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New York and the Politics of Central Banks, 1781 to the Federal Reserve Act

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Abstract: The paper provides a brief history of central banking institutions in the United States. Specifically, the authors highlight the role of New York banking interests in the legislations affecting the creation or expiration of central banking institutions. In our previous research we have detected that New York City banking entities usually exert substantial influence on legislation, greater than their large proportion of United States' banking resources. The authors describe how this influence affected the success or failure of central banking movements in the United States, and the authors use this evidence to support their arguments regarding the influence of New York City bankers on the legislative efforts that culminated in the creation of the Federal Reserve System. The paper argues that successful central banking movements in the United States owed much to the influence of New York City banking interests.

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Key words: financial crisis, central bank, banking legislation

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New York and the Politics of Central Banks, 1781 to the Federal Reserve Act

The chartering of banks by the federal government has been controversial since the beginning of the American Republic. This has been particularly true of the establishment of central banks. Much opposition to chartering central banks in United States history often has been attributed to rural, agrarian, and populist interests. A closer investigation of the opposition, however, indicates that more specific interests groups can be identified, ones often having little direct connection to stereotypical agrarian interests. Furthermore, the interests opposing and supporting the First and Second Banks of the United States specifically had striking parallels that reappeared (or perhaps persisted) in the debates leading up to the Federal Reserve System almost a century later. New York City banking interests in particular appear repeatedly.

I. The First and Second Banks of the United States.

The first bank chartered in the United States appeared in 1780 when Robert Morris established the Bank of Pennsylvania, in part to aid in purchasing supplies for the Continental Army. At about the same time, Alexander Hamilton was pushing for the creation of a bank to aid in the financing of the Revolutionary War, a bank he referred to as the Bank of the United States. Hamilton's first attempt at banking failed. In 1781 Morris became Superintendent of Finance for the United States and immediately faced the task of pulling the federal government back from the edge of bankruptcy. He petitioned Congress for the creation of a bank designed to replace the depreciated currency with bank notes of the new bank, notes that could be used to pay federal taxes and duties and would be payable on

demand in specie. In May, 1781 Congress approved Morris's plan for the Bank of North America.

Morris had difficulty in raising the capital to start the bank and eventually resorted to using stock in his Bank of Pennsylvania as some of the initial capital for the Bank of North America, which subsequently subsumed the Bank of Pennsylvania. Between 1781 and 1784 the Bank was successful in helping the US straighten out its finances, but when Morris resigned as Superintendent of Finance, the Pennsylvania Assembly revoked the Bank's charter in 1785. This outcome was the result of political maneuverings among the agrarian majority of the Pennsylvania Assembly and some of Morris's political enemies (Hammond, p. 53; Kaplan, p. 13), and it would not be the only time rural interests would affect the course of banking in the US. Still, the role of agrarians in this early struggle is unsettled. Bray Hammond intimates that there were some wealthy, commercial interests at work who were using the agrarians as "cats paws" to further their own interests in the controversy (Hammond p. 62). The Bank's charter, however, was renewed for 14 years in 1787, in part the result of skillful argumentation by Thomas Paine against the agrarian position in the Pennsylvania Assembly.

The Bank of North America never really served as a central bank (there were no other banks in the US until 1784, when the Bank of New York was chartered), apart from issuing its own notes and serving as the federal government's fiscal agent, although it existed as a commercial bank until 1929, when it was acquired by the Philadelphia Company for Insurance on Lives and Granting Annuities. The same is not true, however, for the First Bank of the United States, the bank that ushered in central banking in the US. In Philadelphia, the establishment of the First Bank in 1791 initiated the stormy congressional

and constitutional debates about the wisdom of creating such an entity, and it created a contingent of opponents reflecting a diverse set of political and economic interest that persisted for over a century. A substantial constituency displayed a strong aversion to a central bank. Thomas Jefferson and James Madison believed it to be unconstitutional in that the Constitution did not grant the federal government the specific power to charter corporations, a privilege left to the states (Kaplan, pp. 23-4); others believed that in its practical use it had become dominated by foreign stockholders or that it was helpful to northern businessmen but not southern agriculturalists. Jefferson also believed that the monopoly power of the Bank would hinder the formation of state-chartered banks. His fears were not obviously born out, however. In 1791 there were four or five state-chartered banks, but by 1811 there were over 100 and by 1818 there were well over 300 having loans and discounts well in excess of $48 million (Van Fenstermaker 1965, pp. 401, 405).

Separately, the Bank was perceived to be using central bank-like powers to manipulate credit conditions. For example, by presenting state bank notes to the state banks for redemption in specie, the First Bank of the United States could restrain or contract credit, whereas forbearing on redemption would tend to support credit growth. Opposition to the First Bank was just able to overcome its supporters, and renewal of its charter in 1811 failed narrowly in the Senate when a 17-17 vote was broken by the nay vote of Vice President George Clinton. Kaplan (pp. 31-2) also notes that during the Bank's 20 year life, support and opposition did not regularly follow party lines, nor did it line up along commercial interests; Federalists and Democrats, farmers and businessmen, all opposed and supported the Bank at some point.

The Second Bank of the United States was chartered in 1816 and located as the First Bank in Philadelphia. The Second Bank was formed in light of the difficulty in financing the War of 1812 and the inflation that resulted from the rapid increase in the number of state banks following the first Bank's demise. Opposition to the Second Bank quickly arose. Southern and western interests agricultural interests, for example, opposed the Bank after it discontinued making direct, long-term agricultural loans in those regions, resulting in what were believed to be unusually high interest rates in those regions (Taus, p. 47). Richard McCulley argues that Jackson's opposition to the second Bank of the United States was supported by two different forces within the Democratic Party (1992, p. 7). One was agrarian and distrustful of banks and "inflationary" paper currency, while the other was commercial and entrepreneurial. This latter group desired paper currency and bank credit but was opposed to the constraints imposed by the Second Bank on note and credit expansion. This coalition is important to note, as one similar to it reappears in the 1890s in the debate leading up to the Federal Reserve System. The agrarians by this time, however, have become supporters of bank credit and paper currency rather than hard money.

There was also opposition to the Bank coming from the state-chartered banks that viewed the Second Bank as a competitor, particularly those in New York City. Martin Van Buren, Andrew Jackson's Secretary of State and later Vice President, convinced his influential Wall Street friends to oppose the Bank. Hammond also notes that New York City bankers were opposed to a bank based in Philadelphia collecting import duties in New York but depositing them in Philadelphia (pp. 352-3), an understandable opposition from a business standpoint. Hammond indicates that Van Buren was, nevertheless, clever enough to clothe his opposition to the Bank in terms of "a struggle of the 'people' against the 'money

power,'" a ruse that fooled Nicholas Biddle long enough to keep him from seeing subversive role of New York bankers in the demise of the Bank (p. 354). Opposition to the Bank was made concrete with Andrew Jackson's veto of the charter renewal of the Second Bank of the United States in 1832 and its subsequent charter revocation in 1836. The Second Bank of the United States subsequently changed its charter to state-charter (Pennsylvania). It became the United States Bank of Pennsylvania and was run by Biddle from 1836 until its closure in 1841.

Andrew Jackson certainly was a highly visible and virulent foe of the second Bank, and he also had a strong personal aversion to banks in general. Kaplan argues, however, that it was Nicholas Biddle's insistence on bringing the Bank's charter up for renewal before the election of 1832 that doomed the Bank. Jackson was otherwise indifferent towards making it a campaign issue, but the perception of Biddle's arrogance aroused Jackson's ire (p. 115). Despite irritating Jackson, there may have been hope for a charter renewal. With some restrictions placed on the Bank's ability to add branches, Jackson may have been willing to sign legislation renewing its charter rather than vetoing it as he ultimately did. Hammond, on the other hand, argues that Jackson was inalterably opposed to the Bank and was set to veto its renewal whenever it was presented. He just did not want it to be a campaign issue in 1832 for fear of upsetting various parts of his political base. Hammond also notes that the eastern Jacksonians were preparing various proposals for Congress for a federally chartered bank based in New York City to replace the Second Bank. Therefore, the influence of New York banking interests in the demise of the Second Bank indicates their role in affecting the development of the US financial structure; New York interests weighed heavily on the question of a central bank in the US, and that influence appears early on.

II. Free-Banking and Silver.

The rejection of the Second Bank's charter led to an extended period in which there was no formal central bank in the US. The lack of a political consensus within the US along with other more pressing issues (e.g., slavery and issues culminating in the Civil War) prevented any successful legislation for or prolonged consideration of a third central bank. The Whigs attempted to enact legislation creating a third bank of the United States, the Fiscal Bank, which would have had some central bank powers. President Tyler vetoed the bill, a veto that was politically suspicious, leaving Tyler as a lame duck president (Timberlake 1993, pp. 68-71). In the midst of this period, the Suffolk Banking System (1825-1858) flourished in the New England area as what may be referred to as an "operational" central bank, especially in the absence of the Second Bank after 1837. Although the key features of the system foreshadowed some characteristics of modern central banking procedures (like lending reserves to other banks and maintaining the operation of the payments system, or presenting the notes of country banks for redemption as a means to control note issue), the Suffolk Bank system was not at the time viewed as a model for a central bank.[1] The Suffolk bank may have played a useful monitoring role for the member banks in the system as well. Howard Bodenhorn notes that the ability of the Suffolk System to control note issue has been brought into question recently (2000, p. 34).

The issue that dominated discussions over banking and monetary reform after the demise of the Second Bank was not the establishment of another central bank, but rather the

[1] Recent research by Rolnick, Smith, and Weber (1998, 2000) suggest that the procedures of the system and its characteristics during the Panic of 1837 helped the New England economy fare better than the rest of the

reform of the circulating medium. In the first few decades of the American republic, silver coin had circulated along with gold coin and both forms of specie held legal tender status. After 1836 silver dollars did not circulate because their value in the market as metal was greater than the value of the metal set at the Mint as coin. This absence of silver in transactions reflected Gresham's Law. At that time, the legal ratio of silver to gold was 16 to 1, namely 16 ounces of silver bought one ounce of gold at the mint. If silver's market price remained close to its legal (or mint) price so that 16 ounces of silver were about the same value as an ounce of gold, then both metals would circulate. If, however, the market price of silver (in terms of gold) got too far out of line with the established ratio, then only the cheaper metal would circulate as coin (Rolnick and Weber, 1986). Milton Friedman argues that after 1837 the legal or mint value of silver was 16 ounces to 1, while the market value was 15.5 to 1 (Friedman 1992, p. 128). This was enough of a difference to drive silver out of circulation, apart from small denomination, minor coins.

The Free Banking Era (1836-1863), in which state bank charters were issued to those individuals or groups satisfying state bank capital requirements, provided the capital for businesses as well as a medium for exchange. This method of bank chartering was more efficient than state legislative chartering, and over time more states adopted this procedure of bank chartering. Each bank issued its own bank notes, and these notes were payable in specie on demand at the issuing bank's location. As in the National Banking System, bank assets like commercial paper and acceptances could not back note issues: longer–term state government bonds and railroad bonds usually backed state bank notes. The bank notes filled

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country. New England banks were able to maintain loans and maintain the operation of the regional payments system.

the demand for cash reasonably well, although there was concern over the apparent excessive variety of bank notes, counterfeiting, and the practice of "Wildcat Banking" (Rockoff 1975, Rolnick and Weber 1983, Rockoff 1985).

Because debate on monetary reform was dominated by the dissatisfaction with the proliferation of bank notes, there were few calls for the re-establishment of a central bank that received serious and prolonged attention. By 1860 there were 1562 banks (Historical Statistics, vol. 2, p. 1020) and an estimated 9000 different types of bank-issued notes in circulation (Robertson 1973, pp. 192-93). As a result, one of the key elements for monetary reform was a desire for a uniform currency. Furthermore, existing institutions responded to the absence of a central bank and appeared to fill the void. As mentioned above, the Suffolk bank system provided some of the elements of central banking to the banks of its region, but these functions supplied mainly payments system efficiency without the central bank features of liquidity creation. Richard Timberlake (1993) and Esther Taus (1941) describe how the Independent Treasury employed some limited, central bank-like powers. Timberlake (1993, p. 67) notes that the pre-Civil War Independent Treasury developed monetary policy tools like open market operations. In addition, Cannon (1910), Timberlake (1984), and Gorton (1985) describe how private and commercial banks formed among themselves a system of clearinghouse associations, starting with the New York Clearinghouse in 1853. Timberlake (1993, p. 199) notes that as early as 1857 the New York clearinghouse began exerting power in ways akin to a central bank through the issuance of clearinghouse loan certificates as a means to increase the liquidity in the short run. These responses to a financial system without a central bank were limited by the legal restrictions on banks and on the limitation of legal tender status to specie alone for tax payments. Furthermore, these measures to expand

liquidity were temporary and regional at best, as the New York Clearinghouse could do little to expand liquidity outside of New York.

III. National Banking and Gold.

During the National Banking Era (1863-1913), the Independent Treasury and the private clearinghouse associations responded to financial panics and crises in ways that one could imagine a central bank might have responded, although even if combined and coordinated these two institutions would have had limited central banking powers compared to those of a central bank. Nevertheless, these nascent but limited central-bank functions stirred little formal action towards establishing a central bank; neither did the stress from the panics in the 1870s and 1880s. Much of the concern over banking and finance in this period continued to focus on the circulating medium. Uniform national bank notes backed by federal government bonds had replaced the immense variety of state bank notes backed by state issued debt, although national bank notes subsequently were criticized as being highly inelastic in supply and unresponsive to changing business conditions. The cause, it was assumed, was in the institutional design of backing currency with government debt, which did not at that time move with or reflect the business credit needs for capital investment. The Treasury's issuance of Greenbacks, a fiat currency, during the Civil War resembled the power to create high-powered money, but that action was controversial and was not resorted to again following the War to any significant degree. Although the Greenbacks were to have been retired rapidly after the War, the Resumption Act of 1875, which also targeted the return to the pre-Civil War gold exchange parity level, allowed for $300 million of

Greenbacks to remain in circulation rather than be retired as the nation slipped into recession in the 1870s.

By the late 1800s, bimetallism had become the political weathervane of the time, with the Free Silver movement gaining strength in the later Nineteenth Century. The Coinage Act of 1873 eliminated the free coinage of silver dollars while retaining gold dollar coins and small denomination or subsidiary silver coins: the so-called "Crime of 1873" had essentially demonetized silver by removing what had been the legal tender status of silver. In the late 1860s and early 1870s, the price of silver was so high that silver coins were not in circulation as media. After 1872 the price of silver began to fall relative to gold, so that silver moved closer toward a relative price at which it might circulate and hence it might be profitable to mint. It was not until after the passage of the Coinage Act and the continued decline in the price of silver that many silver producers realized that they could no longer get their silver minted into dollar coins. As a result, the country was effectively on a monometallic standard based on gold.

The "Crime of 1873" and the deflation from 1873 to 1879 also achieved 'resumption' of the gold parity level of the dollar relative to the English pound that prevailed prior to the departure from the gold standard in 1861. The Resumption Act of 1875 also specified that convertibility of U.S. notes into gold specie alone should begin in 1879. Restricting the backing of the money supply to gold certainly infuriated various interests like western silver mining interests directly, but it also angered agrarians, farmers and other constituencies now desiring "easy money" in comparison to their "hard money" stance during antebellum times. Agrarian forces in particular correctly identified the monometallic gold standard (along with the drive toward resumption at the pre-Civil War dollar gold value)

as the source of the deflation that continued through 1896; their identifying the gold standard as the primary cause of financial difficulties in the farm sector throughout that period is more questionable.

The Populist movement of the later 19th century incorporated most of the key agrarian and farming interests. The influence of this movement on the various proposals for a central bank is not straightforward, however. Much of the political effort from the Populists aimed at remonetizing silver rather than creating a central bank. Richard Hofstadter (1955, pp. 50, 104-108) suggests that the silver mining interests of the western states (as distinct from agrarian interests) were key forces behind the linkage of free silver to the populists. Demonetization drove down the value of the silver mining interests' stock of silver. The lower relative price of silver to gold in the late 1880s and early 1890s provided agrarians an opportunity to increase the supply of money if silver were again part of the monetary standard, which would allow them to pay farm debts with cheaper dollars. These two components of silver's decline in value aligned the two separate forces in the same direction.

Richard McCulley (1992) presents a useful three-way breakdown of the political interests behind a central bank in the years leading up to the presidential election of 1896, and two of these have been often equated with populism as a whole. The two groups represent a division within the Democratic Party along rural and urban lines. McCulley describes the first group as the Jeffersonians (p. 25). The Jeffersonian distrust of banks found its purest expression in opposition to the national banking system, national bank notes, and gold redemption of US bonds and greenbacks. They were farmers and agrarians, and they were opposed to bank-issued currency or bank notes because they perceived that too

much control of credit and liquidity was delegated to commercial banks who were not interested in easing credit. They wanted more governmental control of banking, with the federal government being the sole issuer of a currency with legal tender status. They also opposed the national bank notes on constitutional grounds, believing that their being issued by banks rather than a government agency violated the constitution's dictate that the power to coin money was reserved for the federal government. In reality, national bank notes backed by Treasury Debt were essentially a government issued currency, albeit one without legal tender status. The federal government maintained a redemption fund in specie to redeem notes of failed national banks, and their volume was constrained by the volume of federal debt outstanding. In their interest were the maintenance of the greenbacks, the free coinage of silver, and the provision of easier credit. Presumably they would be more willing to pursue an easier money policy, one perhaps more inflationary than bankers would like, and one that would be outside of the control of banking interests. In short, the Jeffersonians just did not want commercial and private bankers manipulating credit conditions, preferring that it be left to agencies having some direct governmental oversight.

The second constituency in the Democratic Party for a central bank identified by McCulley is the "Laissez Faire" interests made up of small town business and commercial interests. The Laissez Faire forces tended to be intensive users of bank notes and bank credit. Although they opposed the national bank notes, their interests were not like the agrarians because they were more opposed to national bank notes backed with federal bonds than with the idea that they were issued by banks. The Laissez Faire interests opposed backing of National Bank notes with federal bonds because government debt issuance was not responsive to private economic credit needs. As a result, credit availability relying on high-

powered money backed by federal debt, reflected federal fiscal debt policy rather than economic conditions and the demand for credit. The Laissez Faire forces were, not surprisingly, against the federal control of the money supply, and these interests were in direct conflict with William Jennings Bryan and the populists. Unlike the Jeffersonians, however, they wanted little government interference in banking, favoring a return to the antebellum style of free-banking and separation of government and banking. One could almost see a Jacksonian-style view of banking among these groups. Perhaps the only point of agreement between the Jeffersonian and Laissez Faire constituencies was their dislike of financial concentration in New York City banks, concentration that had been magnified by the National Bank Acts of 1863 and 1864 creating a bond-backed currency. The various asset-backed currencies promulgated James Forgan or J. Laurence Laughlin also served as a sinecure for these otherwise disparate groups.

The third group favoring a central bank was identified with the Republican Party, which was in favor of the national chartering of banks and enlarging the federal government's monetary powers. This goal had been achieved somewhat by backing national bank notes with federal government bonds and by authorizing the Treasury to redeem federal obligations in gold, as authorized in the National Banking Acts. McCulley argues that the Republicans in effect re-established free-banking through the National Bank Acts of 1863 and 1864, but now at a national level rather than a state level (p. 24). The similarity to free-banking comes from the ability of any group of investors who could meet the capital requirements for a national bank to obtain a charter without having to obtain special permission from the legislature. Awareness of the three groups identified by McCulley helps identify the various political forces at work in the events leading up to at least 1896.

There were limited attempts to appease the silver and populist forces amidst the battle over the monetary standard at various instances during this time. The Bland-Allison Act of 1878 authorized limited purchases of silver and the issuance of silver certificates by the Treasury, and the Sherman Silver Purchase Act of 1890 roughly doubled the amount the Treasury could purchase in a weak attempt to support the price of silver to mollify the silver interests; nevertheless, silver's price continued to fall as worldwide adoption of the gold standard increased. As silver prices fell, the bond between the silver mining interests and the populists became more compelling. For agrarian interests, easy money was the perceived essential element to the free silver campaign. The Bland-Allison Act further extended the life of Greenbacks and, hence, easier money without a central bank. From the history of the First and Second Banks of the US, a central bank was viewed as more likely to be supported by large banking interests (hard money folk) as well as serving those interests through some degree of control by commercial banking interests, namely the New York banks. Hence, there was no strong constituency for a central bank arising among the agrarian populists.

Populist critics of the National Banking Era pointed to the pyramid structure of reserves, which had been accused of being the leading cause of the excessive concentration of bank reserves in New York City. The National Banking Acts had institutionalized the practice of country national banks holding deposits at reserve city banks by counting those deposits as legal reserves. New York City banks may have opposed the passage of the national banking system had this element been missing in the legislation. Interior banks liked the payment of interest on deposits, whereas city banks didn't want to have to compete for deposits. West (1974, pp. 38-9) notes that reserve city banks were agitating for a ban on interest paid on interbank demand deposits, arguing that such a ban would result in deposits

being spread more evenly across city banks, relieving them of competitive pressures to pay interest. Secretary of the Treasury William Richardson argued against the payment of interest on reserves as early as 1873. He also argued that national banks, particularly those in reserve cities, should be allowed to pay out their reserves during the seasonal strains on the money markets, even if it meant temporarily going below the ratios set by the National Bank Acts. This simple agreement might have relieved some pressure on the payment system during panics. Still, there would be ambiguity about how far a departure from the legal reserve ratio would be tolerated. Regardless, the legal reserve ratio was violated by New York City banks in 1907.

IV. The National Banking Era Panics.

The disruption and inconvenience caused by the recurring financial panics of the National Banking Era are regarded as the key events that motivated the debates surrounding the establishment of a central bank. While there were varying degrees of severity in the panics that took place in 1873, 1884, 1890, and 1893, it was not until the Panic of 1907 that the central banking movement really solidified and gained momentum, both politically and in the public eye. By that time, the inability to increase the stock of high powered-money at short notice became an obvious short-coming of the U.S. monetary system. Experience demonstrated that this inherent flaw could not be alleviated successfully through the Independent Treasury System or the clearinghouses without alteration.

From the perspective of some economic historians, the crisis of 1873 was handled relatively effectively by existing institutions like the clearinghouses. Despite the severity of the economic and financial distress, Elmus Wicker (2000, p. 16) notes that George S. Coe,

chairman of the New York Clearinghouse Committee, created two tools to mitigate panics: the first was coordinating the pooling of reserves among NYC clearinghouse members, or the policy of 'equalization of reserves,' which was the practice of issuing a single balance sheet for the clearinghouse member banks in place of individual balance sheets during a financial crisis (Gorton 1985). Second, he employed the practice established by the New York Clearinghouse in 1857 of issuing of clearinghouse loan certificates, the practice of circulating IOUs among clearinghouse member banks to settle clearing balances in place of cash settlements to free up cash to pay to correspondent banks (Calomiris 2000, p. 9, 105). Coe also declared a suspension of convertibility of deposits into currency to prevent wholesale liquidation of deposit accounts. Although these actions were eventually successful in alleviating the liquidity crisis of the panic, some of these actions were also against the law. The suspension of convertibility was not a power that clearinghouses could invoke and had to be authorized by a state banking authority or governor in most instances. Circulating clearinghouse certificates among member banks was legal, although then circulating the loan certificates to depositors and the public was not. For the most part, the circulation of clearinghouse loan certificates to the public during panics was limited until 1907 (see Andrew 1908). Authorities did not confront these infringements of the law, however, and no coordinated push for a central bank arose, perhaps because the banking interests in the major central reserve cities, namely New York City and perhaps Chicago, viewed their ability to respond to panics as more than adequate.

O.M.W. Sprague observed that the events during the panic of 1893 did little to increase sentiment for a central bank, particularly among New York bankers. Indeed, he argues that it probably damped it:

> The experience derived from this crisis (of 1893) led to no changes whatever either in banking methods or in legislation. The silver question drew away men's minds from any consideration of the questions raised by earlier crises. Whether the banks through their own efforts might not place themselves in a better position to meet future emergencies does not seem to have been discussed. Both bankers and the public seem to have been well satisfied with the showing made by the banks, especially those of New York; and indeed if comparison be made with the policy adopted by the Chicago banks (of not issuing clearinghouse certificates quickly), the banks of the metropolis met the situation in a creditable fashion (Sprague 1910, p. 210).

Until the Panic of 1907, New York national banks had handled the earlier financial crises adequately on their own, at least in terms of protecting the clearinghouse member banks. It is possible that New York City bankers may have even profited from the national banking era crises (Donaldson 1992, 1993)

Wicker (2000) notes also that prompt action by the New York clearinghouse possibly avoided the germination of two incipient panics in 1884 and 1890. And even in 1907, members of the New York City Clearinghouse ensured that those national banks associated with the failed copper corner of Augustus M. Heinze were made whole either by liquidation, or the banks were reorganized by forcing the management to resign.. These crucial events preceded the panic by slightly more than a week. Given such successful circumstances for combating panics, one would expect little enthusiasm for the institution of a central bank in the US coming from New York banking forces.

Despite the serious panic of 1893, the free silver movement continued to overshadow the few proposals for the establishment of a central bank. Wicker (2000, p. 52) emphasizes that the source of the panic of 1893 was outside New York City, and the interior of the country suffered more bank suspensions than did New York City during that panic. It is possible, that, from the perspective of the New York banking interests, the free silver movement was perceived as the more imminent threat to the banking industry and to international payment and exchange rate stability than intermittent financial panics arising from liquidity demands of banks in the interior of the country.

The economic turmoil of the 1890s, punctuated by the Panics of 1893 and 1896 and the economic depression of 1892-1894, brought other issues of monetary reform to light.[2] The nature of national bank notes also came into question. The notes were secured by a bank's purchase of eligible federal government bonds; the bonds were then placed on deposit at the Treasury and thereby allowed the national bank to issue notes up to 90 percent of the par value of the bonds. The arrangement was a good deal for the banks if the bonds were trading below par in the market. Critics of such a scheme argued that backing comprised of government debt made note issue inelastic; they believed that fluctuations in the federal debt level bore no relationship to changes in economic activity (see for example, Laughlin 1911). From this perspective, the amount of federal debt outstanding would not expand and contract with the overall level of business activity, particularly during the fall crop-moving season. Contemporaries believed that such an inelasticity in the supply of currency resulting from its

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[2] Friedman and Schwartz (1960, pp. 134) and Friedman (1992, pp. 76, 78) argue that had the Coinage Act of 1873 included the coinage of silver dollars, the turmoil of the 1890s may have been less severe. It is interesting to speculate whether the coinage of silver would have delayed the creation of the Federal Reserve System, perhaps by making subsequent panics less severe. Ex post, the price deflation likely would have been less severe (see Garber 1986 for a detailed discussion of bimetallism).

backing with federal bonds would not accommodate the increased demand for liquidity during the crop movement season. Related to this issue is the observation by modern economists that national banks never issued bank notes up to the full amount authorized by law, implying that the form of backing was not obviously relevant to the issue of inelasticity. Charles Calomiris and Joe Mason (2002) have recently argued, however, that legal restrictions on the issuance of bank notes per bank were actually binding at the individual bank level even though there appeared to be room for note expansion at an aggregate level, so examinations of aggregate issuance and "potential" for issuance are misleading.

The efforts of the Belmont-Morgan Syndicate of 1895-96 to stem gold outflows in 1895 further revealed a gaping hole in the U.S. monetary framework, one that did not seem obvious to observers at the time. In what some have described as an international run on the U.S. Treasury, its stock of gold fell to low of $45 million by February, 1895. The run likely was spurred by the growing political strength of the free silver movement in the United States and fears that the U.S. would devalue or depart from the gold standard, leaving international lenders with large capital losses. This liquidity drain was caused in part by foreign investors converting assets to gold and shipping the proceeds overseas as concern over the United State's ability to remain on the gold standard increased. To stem the outflows, J.P. Morgan and Augustus Belmont, Jr. formed a syndicate of bankers and financiers to sell $65 million worth of gold to the Treasury in return for 30-year government bonds to be marketed by the syndicate. A central bank may have been able to offset these outflows, without resort to ad hoc syndicates. Some believe, however, that abandoning the gold standard would not have been that undesirable (Friedman and Schwartz, p 111).

Viewing the amount of federal debt outstanding as a constraint on national bank note issue, a movement began to take hold that recommended replacing the government bond-backed National Bank notes with other notes backed by short-term assets of individual banks like commercial paper or acceptances. In addition, the acyclical nature of federal debt failed to ensure adequate volume of backing for the provision of credit to commerce. 'Asset-backed' currency proposals began to appear regularly in public discussions in the 1890s. Essentially, these proposals were aimed at producing a financial system akin to the monetary system in Canada, but without the branch banking powers of Canadian banks. At the American Banker's Association Convention of 1894 in Baltimore, one plan arose to amend the National Bank Acts by replacing the bond-backed notes with notes backed by the short-term assets of the issuing bank. A guarantee fund was also to be established at the Treasury to redeem the notes of a failed bank. The support for such a currency came from the Laissez Faire branch of the Democratic Party identified by McCulley. West notes that some prominent New York bankers opposed the "Baltimore Plan." These bankers feared that without restrictions or powerful monitoring, questionable bank assets could be used to secure currency issues. Livingston notes that New York City bankers would not support an asset backed currency proposal without branch banking provisions. Politically, neither proposal had potential as legislation. An asset backed currency was a cornerstone of monetary reform proposals coming out of the Midwest, particularly those of J. Laurence Laughlin and James B. Forgan.

The presidential election of 1896, coupled with gold discoveries in South Africa, along with the invention of the cyanide extraction process for gold spelled the beginning of the end for the silver issue and W.J. Bryan, at least monetarily (Friedman 1992, p. 124). The

Gold Standard Act of 1900 established the gold dollar as the monetary standard for the U.S., formally ending the role for silver, apart from that of subsidiary or small denomination coin. Once the silver issue was put to rest, alternative schemes for expanding the issuance of currency and credit could expand to fill the gap left by the demise of silver's dominance over the issue of monetary reform. Despite the lack of early success in legislative action, the Baltimore Plan and the asset-backed currency issue, nevertheless, influenced later reform measures, most notably the plan proposed by the Indianapolis Monetary Commission in 1898, written by a key member of the executive committee of the convention, J. Laurence Laughlin, the first head of the Economics Department at the University of Chicago (p 61 McCulley). It is therefore not surprising that his ideas were central to this proposal.

Laughlin was strongly against a bimetallic standard and favored gold, but he was also a proponent of an asset-backed note-issue. The Indianapolis Monetary Commission plan included a 5-year phasing out of the bond-backed national bank notes while they were replaced with asset-backed notes issued by the individual banks. The plan included a 5 percent guaranty fund to redeem the notes of failed banks, and it even included some branching provisions. But it did not alter significantly the system of reserves present under the National Bank Act. A movement towards a central bank with a compelling message had yet to acquire a politically effective constituency.

McCulley notes that the three-way political division over banking reform had evolved to cover the groups more explicitly represented by "Wall Street," "LaSalle Street," and "Main Street." Wall Street interests favored retaining much of the National Banking System and a bond-backed currency, while LaSalle Street interests preferred an asset backed currency. James Forgan of the First National Bank of Chicago and J. L. Laughlin, two key

representatives of LaSalle Street interests, advocated an asset backed currency, mainly because Chicago banks were left isolated by New York City banks during panics. Main Street can be identified with the earlier Jeffersonian group desiring governmental control of banking and the issuance of currency to protect them from Wall Street domination. Unlike the earlier categorization by McCulley, this coalition did not line up cleanly with political interests, because some western Republicans aligned with LaSalle Street interests on the issue of an asset-backed currency in contrast to the eastern Republicans. Here, however, the preference of interior banking and business interests for an asset backed currency may have reflected their experience during the 1893 panic. At that time, New York City actions like the suspension of convertibility forced the interior of the country to survive the panic without adequate provision of credit and currency from New York City.

V. The Panic of 1907: the Last Straw.

The Panic of 1907 was different from the earlier panics not only in its severity but also in the new arrangement of intermediaries affecting the payments system. These differences solidified a conscious movement toward the establishment of a central bank (see chapter XX on why 1907 was different). With the Panic of 1907 still fresh in the minds of those who had witnessed and combated it like Paul Warburg, the debates on monetary reform commenced. Notably, the debate centered on establishing a central bank in the United States rather than on particular structures necessary to prevent financial panics like 1907. Wicker (2002, p. 8) suggests that it was a conscious change in viewpoint among congressional leaders, Nelson Aldrich in particular, after the 1907 Panic that led to a central banking movement. Warburg (1930) documents how attempts to make New York bankers interested

in a central bank had fallen flat before the Panic of 1907 but had gained new urgency after the Panic.

In a revealing passage in his memoirs, Warburg describes how James Stillman, President of National City Bank of New York, chided him in 1903 for his paper on central banking reform. Stillman went as far as to suggest that the US banking system would be the model for the European banking systems. In 1907, Stillman, presumably worried about the future ability of New York national banks to deal with financial crises, requested a copy of a paper Warburg had written several years earlier outlining a central banking plan for the US. The following extended quote from Warburg's memoirs outlines these changing attitudes clearly:

> This memorandum was shown to Mr. Jacob Schiff, then the senior partner of the banking firm Kuhn, Loeb & Company, of which I had lately become a member. Mr. Schiff read the paper with interest and told me, what afterwards he often repeated, that, while theoretically he agreed with most of the thoughts expressed, he believed that I was misjudging the psychology of the American people, who would never, he said, accept any system approaching a central bank. But since he always appreciated earnest efforts on the part of his juniors and never missed an opportunity for encouraging them, he suggested that I let him show the paper confidentially to two friends. One of these was James A. Stillman, president of the National City Bank of New York. It was significant, however, of the atmosphere in which we were living that Mr. Schiff warned me to be careful not to have the memorandum go any further, lest, having just arrived from Europe, I might impair my standing in the banking community by creating the impression that I was urging a system which, in the final analysis, would have to be built around a central bank organization. I gladly accepted Mr. Schiff's suggestion, and a few days afterwards I found Mr. Stillman standing over my desk. He looked at me silently, as was his wont, through his half-closed, heavy dark eyes.
>
> "How is the great international financier?" he asked with friendly sarcasm. He then added, "Warburg, don't you think the City Bank has done pretty well?"
>
> I replied, "Yes Mr. Stillman, extraordinarily well."
>
> He then said, "Why not leave things alone?"

> It was not without hesitation that I replied, “Your bank is so big and so powerful, Mr. Stillman, that when the next panic comes, you will wish your responsibilities were smaller.”
>
> At this, Mr. Stillman told me that I was entirely wrong, that I had the mistaken notion that Europe’s banking methods were the most advanced, while, as a matter of fact, American methods represented an improvement upon, and an evolution of, the European system, America having already discarded its central bank. He had no doubt that progress would have to be sought, not by copying European methods, but by elaborating our own.
>
> Four years later, in the midst of the panic (of 1907), I found Mr. Stillman once more standing over my desk; and when I looked up, he asked, “Warburg, where is your paper?”
>
> I said to him, “Too late now, Mr. Stillman. What has to be done cannot be done in a hurry. If reform is to be secured, it will take years of educational work to bring it about.”
>
> This incident is related for the sole purpose of showing the status of banking and business opinion in those far-off days. What Mr. Stillman had said was typical of the general attitude then prevailing (Warburg 1930, pp. 18-19).”

Clearly, the Panic of 1907 altered at least one influential banker’s opinion on the future organization of US banking. The influence of Stillman should not be underestimated, as one biographer recalls how Stillman had to convince a stubborn JP Morgan to aid the Trust Company of America after the Knickerbocker trust had suspended (Burr 1927, pp. 233-34). Morgan apparently believed that he shouldn’t have to risk his own assets to save an imprudent intermediary.

The clear dominance of the New York national banks in the New York, and hence national, money market had diminished notably since the 1893 panic. The assets of trust companies had grown tremendously since 1896; by 1907 total assets of trust companies and of national banks in New York City were about the same see Table x in chapter xx).

Even though the large New York City national banks controlled a shrinking proportion of the banking system's assets, they remained crucial to the payments system. The proportion of bank assets controlled by the big 6 New York City banks fell from about 60 percent of New York City bank assets to around 28 percent between 1880 and 1907 (see Table 1). The trust companies, even though large, nevertheless had a small volume of check clearings and hence were not crucial to the payments system. For a modern analogy, deposits in trust companies are like money market mutual fund deposit accounts – you can write checks on the accounts, but they are likely not your first choice of payment source.

Table 1: Assets of New York City Intermediaries, 1880-1907 (millions of $s).

	1880	1907 (August 22)
Big Six NYC National Banks		$837
NYC National Banks	$477.7 (Oct. 1)	$1,364
NYC State Banks	$66.2 (Sept.)	$560
NYC Trust Companies	$68.6 (Jan. 1, NY State)	$1,084
All Banks and Trusts, NYC	$612.5	$3,008

Sources:

1880 -- *Annual Report of the Comptroller of the Currency 1880*; p. 158 (national banks), p. 122 (state banks), p. 124 (trust companies).

1907-- National Banks, *Annual Report of the Comptroller of the Currency, 1907*, pp. 722-24.
State Banks, *Annual Report, New York Superintendent of Banks 1907*, pp. 211-12.
Trust Companies, *Annual Report, New York Superintendent of Banks 1907*, pp. 666-67.

Because of their weakening control over financial markets, the New York bankers finally accepted that political action had become necessary to address the flaws in the National Banking System that had been laid bare by the Panic. The flaws included:

1) The pyramiding of reserves – the key flaw was that reserves were centralized in the New York City money market, but they essentially had multiple, competing claims on them.

2) Lack of a rediscount market for bank assets – there was no established, liquid market to rediscount assets to acquire reserves from other banks that held "excess" reserves for short-term purposes.

3) No lender of last resort – in extreme cases, banks could get loans backed by bank collateral from their clearinghouse, but typically only the clearinghouse members were recipients. There was no legal mechanism to borrow from a source that would in effect increase the stock of high-powered money (as opposed to borrowing from other banks or rearranging existing reserve holdings).

4) Secondary liquidity held in form of call loans on the stock market, that is, the first loans to be liquidated-- Warburg and Laughlin were especially uncomfortable with the secondary source of liquidity as call loans on the stock market. Clearly, banks in the aggregate could not rely on call loans as a source of liquidity because any movement toward large-scale liquidation would generate precipitous declines in the level of stock prices (see chapter on call loans). Friedman and Schwartz suggested the absence of interest on reserves led to the

funneling of excess reserve liquidity to the call loan market, which was typically viewed as low risk (see ch. Xxx).

5) Asymmetric regulation – state regulation versus federal regulation. Commercial banks faced competition from financial institutions that arose to avoid limiting regulations. In New York State, trust companies engaged in most banking activities, but they were regulated less strictly than national banks or state banks, and had greater local political influence. The trusts in New York concentrated their lobbying in Albany, whereas national banks aimed lobbying at federal legislation.

The asymmetry of intermediary regulation led to financial innovation in order to circumvent the more stringent regulations placed on the national banks. In New York City, the rise of the trust companies between 1896-1907 (Cannon 1910 or Moen and Tallman 1992) placed a large proportion of intermediated assets beyond the direct influence of the New York Clearinghouse. The New York Clearinghouse offered membership to the New York City trusts, but the trusts rejected the offer because the requirements for reserve holdings were perceived as too restrictive. The New York State legislature refused to impose reserve requirements on trust companies that were comparable to the banks', so trusts retained a competitive advantage over both national banks and state banks.

In contrast to New York, there was no regulatory asymmetry in Illinois and Chicago because the trusts were members of the Chicago Clearinghouse Association and were more involved in the payments system and check clearing, perhaps because they were in some cases owned by national banks. But the key factor from this comparison is that from the

perspective of Chicago bankers like James Forgan, a central bank was less essential to the stability of the financial and banking system than was reliable access to short-term liquidity, something that an asset-backed currency could adequately provide. Hence, there was no strong coalition for a central bank coming from Chicago and the Midwest; rather, they were more interested simply in a system that would ease the expansion of bank credit and asset rediscounting, a system that could be run by the banks themselves. By this time, the Midwestern businesses and agricultural forces were tired of being dependent on New York City reserve fluctuations determining liquidity and credit availability.

After the Panic, however, the New York bankers recognized a distinct and valuable role for a central bank that Chicago bankers, far from the New York Stock exchange and the call loan market, did not appreciate. In this setting, the central aspect of monetary reform was to disentangle the capital markets and the demand for capital from the seasonal demand for cash in the money market; the New York bankers now realized that the call loan market had to be separated from the supply of reserves. The Aldrich-Vreeland Act of 1908 and the related work of the National Monetary Commission in 1910 to investigate the establishment of a central bank in the United States was the first political success of the movement to establish an independent source of reserves. Livingston (1986) provides an exhaustive study of the movements after 1890 supporting the establishment a central bank in the United States, movements defined according to economic classes. The central tenet underlying Livingston's analysis is his concentration on a perceptible shift in the financing of the US economy, moving from a reliance on bank loans towards increased funding of corporations in the capital and equity markets which in turn was giving rise to a corporate class distinct from a more entrepreneurial class. His argument is consistent with ours, in that the New York

bankers, who were intimately connected to the equity markets through the call loan market, unlike the Chicago bankers, wanted a central bank that would prevent hoarding of reserves by the thousands of commercial banks. It was the scramble and hoarding of reserves that increasingly threatened to bring down the equity market, centered in New York, through the call loan market.

VI. Legislation Arising from the Panic.

With growing support from New York banking forces, legislative action to create a central bank gained some political headway. Once it gained momentum, the congressional debates surrounding the a central bank centered on the control of the proposed bank and whether or not there would be one bank or a system of banks, either centrally coordinated branches or independent banks. What institution would issue bank notes, commercial banks or the central bank(s), also got some discussion. Given the tone and content of the debate, an asset-backed currency from some form of decentralized banking structure with reserve holdings insulated from the call loan market now seemed possible. Given the weaknesses in the banking system revealed by the Panic of 1907, the New York bankers were now willing to entertain proposals for reform. They may have realized that momentum for reform was building outside of New York and that had better be in a position to influence it or else they would be left behind. Furthermore, because some the reforms of the interior bankers were in harmony with those of Paul Warburg, who was in a position to influence the New York bankers, the ideas flowing from the Midwestern banking interests about an asset-backed currency could start to take hold in New York.

Several bills were introduced to congress immediately after the Panic of 1907. The first was the Fowler Bill, introduced by Representative Charles Fowler of New Jersey (Chairman of the House Committee on Banking and Currency) in 1908. It provided for an asset-backed currency backed by bank assets like promissory notes, but it also provided for up to twenty regional redemption centers for national bank notes. Senator Nelson Aldrich of Rhode Island also submitted a bill in 1908 as a reaction to the Panic of 1907. The Aldrich Bill was also designed to provide emergency currency during financial crises. Banks could form associations that would then issue emergency currency that was backed by federal state, local, and railroad bonds deposited by the member banks. These bills were quite different in the backing of the currency, and neither received overwhelming support in either house of the congress. Aldrich backed off on the inclusion of railroad bonds as backing; Fowler's attempt to include a guarantee fund based on a 5% percent tax on national banks' deposits to insure the notes of failed banks only inflamed the debate (McCulley 1992, p. 153; Livingston 1986, pp. 180-81). To reach a compromise in Congress the Vreeland Substitute Bill introduced by Representative Edward Vreeland of New York replaced the Fowler Bill. The Vreeland Bill authorized national banks to issue asset-backed currency, but only as an emergency measure, not as a general practice. Contemporary critics of asset backed currency issue claimed that there was no structure in place for objective discrimination of "good" or "bad" assets as backing. In essence, there was a fear that there would be an over-issuance problem.

The Vreeland Bill and the Aldrich Bill were combined to produce the famous Aldrich-Vreeland Act in May, 1908. It created banking associations of national banks that could issue a taxed, emergency currency backed by the deposit of either bonds or commercial

paper. An asset-backed currency had finally appeared in the US, although McCulley makes it clear that Sen. Aldrich managed to restrict the use of commercial paper as eligible collateral. McCulley also notes the speed with which the act was passed and how in many ways it was favorable to New York banks (pp. 154-55). The Act also created the National Monetary Commission, given the task of examining various monetary and banking systems and producing a report outlining reforms for the U.S. banking system. That report was delivered to Congress in 1912 in 24 volumes.

The passage of the Aldrich-Vreeland Act in 1908 legalized formally some of the actions that had been taken by clearinghouse associations to alleviate the financial stress of liquidity shortages as in 1873, 1884, and 1893. But the monetary aspects of the bill were explicitly and intentionally a temporary measure, enacted in anticipation of further reforms later on, expiring in June, 1915. Its emergency currency provisions were put to use once as depositors panicked in the summer of 1914. At that time the New York Stock Exchange was closed for six months in response to massive liquidation of equities by Europeans anxious over WWI. The Federal Reserve Act had been passed by this time, but the reserve banks had yet to begin operations.

The Aldrich-Vreeland Act, however, addressed only a subset of the perceived flaws in the US banking system, mainly the lack of a rediscount market for bank assets and a formal lender of last resort. The emergency currency issue in Aldrich-Vreeland would add transactions components like notes and reserves, but the other flaws like the pyramiding of reserves and the call loan market being a source of reserves were not addressed.

Paul Warburg perhaps was the one individual, more than any other, who influenced central banking reforms in the United States after the Panic of 1907. Arriving in the U.S.

after having worked in his family banking house in Hamburg, he was quite aware of the functions of a central bank and what would be politically unacceptable in the populist U.S. Warburg was not directly a proponent of an asset-backed currency, but his views were close enough to those of J. Laurence Laughlin that a perceived common interest and goal could be exploited. The goal was to promote an alternative to the call loan market that would deal in rediscountable short-term paper for New York City banks to use as an asset for reserve management. Warburg was particularly interested in accelerating the development of the banker's acceptance market and a more liquid commercial paper market as the basis for the assets of commercial banks, assets that could be discounted at the central bank. His preference for a national market for re-discountable, real tangible assets reflects his upbringing in German and European merchant banking. The practical implications are similar to the asset-backed currency proposals of Laughlin along with his promotion of self-liquidating loans on real assets, like bills of lading on traded goods.

In 1910 Warburg proposed a "United Reserve Bank" for the U.S. That central bank would have a main bank in Washington, D.C. and divide the country into 20 reserve association districts where branches could be established, but the central bank would essentially be one institution overseen by a Board of Governors in Washington D.C. The reserve Bank could accept deposits from the Federal government or its member banks, deposits that would count as legal reserves. It could buy commercial paper and banker's acceptances from member banks, and it bank could deal in European commercial paper. It could buy and sell U.S. treasury notes, and it would be the only issuer of bank notes in the U.S. The bank notes would be convertible into gold and secured by commercial paper. The inclusion of European bills is consistent with Broz's thesis that one reason for the

establishment of the Federal Reserve System was to turn the U.S. dollar into the international currency it was slowly becoming and to make the U.S. money center banks into significant international intermediaries (Broz, 1997).

In contrast, Victor Morawetz, writing at about the same time as Warburg, stressed a plan for a system of independent regional reserve banks owned and administered by the commercial banks in each region similar to the district reserve banks in the Federal Reserve System. In the Moravetz plan, there would be a managing board over the banks that would regulate the volume of note issue, but it would have no banking functions, a structure reminiscent of the Board of Governors of the Federal Reserve System. West (1972 pp. 61-62) correctly notes the decentralized aspects of Morawetz's proposal in contrast to Warburg's centralized plan; West also notes that Morawetz was correct in being more concerned about a credit shortage during panics rather than a currency shortage as banks liquidated assets in a scramble to obtain cash to pay out to depositors. Morawetz was criticized, however, for emphasizing note issue problems (West, p. 62) rather than reserve bank rediscounting operations. But the concern over note issue is not surprising, given his recent memories of the Panic of 1907 and the runs on deposits at the New York trust companies. The Federal Reserve Act ultimately allowed the creation of an asset-backed currency through the holding of bank assets like banker's acceptances and commercial paper in the Federal Reserve Banks portfolio, although this never seemed to be a leading question in previous legislative attempts.

Warburg's influence continued in the efforts of the National Monetary Commission, even though he was not directly a part of the Commission. Senator Nelson Aldrich was the chairman, and West (P. 70) (see also Wicker 2002, p. 12) notes Aldrich's rapid conversion

from a bond-backed currency to one backed by commercial assets like commercial paper after the Commission's trip to Europe to interview European central bankers. German bankers seem to have been key in Aldrich's conversion.

One goal of the Commission was to present a proposal for banking reform. The secretive trip to Jekyll Island, Georgia in November, 1910 was where the proposal finally was developed. The trip most likely was arranged by JP Morgan or his close associate Henry Davison (West, p. 71). Sen. Aldrich, his private secretary Arthur Shelton, Henry Davison, A. Piatt Andrew, Frank Vanderlip, and Paul Warburg were the cast of characters at the Jekyll Island meeting. The Commission's proposal, sometimes referred to as the Aldrich Bill of 1912, for a National Reserve Association was sent to Congress in 1912 (National Monetary Commission 1912, pp. 43-71). The Association was to have its headquarters in Washington, DC, and it was to have a branch in each of 15 districts, which could be further subdivided into local associations of at least ten banks. All discounting functions were to be handled by the 15 branch banks. Notably, this plan was not much different from Warburg's United Reserve proposal of 1910.

National banks could immediately join the Association, but they were not required to. State banks and trust companies could join if they met conditions about reserves and capital similar to those of the national banks. The branches could discount commercial paper, bills of exchange, bankers' acceptances, and foreign bills of exchange from member banks. Bills used to purchase stock, bonds, or other securities could not be rediscounted, nor could notes or bills having a maturity of more than 28 days. West (1977, p. 76) notes that this was an attempt to legislate the real bills doctrine. The branches could also purchase all federal government securities—engage in open market operations-- as well as state and foreign

government securities having a maturity of 90 or fewer days. Reserve requirements were to be the same as those in the National Bank Act, and reserves could remain located as they were, or they could be deposited in one of the Association's branches. No interest was to be paid on reserve deposits. The Association could set up branches overseas, and the bill authorized national banks to set up overseas operations.

When the Democrats took control of both houses of Congress and the presidency in 1912, it became clear that there was a dimming chance of passage for the Aldrich Bill. It was replaced by a bill crafted by Rep. Carter Glass of the House Finance Committee, with much help from H. Parker Willis. While there was substantial debate over the bill in an attempt to differentiate it from the Aldrich Bill, several authorities argue that the Glass Bill was not very different from the Aldrich Bill of the National Monetary Commission and that the Federal Reserve System ended up being much like the system proposed by the National Monetary Commission (Paul Warburg 1930; Friedman and Schwartz 1963; West, p. 111-12; Wicker 2002). There was debate over the number of regional banks and branches, location of reserves, control of the Federal Reserve Board, and ownership of the system's stock.

There are some differences between the Aldrich Bill and the Glass Bill that eventually became the Federal Reserve Act that are notable, however. Our comparison is based on the Aldrich Bill as presented in the reports of the national Monetary Commission (GPO 1912) and the version of the Glass Bill introduced to the House of Representatives on June 26, 1913 (Willis 1923, p. 1595). Under the Aldrich bill the National Reserve Association was to have 15 districts, and the overseeing board of directors was to have 46 members. The executive officers included a governor (chosen by the President of the United States, two deputy governors elected by the board of directors, a secretary, and several

subordinate officers (p. 53). Under the Glass Bill there would be no fewer than 12 banks (Willis, p. 1596) and the Federal Reserve Board would oversee the banks and have seven members, four chosen by the President of the United States and the remaining three being the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency. The stock of the National Reserve Association and the Federal Reserve System was to be held by the subscribing banks and was not transferable. Reserve requirements under the National Reserve Association was to be the same as outlined in the National Banking Acts, while the Glass Bill specified a slight reduction in reserves over those of the National Bank Acts, from 25% to 20% over time for banks in reserve cities for example. National banks were required to join under the Glass Act or lose their charter as a national bank, while under the Aldrich Act membership apparently was optional, even for national banks (p. 44). H. Parker Willis argues that this was a point of serious conflict and that national bankers were opposed to mandatory membership for national banks. Reserve city bankers were also opposed to the requirement that their reserves be held at a Federal Reserve Bank as outlined in the Glass Bill, wanting such a transfer to be optional. Willis also notes opposition from country banks on the elimination of charges for collecting checks (p. 406). Finally, the Aldrich Bill prohibited the paying of interest on deposits of member banks held by the National Reserve Association, while no such prohibition seems present in the Glass Bill. This is consistent with NY banks wanting such a prohibition, unlike the country banks.

The Federal Reserve Act of December 13, 1913 specified no less than eight but no more than twelve reserve banks. The Board of Governors was similar to that specified in the original Glass Bill, except that the President would appoint five rather than four governors, the Secretary of Agriculture not being a member ex officio under the Federal Reserve Act.

National banks were required to join within a year or lose their charter as a national bank. Reserve requirements were lower under the Federal Reserve Act than the original Glass Bill. For example, banks in central reserve cities were to hold a reserve of 18 percent against demand deposits and 5 percent against time deposits, 6/18ths in its own vaults, 7/18ths at a Federal Reserve bank, and the remainder in its vaults or at a Federal reserve bank at its own choosing. Finally, there was no prohibition on the payment of interest on demand deposits of individuals or correspondent banks at member banks.

In response to the banking crises of the Great Depression the Banking Acts of 1933 and 1935 included a prohibition of interest on demand deposits and a cap on interest paid on time deposits at banks. While these two banking Acts are most widely known for creating the Federal Deposit Insurance Corporation (FDIC), the interest rate caps are of particular interest to us. These caps reduced the volume of interbank deposits, and effectively restrained the growth in call loan credit issuance, notably a market that was never dealt with effectively in the earlier acts (Friedman and Schwartz, p. 443-445). Even though key protagonists in the reform movement like Paul Warburg and J. Laurence Laughlin had commented on the destabilizing potential of the call loan market during panics in the debates leading up to the Federal Reserve Act, there was no direct measure aimed at the call loan market in that legislation. The Glass-Steagall Act also made government securities eligible for discounting, returning the US to the bond-backed currency we still have today. This feature was made permanent in 1945 (Friedman and Schwartz, p. 321, fn 25).

There were complex arrangements of interest groups opposing and supporting a central bank, more complex than the distinctions contained in descriptions like urban/rural, populist/elitist, East/West, etc. Some bankers favored a central bank while others opposed it,

and it never seemed to be big concern of Theodore Roosevelt. The influence of the New York bankers appears again and again. Earlier they had opposed a central bank in Philadelphia, while later on they had opposed one because they had in effect been able provide the central bank functions they felt beneficial to them. Did the Federal Reserve System give the New York bankers what they had wanted in light of the weaknesses revealed by 1907? New York City bankers were able to maintain a strong influence in the call loan market and hence in the stock market, and with a central bank the call loan market was now relieved of its previous, tenuous role as a source of emergency liquidity. The bankers also got lower reserve requirements and, perhaps most important, they no longer held the responsibility for controlling panics. The role of New York City banks was now to aid the commercial development of the country, that is, to serve as the source of financing business, and the reserve banks were to serve as the provider of emergency liquidity.

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Time Line of Important Events, Legislation, and Individuals leading up to the Fed:

1. Various bits of legislation concerning silver/gold:

    Coinage Act of 1873, "The Crime of 1873"

    Resumption Act of 1875

    Bland-Allison Act of 1878

    Sherman Silver Purchase Act of 1890

    Gold Standard Act of 1900

2. Belmont-Morgan Syndicate (1895)

3. Baltimore Plan (1894)

4. Indianapolis Plan (1898)

5. Fowler Bill (1908)

6. Aldrich Bill (1908), Aldrich-Vreeland Act of 1908

7. Paul Warburg Speech and National Reserve Association Proposal (1910), V. Morawetz

8. National Monetary Commission (1910), Aldrich Bill of 1912 (Jekyll Island)

9. National Citizen's League (1910)

10. Glass Bill in House of Representatives. (June 26, 1913)

11. Federal Reserve Act (1913)

12. Bank Acts of 1933, 1935

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