifting of risk from shareholders to the deposit insurance fund and by implication the taxpayers. See, for example, Benton and Kaufman (1996).

99 See Friedman and Schwartz (1963 [1993]: pp. 299-419) for one widely accepted interpretation of the bank panics and the Fed’s poor response. For a somewhat different view on the Fed’s response from a contemporary banking observer, see Anderson (1949 [1979]: pp. 221-223 and especially pp. 260-267). According to Anderson, the Fed’s inability to provide accommodative monetary relief in 1932 stemmed mainly from its previous efforts to hold down interest rates through aggressive open market operations in US government securities in 1930. “Had the Federal Reserve banks been able, in the autumn and winter of 1931-32, to buy the $290 million of government securities which they had previously bought between November 13, 1929, and August 20, 1930, they could have eased the strain a great deal” (p. 264) In short, because the Fed was already at its lawful limit for government securities holdings, it could offer no further help. Its inability triggered a liquidation of bank credit in which deposits of member banks contracted nearly 40% in just 6 months—going from $5.552 billion in June 1931 to $3.347 billion by December. (*ibid.*) In short, Friedman and Schwartz are right that the Fed failed to act, but it seems that it did not do so because it could not do so.
more reserves than minimally required (excess reserves) such that the ratio of reserves to deposits rose above 40 percent by the late-1930s.

A bank’s choice to hold excess reserves (i.e., beyond those legally required minimums) can be a prudent, defensive measure taken in response to the weakened condition of the banking system, or a rational anticipation of further depositor withdrawals. Policymakers, and in particular the Fed by contrast, saw the increase in excess reserves as a threat to credit availability and tried to correct it by raising minimum reserve requirements in a misguided attempt to “soak up” the excess and force them into the lending channel. The attempt backfired as bankers simply continued to hold excess reserves over the now-higher minimum requirements.

A Fed policy of sterilization of gold inflows, and the increase in reserves, Friedman and Schwartz (1963) contend, combined to shrink the available stock of money and contributed to the 1937-38 depression. There were however, other significant factors at work including the Undistributed Profits Tax, as well as the increase in inheritance and estate taxes. See Anderson (1949).

After the disastrous experience of the late 1930s, changes to reserve requirements, however, were much more sparingly and cautiously made. As instruments of monetary policy, changes in reserve requirements have the potential to elicit very large effects on money and credit availability. Changes in reserve requirements, in other words, are a blunt tool. Small changes in required reserves have the potential exert large changes in credit availability through the operation of the deposit multiplier (as the experience of the 1930s demonstrated). Second, the recent creation of the FOMC meant that open market operations, a more direct and effective means of implementing changes in monetary policy, would assume a more prominent role.

After the Banking Act of 1935, excepting brief spasms like the reserve requirement changes in 1937, money and banking receded into the Great Depression background. Policymakers and the Roosevelt administration instead shifted focus to structural economic issues (i.e., issues of economic organization). Nevertheless, in spite of its comparatively short if spectacular run, the traumatic experiences with money and banking during the Great Depression continue to exert a gravitational pull on U.S. banking policy. As Calomiris (1993: p. 99) concludes,

Not only has the accident of the Great Depression had a lasting regulatory effect through the inertia of policy, it has provided selective ‘lessons from history’ that continue to exert a death grip on the imaginations of academics and policymakers, providing seemingly incontrovertible evidence of the inherent instability of banking and the need for constant government intervention to prevent a ‘melt-down.’ A better set of lessons would have been how preventable and unusually bad the Great Depression was, even from the jaundiced perspective of earlier American banking history; and more important, that the fragility of American banking has always been an artifact of a fragmented, inefficient, and uncoordinated unit banking system.
2.7 The Modernization Era

After the catastrophe of the Great Depression and its thousands of bank failures, the U.S. banking system was remarkably calm. Deposit insurance, at least for several years would have its desired effect, as suspension and failures dropped significantly, and runs stopped completely (see Figure 2.3). The industry remained largely organized along unit banking lines with limited branching. This fundamental weakness had been papered over (with deposit insurance and a strengthened Federal Reserve), but it still had not been systematically addressed. Remaining systemic weaknesses would not begin to reappear until the 1980s, with a new wave of collapse culminating with the S&L crisis. The first cracks began to appear in the 1970s, but in the relatively sanguine 1950s and 1960s, U.S. banking was staid and quiet, accompanied by some modest innovation within the constraints of its tight regulatory fabric.

2.7.1 The Bank Holding Company Act of 1956

One continuing innovation, actually in use since the 1920s, was the use of bank holding companies (BHCs) to circumvent branching restrictions. A holding company functions as an umbrella organization under which individual sub-corporations pursue varying activities. The BHC holds shares in each the underlying entities, which might be banks located in different areas of a state, and/or could include enterprises engaged in financial services tangentially related to banking (such as insurance, real estate, etc.).

The main purpose of the Bank Holding Company Act (BHCA) was to restrict bank holding company activities to the banking business. Oddly, despite the political economy that would suggest otherwise, Huber (1989: 1-16) argues the act was not meant to curtail use of holding companies as means of avoiding state limitations on branching. Kareken (1986, p. 8), however, drawing on a history of the act prepared by Treasury, suggests the opposite. The purpose, Kareken aruges, “was and is to keep (national) banks, disguised as bank holding companies, from subverting the federal government’s prohibition against interstate banking.”

The BHCA applied to corporations that owned or controlled “at least 25 percent of two or more banks...In evaluating the merits of individual applications the FRB was...to consider...(1) the financial history, managerial capacity, and futures prospects of the banks involved; (2) the competitive consequences...; and (3) the convenience and needs of the public.”

Interestingly, the act’s definition that a BHC consists “of two or more banks,” induced its own form of innovation. This two-bank minimum offered a loophole, referred to as the “one-bank bank holding company,” and the inclusion of the loophole was deliberate. It reflected “an accommodation to the special problems of small-town banks. Frequently,

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100 See Huber (1989: p. 1-17), where he suggests that Congress had considered limiting BHCs in both the 1933 and 1935 Banking Acts. He notes, though, that at the time “controlling undesirable expansion was not a burning issue.” ibid.

101 It is one of the ironies of the unusual treatment of banking, that we see the federal government protecting and even facilitating restrictions against interstate commerce, including interstate branch banking.
the owner of such a bank was simultaneously engaged in the operation of another business, notably services activities such as real estate and insurance. If the BHC form of organization were prohibited, these activities would have to be operated separately, thus weakening the banks and concealing [potentially] important conflicts of interest.102

The protection of small unit banks had an unintended consequence. Larger banks saw an opportunity to escape additional regulation under the Bank Holding Company Act. They quickly created large one-bank BHCs. “In less than a year, 100 new one-bank BHCs were formed, and total BHC assets rose from $18 billion to $108 billion. Since the [Act] did not apply to these entities, there were virtually no limitations on the economic activities in which they could engage.”103 In 1970, at the urging of the Fed, Congress amended the 1956 Act to eliminate the one-bank loophole. Banks had to divest most of their nonbank activities if such activities were begun after 1968.104

2.7.2 Changes in the 1960s and 1970s
There were several changes to the legislative and regulatory framework in the 1960s and 1970s, including Financial Institutions Supervisory Act (FISA) of 1966. Previously, a regulator’s only recourse upon finding a legal violation was to apply the drastic measures of either sending an institution into conservatorship or revoking its insured status. FISA gave regulators the added power to issue cease and desist orders, which could compel banks to stop unsafe or unsound banking practices.105

The Bank Secrecy Act (BSA) of 1970, despite its name, was not an effort to improve bank secrecy or to protect customer privacy. Rather, it required banks to keep detailed records on customer transactions (including microfilming, or in other ways, recording all checks processed) to facilitate investigations and prosecutions of illegal activities. The law also required banks to file reports with the Secretary of the Treasury for all transactions involving more than $10,000 in funds, and to report all currency transactions greater than $5,000.106

Before 1978, foreign banks could open branches across state lines, were not subject to reserve requirements, and could operate securities affiliates. In short, foreign banks

103 loc. cit.
104 Another loophole in the BHCA would be exploited in the early 1980s: the non-bank bank. The act defined a bank as an institution that took deposits and made loans. If an institution did only one of these activities, it was a “nonbank” and its parent was not subject to the BHCA. President Reagan’s first Comptroller of the Currency began chartering nonbanks from Merrill–Lynch, Sears, and American Express. Fear once again resurfaces, only this time at the Federal Reserve, which was fearful that “Insurance, securities, and retail companies were getting into banking without any role for the Fed as watchdog. The loophole seemed to threaten the whole structure of financial regulation.” Haraf (1988).
106 Huber (1989: p. 1-22) points out that in connection with the BSA’s requirement to record bank transactions, many banks routinely made copies of customer checks already. However, the rising cost of doing so encouraged many larger banks to stop the practice. The withdrawal of many banks from what had been a voluntary protocol, prompted the BSA.
represented more agile, less regulated competition for U.S. banks. The International Banking Act of 1978, subjected foreign banks operating in the U.S. to the same dual banking system of regulation facing U.S. banks.\(^{107}\)

Originally titled, the Safe Banking Act, the Financial Institutions Regulatory and Interest Rate Control Act of 1978 established limits on bank insider transactions, set up rules governing electronic funds transfers, and enabled thrifts to offer third-party payment services.\(^ {108}\) Although these were the principal motives of the law, the legislation in fact, contained over 20 titles covering, among other things, financial privacy, minting gold medallions, and creating the Federal Financial Institutions Examination Council.

### 2.7.3 Disintermediation Leads to Problems in the 1980s

Beginning in the late 1970s, the regulatory and policy seeds sown in response to the Great Depression began bearing some bitter fruit. Market interest rates were rising in response to rising inflation, as well as, later, in response to the Federal Reserve’s efforts to wring inflation out of the economy. Consequently, deposit interest ceilings on time accounts and prohibitions against interest paid on demand deposits meant that banks were no longer attractive instruments for depositors. By contrast, money market and cash management accounts offered by Wall Street and other nonbank firms paid attractive market rates of interest at the same time they offered some limited check writing services. The combination of interest rate limits and innovation by nonbank rivals resulted in disintermediation—i.e., the loss of banking’s principal role as an intermediary.

In passing the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980, Congress observed that its responses under the Banking Acts of 1933 and 1935—namely, the limitations on deposit interest rates—were no longer appropriate or fair in the turbulent interest rate environment of the late 1970s. DIDMCA also continued the trend of equalizing the treatment of different types of depository institutions. Thrifts, for example, were given the ability to offer checking accounts, a wider lending authority, the ability to engage in credit card operations, and to create trust departments.\(^ {109}\)

Depositories throughout the U.S. were allowed to offer interest-bearing checking accounts for the first time since 1933, but only to consumers and non-profit organizations. The deposit interest payment prohibition on commercial checking accounts remained. The Federal Reserve also was now obligated to charge for its check clearing services, and to make such services were available to non-members. In addition, DIDMCA now made reserve requirements established by the Federal Reserve binding on all institutions (federal and state chartered, as well as commercial banks and thrifts).

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\(^ {107}\) See Mishkin (2004: p. 256 and passim).

\(^ {108}\) See Huber (1989: p. 1-26). Third party payment services meant allowing S&Ls and credit unions to offer checking accounts (or NOW and share draft account respectively).

Lastly, the Act raised the maximum level of deposit insurance coverage from $40,000 to $100,000.\textsuperscript{110}

2.7.3.1 Regulatory Forbearance, Zombies, and Vampires

By the early 1980s, depositories (thrifts in particular) were still suffering from disintermediation, despite their new powers obtained in the previous two acts. The fact is, it would take time (and perhaps lower market interest rates) for the thrift industry’s balance sheet to readjust after years of accepting capped deposits and lending for long-term low interest mortgages.\textsuperscript{111} The Depository Institution Act of 1982 (“Garn-St. Germain Act”) further expanded thrift industry powers by enlarging the base of assets against which thrifts could lend. Thrifts “were now allowed to have up to 40\% of their asset in commercial real estate, up to 30\% in consumer lending, and up to 10\% in commercial loans and leases.”\textsuperscript{112}

These expanded lending opportunities represented new but much more volatile areas for the relatively staid thrift industry. Combined with increased deposit insurance coverage and freedom from deposit interest ceilings, the enticement to moral hazard on the part of some thrift managers was predictable. Some thrifts recaptured part of their lost deposit base by paying higher deposit rates at the same time they entered new and unfamiliar lending markets, particularly commercial real estate. The first casualties appeared in Texas in 1981 and 1982, where collapses in energy and farming contributed to $10 billion in losses for the thrift industry as a whole.\textsuperscript{113} Further aggravating a bad situation, in 1986, Congress passed Tax Reform Act, which contained tax treatment provisions that made investments in real estate (especially rental properties) less attractive.

Thrift insolvencies continued to mount, and in response, regulators (the Federal Home Loan Bank Board and the FSLIC) pursued a policy of regulatory forbearance. In essence, regulators chose to look the other way, and allow insolvent S&Ls to include goodwill in the calculations of minimum capital. Mishkin (2004: p. 275) points out the decisions of regulators to forbear traced to three principal motivations: (1) the FSLIC insurance fund could not pay off all the depositors of insolvent thrifts without bankrupting itself; (2)

\begin{itemize}
  \item “The FSLIC and the FDIC were authorized to assist institutions meeting prescribed net worth standards that had suffered losses primarily as a result of mortgage lending activities. This assistance was provided through the purchase of ‘net worth certificates.’ These certificates are issued by an institution and purchased with promissory notes by the insuring agencies.” Net worth certificates were junior to all claims except the common shareholders. Huber (1989: pp. 1-32).
  \item Mishkin (2004: p. 274). “S&L regulators allowed up to 10\% of assets to be in junk bonds or in direct investments (common stocks, real estate, service corporations, and operating subsidiaries).” ibid.
  \item Texas was a unit banking state. Calomiris, Hubbard, and Stock (1986, p. 469) found that “California had an exceptionally high rate of troubled agricultural loans during the early 1980s. As of 1984, 8.4 percent of California’s agricultural loans were in nonaccrual status, compared to an average of 4.7 percent for the rest of the country. …Despite these difficulties, California accounted for only 1 of 68 agricultural bank failures in 1985. The reason they weathered the storm so well is that most agricultural lending in the state comes from large well-diversified banks, which hold only 3 percent of their portfolios in agricultural production loans.” As cited in Calomiris (1993: p. 42)
\end{itemize}
regulators were may have been too close to those they regulated; and (3) regulators simply did not want to admit a policy mistake.

Forbearance, though perhaps understandable (and possibly even well intentioned), created twin monsters: zombies and vampires. A technically insolvent or zombie S&L (i.e., one whose capital base is depleted but for regulatory goodwill) has little to lose by making high risk bets (“betting the bank” as it were). If its bet pays off, the thrift avoids bankruptcy, but if not, one could always assert the thrift was probably beyond help anyway. Given the high probability of failure (i.e., the high risk) of such bets, it is not surprising that such a strategy would only add to mounting industry losses. Moreover, to fund the high-risk bets, many thrifts paid high interest rates to attract depositors. “By offering high deposit rates, bankrupt S&Ls sucked the funds out of healthy institutions, becoming vampires instead of zombies.”

2.7.4 The Savings & Loan Crisis

By the latter half of 1980s, mounting losses in the thrift industry had all but depleted the FSLIC deposit insurance fund. The Reagan administration and Congress seriously underestimated the size of the problem, providing less than $11 billion to recapitalize the FSLIC with the passage of the Competitive Equality in Banking Act of 1987 (CEBA). To repay the contributed capital, CEBA raised annual assessments against insured institutions to nearly 21 basis points of deposits. “Recognizing that this approach made FSLIC insurance even less attractive, Congress made provision for levying exit fees against institutions that gave up their FSLIC membership.”

However, rather than correcting the problems regulatory forbearance had already caused, CEBA allowed the Federal Home Loan Bank Board to continue it. In 1988, the year following CEBA's passage, S&L losses exceeded $10 billion. In 1989, losses would almost double to $20 billion. The thrift industry was sinking fast and lifelines thrown to it thus far were inadequate.

Congress responded with the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989. It sought to resolve the S&L crisis by eliminating the Federal Home Loan Bank Board and the FSLIC. The functions performed by the Board went to the new Office of Thrift Supervision (OTS) inside the Treasury Department, while the deposit insurance functions of the FSLIC were handed over to the FDIC. FIRREA also created the Resolution Trust Corporation (RTC) to liquidate the assets of failed

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115 Thus besides having to compete with zombies and vampires, healthy well-managed institutions now had to pay for their industry's cleanup.


By the time the RTC completed its work six years later, the bailout of the S&L industry is estimated to have cost taxpayers $150 billion.

The banking industry, and in particular the FDIC, was not immune to the troubles afflicting the thrift industry. By the late 1980s, the FDIC’s insurance fund was nearly depleted as well. Congress responded once again, this time with the FDIC Improvement Act (FDICIA) of 1991. Its aim was to recapitalize the bank insurance fund, but also to put in place controls that would minimize future taxpayer losses. The bill recapitalized the insurance fund by allowing the FDIC to borrow from the Treasury, requiring in return, higher deposit insurance premiums (1.25%) to be charged against insured deposits.

To reduce the possibility of future taxpayer losses, the FDICIA required the FDIC to pursue the least-cost resolution method for failed banks. Employment of the least cost method implied that the “too-big-to-fail” doctrine was only operable under extraordinary circumstances. For failing banks, (that is, banks that were severely undercapitalized but were not yet insolvent) the FDIC was obliged to take Prompt Corrective Action. Prompt corrective action meant forbearance (regulatory discretion, in other words) was no longer an option. The FDIC was also to assess deposit insurance premiums on a risk-adjusted basis.

2.7.5 The Calm after the Storm


Kroszner and Strahan (1999) provide a detailed and fascinating study of the political motivations behind the adoption of interstate banking at both the state and federal levels. Essentially their argument distills down to the costs of maintaining the limitations on branching had finally exceeded the benefits (rents) that could be extracted by maintaining the barriers. Banking was undergoing rapid technological change (with the introduction of faster cheaper computers and communications), at the

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118 Mishkin (2004: p. 278). The RTC sold more than $450 billion of real estate owned by failed institutions. “After seizing the assets of about 750 insolvent S&Ls, over 25% of the industry, the RTC sold over 95% of them, with a recovery rate of over 85%.” ibid.

119 loc. cit.

120 The least cost method of resolution implies (but has not been stress-tested) that uninsured depositors are likely to suffer losses. Indeed, since the adoption of FDICIA the Federal Reserve orchestrated the bailout of Long Term Capital Management (LTCM) in 1998. Though LTCM was comparatively small, it was linked to several very large banks, the failure of any one of which could have imperiled the financial system (or so it was held at the time).

121 See Mishkin (2004: p. 279). For more on risk-based capital standards, including those based on the international Basel Accord, see Chapter 6.
same time it faced competition from domestic (e.g., money market funds) and foreign sources. Disintermediation and subsequent widespread institutional failure starkly revealed the interplay of these and other forces in such a way that deregulation of branching at last made sense.\textsuperscript{122}

In 1999, Congress passed the Financial Modernization Act of 1999 ("Gramm-Leach-Bliley Act"). It repealed the Glass-Steagall Act’s separation of investment and commercial banking.\textsuperscript{123} Securities and insurance firms were allowed to purchase banks, and similarly, banks could purchase insurance and securities firms and engage in real estate activities. The Act also set in motion significant changes in regulatory turf:

...states retain regulatory authority over insurance activities, while the Securities and Exchange Commission continued to have oversight of securities activities. The [OCC] continues has the authority to regulate bank subsidiaries engaged in securities underwriting, but the Federal Reserve continues to have the authority to oversee bank holding companies under which all real estate and insurance activities and large securities operations will be housed.\textsuperscript{124}

2.8 Conclusion
An ancient Chinese proverb (or curse) states, “may you live in interesting times.” With respect to U.S. banking, the times and the journey have certainly been interesting, from the Funding Act of 1790 and the first Bank of the United States, to the Banking & Branching Efficiency Act and the Financial Services Modernization Act. The pendulum of change swung, sometimes wildly, from intense regulation and control of the banking and monetary systems, to periods of less intense regulation and more freedom to innovate, coordinate, and serve.

Beyond being a highly variable experience, however, the U.S. experience was also unusual in comparison to other countries. “Why was the United States so different? The answer lies in the institutional and historical peculiarities of the American political experience: the protection of local interests ensured by federalism, the distinctly American method for allocating power among national legislators (which also gives disproportionate weight to regionally concentrated minorities), and the legal precedents

\textsuperscript{122} Calomiris (2002) provides an interesting parallel between deregulation that began in the 1920s in response to the agricultural bust, and deregulation in the 1980s and 1990s. In the former instance, deregulation was stillborn because of the Great Depression, while in the 1980s and 1990s it succeeded because of differences in the technological, institutional, and ideological environment. As a practical matter, Calomiris (2002: p. 17) suggests these forces meant that “the political costs of failing to address perceived regulatory flaws became significantly large.”

\textsuperscript{123} The separation had been significantly breached in 1988 when the U.S. Supreme Court upheld the Federal Reserve’s decision to allow J.P. Morgan to underwrite corporate debt securities. The Fed extended permission to underwrite corporate equities in 1990. Mishkin (2004: p. 251).

\textsuperscript{124} Mishkin (2004: p. 251). The new multi-line holding company is now called a Financial Holding Company.
established by the Supreme Court, which gave states great latitude in chartering of banks.” Calomiris (1993: 90)

Fear of concentrated power, of moneyed interests, and of banking in general punctuated a great deal of the history of U.S. banking legislation and regulation. Sometimes that fear would manifest itself in deregulatory actions, as in the antebellum free banking era, or the 1920s (albeit short-lived), and in the 1990s (not yet complete). Other times, fear generated less-considered responses as in the periodic bank panics that have dotted U.S. history.

To be sure, fear may have also been an effective mask to cover and rationalize self-interested motives. Unit bankers seem to have employed this tactic for years to protect their perches in the financial world, and to argue successfully for federal deposit insurance, for example. Larger banks have used fear of unregulated foreign bank competitors and domestic nonbank competitors to argue for rules that subjected their competitors to the same regulatory costs and consequences that they had to bear.

Self-interest, however, need not always carry a negative connotation. U.S. Bankers of all sizes were often quite adept at harnessing self-interest to coordinate responses and to solve collective action problems that could otherwise harm the industry and its participants. Clearinghouses and mutual guaranty systems are two examples of effective and self-interested coordination.

Not to be overlooked either is the self-interest of the policymakers and regulators. The desire to raise revenues more conveniently, especially in connection with war finance, can be one manifestation of this phenomenon in politics. Another manifestation is the desire of regulators to protect their institutions and reputations even if doing so leads to undesirable social consequences. Forbearance in the 1980s offers a vivid case in point here.

But just as bankers can positively harness self-interest, so too, it seems, can policymakers. When confronted with the inescapable conclusion in the 1980s that the system could not continue in its presently regulated state, it did not. Regulators and policymakers shifted gears and opted for measured deregulation, rather than preside over a declining industry.

While recent changes offered welcome relief, the task of rationalizing U.S. banking regulation is not complete. Calomiris (2002), for example, lists half a dozen significant hurdles that remain in banking.\(^\text{125}\) Moreover, while allowing nationwide branching and consolidation certainly corrects a long-standing weakness in the industrial organization of U.S. banking, without considering the other patches that have been applied to the

\(^{125}\) These unresolved issues include: (i) unclear definitions in Gramm-Leach-Bliley as to what financial activities qualify under the new law; (ii) a continued segregation of commerce and finance; (iii) using the central bank (the director of monetary policy) as also the chief regulator; (iv) that because governments grant charters they should also tax and regulate to recover the rents such charters confer; and (v) the absence of credible market discipline. See Calomiris (2002: p. 18).
system over the years (such as deposit insurance for example), reform of one element, however critical, can be ineffective or worse without reform of other policies. In connection with branching and deposit insurance, for example, Calomiris (1993: p. 100) warns, “simply allowing bank consolidation or branching as a means to stability, without reforming deposit insurance, may be highly inappropriate in the current context, and may lead to even greater losses. As Boyd and Graham (1991) point out, in today’s economy large banks do not seem less likely to fail, possibly because the incentives to take on risk (due to the mispricing of deposit insurance) are largest for these banks.”

Perhaps the most useful conclusion to draw from U.S. banking history is that the industry is not inherently unstable, periodic bouts of severe instability notwithstanding. It can, however, be made that way by poor institutional designs based on fear-induced and self-interested reactions.

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126 Although the Federal Deposit Insurance Corporation Improvement Act sought to correct deposit mispricing by charging risk-adjusted premiums for deposit insurance, Mishkin (2004: p. 279) points out that it has not worked out that way. The FDIC’s risk-based premiums have instead “resulted in 90% of the banks with over 95% of the deposits paying the same premium.”


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Figure 2.1 Early Federal Banking Activity

- **Funding Act of 1790**
  US assumes state War debts; redeems at Par. Est. Central Bank. DC

- **1st Bank of the United States. Chartered**
- **1st Bank of US Charter Lapses**
- **2nd Bank of US Chartered**
  - President Jackson vetoes charter renewal for 2nd Bank of US, which closes in 1836. No further federal role in banking until 1863

- **Currency Act of 1863**
  - National Bank Act of 1864
    - Taxes state bank notes (2% then 10%). Est. Office of Comptroller of the Currency (OCC) to supervise National Banks. Required National Banks to purchase US bonds equal to one third of their capital. OCC held bonds and paid banks with “Greenbacks” equal to 90% of bonds’ value.

- **Specie Resumption Act of 1875**
  - Resumes (by 1879) redemption of legal tender into gold suspended during Civil War

- **Federal Reserve Act of 1913**
  - Est. Federal Reserve System. National banks must be members. Gave clearing, discounting, and supervisory roles to the Fed

- **McFadden Act of 1927**
  - Prohibited Interstate banking and restricted intrastate branching to that permitted to state banks.

- **Free Banking Era**

- **Banking Act of 1933**
  - “Glass-Steagall” Separated commercial and investment banking. Created FDIC as temporary agency

- **Banking Act of 1935**
  - Est. FDIC as permanent agency
Figure 2.2 Modern Federal Banking Activity

**Bank Holding Company Act**
FRB approves bank holding company (BHC). BHCs can not acquire out-of-state banks unless the bank’s home state allows it.

**Community Reinvestment Act**
Requires banks to lend in the communities where they take deposits.

**Bank Secrecy Act**
Banks must record all clearings and report all transactions over $10,000 and overseas transactions over $5,000.

**Depository Institutions Deregulation and Monetary Control Act**
New thrift powers. Est. NOW accounts. Phases out Reg. Q (interest rate caps). Deposit insurance to $100,000.

**Competitive Equality in Banking Act**
Set new standards for funds availability. Recapitalizes FSLIC.

**Depository Institutions Act**
"Garn-St. Germain" Expands FDIC assistance to troubled banks. Expands thrift powers. Creates net worth certificates. BHCs can acquire failing banks in other states.

**Depository Institutions Deregulation and Monetary Control Act**
New thrift powers. Est. NOW accounts. Phases out Reg. Q (interest rate caps). Deposit insurance to $100,000.

**Financial Institutions Regulatory and Interest Rate Control Act**
Limits bank insider transactions. Est. electronic funds transfers law.

**Financial Institutions Reform, Recovery, and Enforcement Act**
S&L crisis resolution. Creates OTS, RTC, and RFC FDIC insures thrift deposits; FSLIC dissolved.

**Financial Modernization Act**
"Gramm-Leach-Bliley" Repeals Glass-Steagall separation; relaxes some BHC Act restrictions, allowing Financial Holding Company to underwrite insurance and securities.

**Int'l Money Laundering Abatement and Financial Anti-terrorism Act**
Add'l records and scrutiny of foreign bank transactions and persons.

**Interstate Banking & Branching Efficiency Act**
"Riegle-Neal" Lifts ban on interstate banking.

**Financial Institutions Reform, Recovery, and Enforcement Act**
"Riegle-Neal" Lifts ban on interstate banking.

**FDIC Improvement Act**
Least-cost resolution for failed banks; Prompt Corrective Action for failing banks. New capital requirements. Truth in Savings.
Figure 2.3
U.S. Bank Failures by Year

Source: FDIC Historical Statistics on Banking, Bank & Thrift Failures, Table BF01. Shaded areas indicate NBER business cycle contractions.