

The National Monetary Commission: American Banking's Debt to Europe

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Table of Contents

ACKNOWLEDGEMENTS	3
INTRODUCTION	4
HISTORIOGRAPHICAL REVIEW	6
<i>Creation of the Federal Reserve</i>	7
<i>Progressive Era Economics</i>	13
BACKGROUND – THE NATIONAL BANKING SYSTEM (1863-1908)	15
CHAPTER I. ORIGINS OF THE NMC (1908).....	25
THE BATTLE FOR CURRENCY REFORM	25
THE ALDRICH-VREELAND ACT	28
COMPOSITION AND SCOPE OF THE NMC.....	35
CHAPTER II. THE NMC TURNS TOWARD EUROPE (1908-1910).....	40
ACQUISITION OF MATERIALS	40
THE NMC INTERVIEWS GERMAN BANKERS	53
NMC VOLUMES ON GERMANY AND THE REICHSBANK.....	57
CHAPTER III. FINAL REPORT OF THE NMC (1911-1912).....	63
THE PRINCIPAL DEFECTS OF THE AMERICAN BANKING SYSTEM	66
THE ALDRICH PLAN.....	72
THE ALDRICH PLAN IN CONGRESS	78
CONCLUSION	83
THE FEDERAL RESERVE ACT AND THE ALDRICH PLAN	83
LASTING SIGNIFICANCE OF THE NMC	88
APPENDIX.....	92
BIBLIOGRAPHY	94

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Introduction

In 1907, the United States experienced one of the worst financial depressions in its history. As the economy grew rapidly during the first years of the 20th century, burgeoning businesses and ambitious merchants turned to banks for loans. As the boom continued, American banks relied upon the Bank of England to help finance the ongoing expansion. But the British soon became worried that American banks were loaning money too freely – a bubble was forming. In late 1906, the Bank of England pulled the rug out from under the American financial system, hiking interest rates by 2.5 percent. As capital flowed out of the United States and back to Europe, Wall Street grew worried. Over the next year, the economic growth slowed to a crawl, but disaster did not strike until the fall of 1907. As the demand for money surged during harvest season, the already strained banks were unable to meet customers' withdrawal requests.¹

According to Frank Vanderlip, vice president of National City Bank, the country's largest bank, a "sudden, unreasonable, and overpowering fright" quickly spread through "all the human herd."² As consumers lost confidence in the banks, the situation worsened. The stock market plunged and cash became scarce. A November 24 *New York Times* article said, "The thing which is hardest for the average man to understand is why there should be such a scarcity of money at a time when prosperity is abroad in the land, ... the crops of the country are good, and the price of labor high."³ Unfortunately, the leaders of the country understood the problem little better than the average man.

¹ Details about the Panic of 1907 from Myron T. Herrick, "The Panic of 1907 and Some of Its Lessons," *Annals of the American Academy of Political and Social Science*, 31(March 1908): 308-325; Robert F. Bruner and Sean D. Carr, *The Panic of 1907: Lessons Learned from the Market's Perfect Storm* (Hoboken, NJ: John Wiley, 2007).

² Roger Lowenstein, *America's Bank: The Epic Struggle to Create the Federal Reserve* (New York: Penguin, 2015), 60.

³ "All Records Broken in the Making of Money," *NY Times*, November 24, 1907.

By the early twentieth century, the United States had grown into one of the industrial superpowers of the world, with output rivaling that of Britain. However, America's highly localized banking system was unable to meet the needs of its surging economy, as evinced by the many financial panics in the late nineteenth and early twentieth centuries. The Panic of 1907 served as a jarring reminder of the deficiencies of the National Banking system. Congress' response, the Aldrich-Vreeland Act of 1908, which only slightly increased the power of national banks, was a temporary fix rather than a permanent solution. The one bright spot in the otherwise underwhelming legislation was the establishment of the National Monetary Commission, a study group headed by Senator Nelson Aldrich (d. 1915), a towering and controversial figure in Progressive Era politics. The NMC faced an enormous challenge: fixing a fragmented, outdated banking system that was supposed to serve the world's largest economy.

To meet this challenge, the commission members did not start from scratch, but instead turned toward Europe for answers. During the next two years, the commission produced a prodigious amount of literature about banking systems in Europe, the United States, and around the world. The commission's publications are among the most comprehensive sources about nineteenth- and twentieth-century banking systems and its recommendations were integral to the establishment of the Federal Reserve. In their final report, the commissioners included a bill, commonly known as the Aldrich Plan, which proposed a central banking authority called the National Reserve Association. Because of the American public's deep-seated skepticism of central banking, Aldrich and his colleagues took pains to distance their legislation from European-style central banking, portraying it as an "essentially American" plan.⁴ Although the

⁴ *Report of the National Monetary Commission* (Washington, DC: Government Printing Office, 1912), 41.

Aldrich bill failed to pass through Congress, it served as the foundation for the Federal Reserve Act that passed two years later. Scholars have largely taken the commissioners' words at face value, reiterating the claim that the Federal Reserve was a uniquely American institution. While it is true that the Federal Reserve's structure was the product of American political compromises, it is misleading to say that it was an essentially American institution.

This thesis will argue that European banking systems, particularly that of Germany, served as an invaluable model for the members of the National Monetary Commission and heavily influenced its recommendations. Further, it will demonstrate that the National Monetary Commission's European research and subsequent banking reform proposals were fundamental to the creation of the Federal Reserve.

Historiographical Review

Historical literature that focuses specifically on the National Monetary Commission is fairly scant – it is confined to small sections of larger works, usually histories of American banking or books about the creation of the Federal Reserve. As a result, this historiography review will examine two broader bodies of literature. First, it will discuss literature about the creation of the Federal Reserve, paying particular attention to debates about the motivations of its founders and the extent to which they relied upon European models. Second, it will look at literature about the Progressive Era, focusing on the development of economics as a distinct field of study, the rise of congressional commissions, and the transatlantic nature of progressive thought. This thesis will engage with both of these bodies of literature by arguing that the National Monetary Commission's European research was integral to the creation of the Federal Reserve and that the commission exemplified certain trends of the Progressive Era.

Creation of the Federal Reserve

The existing literature about the origins of the Federal Reserve can be roughly divided into two schools of thought: scholars who argue that the Fed was created primarily for economic reasons and those who argue that the motivations were political or personal. Within the first group, scholars disagree about the extent to which the founders of the Federal Reserve relied upon European central banks as models for their work. In the second group, some scholars point to the political ambitions of certain congressmen as the driving force behind the creation of the Fed, while others emphasize the personal incentives of a select group of elite bankers.

Many scholars believe that the primary motivation for the creation of the Federal Reserve was economic – that it was a response to the inadequacy of the National Banking System in place from 1863-1913.⁵ Robert Craig West exemplifies this view when he argues that the creation of the Federal Reserve was a response to the turbulent economic conditions of the previous fifty years. According to West, the main purpose of the Federal Reserve Act was to centralize policy decisions and to provide economic stability through an elastic currency.⁶

These scholars do not deny that political factors heavily influenced the shape that the Federal Reserve Act ultimately took. For example, Allan Meltzer acknowledges that the Federal Reserve Act was a compromise between bankers who wanted a powerful, independent central

⁵ Allan H. Meltzer, *A History of the Federal Reserve* (Chicago: U of Chicago Press, 2009); Donald R. Wells, *The Federal Reserve System: A History* (Jefferson: McFarland, 2004); Richard H. Timberlake, *The Origins of Central Banking in the United States* (Cambridge: Harvard UP, 1978); Richard T. McCulley, *Banks and Politics During the Progressive Era: The Origins of the Federal Reserve System* (Ithaca: Cornell UP, 1992); Robert Craig West, *Banking Reform and the Federal Reserve, 1863-1923* (Ithaca: Cornell UP, 1977); Murray M. Rothbard, *A History of Money and Banking in the United States: The Colonial Era to World War II* (Auburn: Ludwig von Mises Institute, 2005).

⁶ West, *Banking Reform and the Federal Reserve*, 9-10. An elastic currency is one that can easily increase or decrease in volume to meet the needs of the economy.

bank and those who feared that a central bank would give monopoly power to New York bankers.⁷ This compromise is evident in the structure of the Federal Reserve, which is comprised of twelve privately funded, semiautonomous reserve banks, with a public board overseeing them. Richard McCulley makes a similar argument, but emphasizes regional differences over political ones.⁸ He categorizes bankers into three specific groups who had different, but overlapping interests in banking reform: Wall Street, LaSalle Street, and Main Street.⁹ These groups of bankers were all interested in stabilizing the economy, but they had different preferences about how to do so.¹⁰

In 1910, a group of economists and Wall Street bankers met with Aldrich at Jekyll Island, Georgia, and devised a plan for an independent central bank that aligned the incentives of all three groups of bankers. Getting a bill passed into law required some significant political maneuvering by Senator Carter Glass (D.-VA), who drafted a bill for that would create a so-called Federal Reserve system that was subject to slightly more government oversight, but maintained the same basic functions laid out in Aldrich's plan. While Meltzer, McCulley and other similar scholars acknowledge that political compromises influenced the structure of the federal reserve, they maintain that economic factors were the primary motivation for the creation of an American central bank.

⁷ Meltzer, *A History of the Federal Reserve*, 65. West expresses essentially the same view in Chapter 10 of *Banking Reform and the Federal Reserve*.

⁸ McCulley, *Banks and Politics During the Progressive Era*.

⁹ Wall Street refers to New York bankers, LaSalle Street to bankers in Midwestern cities like Chicago, and Main Street to bankers in small towns and local businesses.

¹⁰ LaSalle Street favored self-regulation and an asset-based currency, while Wall Street was opposed to allowing smaller banks to issue any additional currency. Main Street wanted some minor changes to the National Banking System, such as the provision of emergency currency.

Among those who believe that the Federal Reserve was established for economic reasons, scholars disagree about the extent to which the Fed's founders looked to European central banks for inspiration. Some argue that European central banks served as an important model for the advocates of an American central bank.¹¹ According to Meltzer, "The Federal Reserve's approach to policy originated in the Bank of England's nineteenth-century practices and the partially developed theory or framework that the practices attempted to apply."¹² He describes in great detail the contributions of several nineteenth-century British economists and bankers, including Henry Thornton, David Ricardo, and Irving Fisher, all of whom developed theories that were seminal to British monetary policy. According to Meltzer, the influence of their theories on the founders of the Federal Reserve can be seen in the early Fed's focus on short-term market interest rates and its decision to base monetary policy on the state of reserves, rather than output or employment.¹³

However, other scholars place comparatively little importance on the example set by European bankers.¹⁴ These scholars, especially Timberlake, tend to emphasize that central banking practices began to develop in America even before the establishment of the Federal Reserve. Timberlake traces American central banking policy through the First and Second Banks of the United States, and then through less visible institutions, like the independent treasury, that were used to exert control over monetary policy after the end of the Second Bank in 1836 and the establishment of the Federal Reserve in 1913. He concludes that the advent of the Federal

¹¹ Meltzer, *A History of the Federal Reserve*; West, *Banking Reform*; Lowenstein, *America's Bank*.

¹² Meltzer, *A History of the Federal Reserve*, 64

¹³ Meltzer, *A History of the Federal Reserve*, 64

¹⁴ Timberlake, *The Origins of Central Banking*; Rothbard, *A History of Money and Banking*.

Reserve was part of a gradual evolution of American central banking practices.¹⁵ According to scholars like Timberlake, the origins of the Federal Reserve are uniquely American, and the influence of European central banking models was not significant.

Another group of scholars argues that the incentives to create a central bank were not economic, but rather political or personal.¹⁶ One school of thought is that the creation of the Federal Reserve was largely the result of Senator Nelson Aldrich's political ambition. Aldrich was a prominent Republican senator who represented Rhode Island from 1881 to 1911, and was extremely influential in debates about tariffs and monetary policy. Some scholars, such as Elmus Wicker, argue that Aldrich saw banking reform as a cornerstone of his legacy.¹⁷ Wicker claims that the Federal Reserve Act was not created to prevent financial panics, arguing that the Aldrich-Vreeland Act of 1908, which allowed national banks to issue asset-backed currency¹⁸ on an emergency basis, was already sufficient for panic prevention.¹⁹ In addition to the emergency asset-backed currency provision, the Aldrich-Vreeland Act established the National Monetary Commission to study a more permanent solution. According to Wicker, "the National Monetary Commission was a 'one-man show' completely dominated by Senator Aldrich, who thought this

¹⁵ Timberlake, *The Origins of Central Banking in the United States*.

¹⁶ Lawrence J. Broz, *The International Origins of the Federal Reserve System* (Ithaca: Cornell UP, 1997); James Livingston, *Origins of the Federal Reserve System: Money Class, and Corporate Capitalism, 1890-1913* (Ithaca: Cornell UP, 1986); George Selgin, "New York's Bank: The National Monetary Commission and the Founding of the Fed," *Cato Institute Policy Analysis* 793 (2016); Elmus Wicker, *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed* (Columbus: Ohio State UP, 2005).

¹⁷ Wicker, *The Great Debate*. Lowenstein also makes this point on pg. 79, but he differs from Wicker in that while he considers Aldrich's personal ambition to be a key factor in the establishment of the Fed, he also places some weight on economic motivations.

¹⁸ Asset-backed currency means bank notes that are backed by any securities the bank is holding, rather than just government bonds.

¹⁹ Wicker, *The Great Debate*, 44.

was his one opportunity for enduring fame.”²⁰ In support of this claim, Wicker cites a single comment made by Piatt Andrew, the leading economist of the NMC. He does not, however, engage in any analysis of the minutes of NMC meetings or correspondence between the commissioners. Although Aldrich’s bill for a central bank was never actually passed, Wicker argues that the Glass-Owen Bill (which became the Federal Reserve Act) was extremely similar to the Aldrich plan in every way except for the governance structure it laid out for the Fed.²¹

Other scholars emphasize the personal incentives of New York bankers as the driving force behind the establishment of the Federal Reserve. James Livingston argues that an elite group of bankers and corporate leaders sought the centralization of banking as a way to better control the burgeoning business sector of the economy.²² Lawrence Broz levels a more specific charge against the same group of elite New York bankers: He says that their motivation in facilitating the creation of the Federal Reserve was to internationalize U.S. currency, which would bring them great personal benefits.²³ Broz portrays the creation of an American central bank as a collective action problem, where the establishment of a stable payments system is a public good that benefits American society as a whole, but “cooperation among the individual beneficiaries for the purpose of improving the system could be expected to be very difficult.”²⁴ Between the 1870s and the early 1900s, the American economy grew significantly, and in particular, came to occupy a more important international position. Broz argues that the

²⁰ Wicker, *The Great Debate*, 50.

²¹ Wicker’s point about the changes to the structure of the Fed in the between the Aldrich bill and the Glass Bill echoes the views of some scholars in the first group.

²² Livingston, *Origins of the Federal Reserve System*.

²³ Broz, *The International Origins of the Federal Reserve System*.

Lowenstein also mentions that New York Bankers stood to benefit from the internationalization of the U.S. dollar (pg. 5-6) but he lists it as one motivating factor among many, whereas Broz argues that it was their primary motivation.

²⁴ Broz, *International Origins*, 3.

international advance of the economy gave New York bankers a private incentive to internationalize the dollar, which was best accomplished by the creation of a central bank. This solved the collective action problem by aligning public and private incentives – the New York bankers were now willing to bear the costs of lobbying for banking reform, since they would gain a disproportionate amount of the public benefit that resulted from the creation of the Federal Reserve.²⁵

Although the literature about the hundred-year history of the Federal Reserve is fairly deep, significant gaps in the historiography about its creation still persist. Scholars have not reached a clear consensus about which actors were primarily responsible for the establishment of the Fed or about their primary motivations. In addition, they disagree about whether the British, German, and/or French central banks served as significant models for the founders of the Fed. In particular, there is a dearth of scholarship on the National Monetary Commission, which played a central role in the advent of the Federal Reserve and left behind a wealth of primary source material.²⁶ Although some scholars acknowledge that the work of the National Monetary Commission had a significant impact on the Federal Reserve legislation that ultimately passed into law, none seem to engage in a critical analysis of the thousands of pages of primary source material that the NMC produced.²⁷ This thesis will delve into the publications, correspondence, and other internal documents of the NMC in greater detail. Analysis of these documents will

²⁵ Broz, *International Origins*, chapters 2 and 3.

²⁶ The National Monetary Commission published over forty reports about banking systems from around the world. These reports, along with correspondence, financial statements, and other internal documents are available as part of the Nelson Aldrich Papers at the Library of Congress. Some NMC publications are also available online through FRASER, the Fed's digital archive.

²⁷ Wicker mentions the National Monetary Commission as a turning point in Senator Aldrich's thinking about a central bank, but goes into little detail beyond that. Lowenstein goes into more detail about Aldrich's trip to Europe for the NMC, but he does not analyze the resulting publications in much detail.

demonstrate that the commission's research about European banking systems were essential to changing the opinions of politicians like Aldrich and that the NMC's recommendations ultimately had a strong influence on the Federal Reserve Act.

Progressive Era Economics

Although many Progressives opposed the establishment of the Federal Reserve at the time, its creation, and in particular the activities of the National Monetary Commission, exemplified several Progressive Era trends. Some of the literature about the Progressive Era mentions the creation of the Federal Reserve, but most of these accounts are oversimplified. However, larger historiographical ideas that have developed about the Progressive Era, including the development of economics as a distinct field of study, the increase of government control over the economy, and the transatlantic nature of progressive thought, are germane to the thesis that the creation of the Federal Reserve was deeply influenced by the National Monetary Commission's research on European banking.

Many Progressive Era historians point out that during the late nineteenth and early twentieth centuries, economics became a distinct field of study that was regarded as a scientific pursuit rather than a social one.²⁸ This shift in thought occurred first in American universities, which were deeply influenced by the example of German universities. This argument is exemplified by Thomas Leonard, whose 2016 book *Illiberal Reformers* examines the intersection between progressive economics and other progressive ideas such as social Darwinism and

²⁸ James T. Kloppenberg, *Uncertain Victory: Social Democracy and Progressivism in European and American Thought, 1870-1920* (New York: Oxford UP, 1986).

T. J. Jackson Lears, *Rebirth of a Nation: The Making of Modern America, 1877-1920* (New York: HarperCollins, 2009).

Thomas C Leonard, *Illiberal Reformers: Race, Eugenics, and American Economics in the Progressive Era* (Princeton: Princeton UP, 2016).

eugenics.²⁹ Leonard points out that in the mid to late 1800s, young American academics began traveling to Europe, especially Germany, where they learned a particular school of political economics that emphasized a greater degree of state control than traditional laissez-faire economics. These academics were also deeply influenced by the “professional status” of German economics professors, who were part of a class of intellectual elites. As these progressive scholars returned to America from 1870 to 1900, they began to replicate and expand upon what they had learned in Germany at American universities, and the status of American economists quickly changed from “gentleman amateurs to specialized professionals.”³⁰ Some of the National Monetary Commission economists, such as Paul Warburg, were born in Germany or had studied there.

Daniel Rodgers makes similar claims about the connection of American economists to German universities, but his book *Atlantic Crossings* is groundbreaking in that it situates these German-trained economists within a larger Progressive Era trend toward transatlantic thought. He argues that “the reconstruction of American social politics was of a part with movements of politics and ideas throughout the North Atlantic world that trade and capitalism had tied together.”³¹ Although Rodgers does not specifically mention the National Monetary Commission, its deep and direct interactions with European bankers and intellectuals typify the phenomenon of transatlantic Progressive thought that he describes.

According to scholars like Leonard, by the dawn of the twentieth century, the budding class of American economists began to move into government jobs and successfully push for

Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, MA: Harvard UP, 1998).

³⁰ Leonard, *Illiberal Reformers*, 21.

³¹ Rodgers, *Atlantic Crossings*, 3.

greater government control over economic life. Leonard briefly mentions the National Monetary Commission as an example of the increased role of economists in government, pointing out the many professors who assisted the commission. He also says that the creation of the Federal Reserve, which he refers to as “the fourth branch in Washington, DC,” was an important step in the trend toward increased federal control over the economy.³² Several of the scholars indicated above also reference the National Monetary Commission and the creation of the Federal Reserve as examples of the incorporation of economic expertise into policy decisions and the increase of government intervention in the economy. However, most of the accounts about the creation of the Federal Reserve are oversimplified, and some are even inaccurate.³³ This thesis, which will paint a more complete and nuanced picture of the National Monetary Commission’s role in the creation of the Federal Reserve, will better situate the commission within the Progressive Era movement toward the incorporation of economic expertise in government decision-making.

Background – The National Banking System (1863-1908)

To fully appreciate the importance of the National Monetary Commission’s work, it is important to first understand the structure of America’s banking system in the preceding half century. This system, commonly called the National Banking System, was conceived at the height of the Civil War and lasted until the passage of the Aldrich-Vreeland Act, the law that

³² Leonard, *Illiberal Reformers*, 44.

³³ For example, Lears says on page 319 that the Federal Reserve Act was drafted at the infamous Jekyll Island Meeting. While Aldrich did begin to draft his monetary reform plan at this meeting, his bill never even came close to passing into law. The bill that became the Federal Reserve Act was actually written and sponsored by Carter Glass, a Democrat from Virginia. It is true that Glass’s Bill was modeled on Aldrich’s Bill, but this example shows that much of the analysis of the creation of the Federal Reserve in Progressive Era literature lacks nuance. Leonard’s brief account of the NMC is also oversimplified and gets some minor details about the commission wrong.

created the NMC in 1908. The primary purpose of the NMC was to analyze the National Banking System, discover its defects, and design a solution. This section will give an overview of the National Banking System's development and structure, as well as some key events that occurred during this period.

In the midst of the Civil War, Congress passed two laws that completely overhauled America's banking system and economy – the National Currency Act of 1863 and the National Banking Act of 1864, which superseded the Currency Act. As the war raged on, the Union government faced a dire shortage of funds to support the war effort. In the antebellum era, state banks had proliferated rapidly – by the time the war broke out, there were many thousands of state banks, and each could issue its own type of currency. State bank notes were unreliable, because their value depended on the financial soundness and reputation of the issuing bank. In addition, notes that were accepted in one part of the country might be worth less in other areas, or even totally rejected in others.³⁴ As a result, Lincoln's secretary of the treasury, Salmon Chase, could not use unstable state bank notes to fund the Union's wartime needs. Throughout the early years of the war, Chase faced a serious shortage of cash. In 1862, Congress passed the Legal Tender Act, which authorized the treasury to issue \$150 million of non-interest bearing notes.³⁵ These notes, which became known as greenbacks, could be used to pay virtually any public or private debts.³⁶ Greenbacks were originally seen as a temporary emergency measure, so both Chase and Congress agreed that it was unnecessary to establish a central body responsible

³⁴ West, *Banking Reform*, 16-17.

³⁵ In 2016 US dollars, \$150 million would have been worth about \$3.6 billion. All inflation calculations in this thesis use the Federal Reserve Bank of Minneapolis' Consumer Price Index Estimate for 1800-2017. See <https://www.minneapolisfed.org/community/teaching-aids/cpi-calculator-information/consumer-price-index-1800>

³⁶ The only exceptions were payments on custom duties and interest on government bonds. McCulley, *Banks and Politics*, 10.

for adjusting the issuance of currency in response to demand for money. However, as Congress authorized the Treasury to continue printing greenbacks to finance the war, they soon became an integral part of the American money supply. This was problematic – a uniform national currency was totally incompatible with the state banking system, since these banks were subject to different state-level regulations and the power to regulate the value of currency fell under the federal government’s jurisdiction, according to the Constitution.

Senator John Sherman (R-OH) realized that the state-dominated banking system was unsustainable, and he began to draft a bill that gave the federal government greater control over the banking system without establishing a central banking authority. Jacksonian Democrats would have considered any more drastic centralization of banking oversight to be monopolistic and oppressive. Sherman’s work provided the foundation for two pieces of legislation: the National Banking Act of 1863 and the National Currency Act of 1864.³⁷

Although Congress’ primary motivation was to create a banking system capable only of financing the war effort, these two laws created a system that would endure for the next fifty years. The National Banking Act completely overturned the state-dominated system by establishing a system of nationally chartered banks, which would be able to circulate a uniform currency, unlike state banks. To induce participation, Congress amended the act in 1865, enacting a high punitive tax on state bank notes. This attempt to force banks into the national system had mixed results.³⁸ Overall, this legislation elevated the federal government’s ability to control the banking system and promote cooperation among banks. While it did significantly

³⁷ McCulley, *Banking and Politics*, 10-12.

³⁸ McCulley, *Banks and Politics*, 12.

increase federal control over banking, the new system was still based on free banking principles – banks were largely independent and there was no central body regulating them.

For the purposes of this thesis, it is important to note that several authors have drawn parallels between the National Banking Act and several features of the Bank of England.

Although Sherman never explicitly mentioned the English central bank as an influence, he was familiar with the English and French banking systems.³⁹ For example, the National Banking Act set a cap on the total number of notes that could be issued by all banks in the system – this was a prominent feature of the English Bank Act.⁴⁰ The idea to use bonds as backing for currency might have also come from the practices of English or German banks.⁴¹ Throughout history, American politicians and bankers have turned to European models for inspiration when designing banking reform measures.

The Republicans promoting the National Banking Act in 1864 were careful to stress that their conception of national banking was nothing like the first two Banks of the United States, established in 1791 and 1816, which had been quite unpopular.⁴² Their new legislation significantly limited the national banks' powers in an effort to prevent the federal government from monopolizing the banking system. First, the government could not designate a particular number of national banks – an indefinite number of banks could receive national charters, as long as each met fairly lenient capital stock requirements.⁴³ Second, the law limited the activities

³⁹ West, *Banking Reform*, 20.

⁴⁰ Fritz Redlich, *The Molding of American Banking*, (New York: Hafner, 1947), vol. II, 105.

⁴¹ West, *Banking Reform*, 23.

⁴² Leonard C. Helderman, *National and State Banks: A Study of Their Origins* (New York: Houghton Mifflin Company, 1931), 148.

⁴³ Capital stock requirement refers to the minimum amount that banks had to pay to join the National Banking System. The National Banking Act “required a capital stock of \$50,000 in cities with populations of 10,000 or less and \$100,000 in cities with populations in excess of 10,000 people.” McCulley, *Banking and Politics*, 13.

of national banks to commercial banking, meaning that they could only conduct short-term lending and long-term investments were restricted.⁴⁴ Despite these checks on the power of national banks, the National Banking Law was criticized by a wide variety of opponents. Bankers thought the law gave Congress and the Treasury Department undue control over the banking system, while Democrats in the West denounced the National Banking System as a monopoly.⁴⁵ Ultimately though, the opposite proved true – even with these sweeping changes, the banking system was still too fragmented to meet the needs of America’s rapidly growing economy. In addition, several aspects of its design exacerbated regional economic inequalities, strengthening New York’s financial dominance and further weakening Western and Southern states.

New York City was already the locus of the American banking system, but several of the original provisions of the National Banking Act contributed to a problematic concentration of money in this financial center. The National Banking Act instituted reserve requirements⁴⁶ for all nation banks. The law specified national banks in seventeen “redemption cities” that would hold a higher proportion of reserves. New York City would hold the highest amount of reserves. New York City banks held all reserves as cash, while smaller redemption cities held half of their reserves as cash and could send the other half to New York and “country” banks only had to hold two-fifths of reserves as cash, while sending the rest to New York.⁴⁷ New York accumulated a huge share of the system’s reserves, which had two significant effects. First, it gave Wall Street

⁴⁴ West, *Banking Reform*, 18.

⁴⁵ McCulley, *Banking and Politics*, 13.

⁴⁶ Reserves are a banks’ holdings of deposits. When customers deposit money, the bank can hold that money as reserves, or loan it out. A reserve requirement specifies a minimum level of reserves that banks must hold at all times. Holding an adequate level of reserves helps to ensure that banks will be able to fulfill customers’ withdrawal requests.

⁴⁷ McCulley, *Banks and Politics*, 17.

bankers disproportionate control over the banking system. Since there was no actual mechanism to enforce cooperation among banks, New York City naturally emerged as the leader of the financial system.⁴⁸ And second, it meant that when banks around the country demanded large amounts of reserves, whether because of normal seasonal fluctuations or economic turbulence, New York banks were placed under considerable strain. This would quickly create serious problems.

In addition to increasing New York's dominance over America's financial system, the National Banking Act disadvantaged other regions of the country, particularly the South and West. The structure of the National Banking System led to the rise of unit banking over the next fifty years. Unit banking refers to a system where individual banks independently serve their local communities, as opposed to branch banking, where large banks establish connected branches throughout regions. Under a unit banking system, banks grew separately and often unevenly, which would later make it even more difficult to integrate the system and encourage cooperation.⁴⁹ As a result, the South and West had significantly underdeveloped banking systems by the end of the National Banking period. The National Banking Act contained a provision that was intended to distribute bank notes evenly across the country, but in reality only worsened the situation. This provision distributed notes based on population and existing bank capital, which resulted in a large share of the bank notes circulating in Eastern states, and a serious dearth of bank notes in the South and West.⁵⁰ This was a major problem, because unlike in the East, where people often made payments with checks or other types of credit, payments in the South and

⁴⁸ West, *Banking Reform*, 25.

⁴⁹ McCulley, *Banks and Politics* 14.

⁵⁰ McCulley, *Banks and Politics*, 20.

West largely depended on bank notes.⁵¹ In later years, there were attempts to address these shortages, but these efforts fell short.

As time passed, other problems arose. In the 1870s, national banking advocates in Congress tried to achieve their original goal of a unified national currency. At the time, there were both greenbacks, which were issued by the Treasury, and the notes issued by national banks. In order to unify the currency, Congress would have to eliminate the use of greenbacks. However, Southerners and Westerners objected strongly to this idea for several reasons. Much of the resistance was political – people throughout the country, but especially in the South, still had a deep suspicion of banks and saw the creation of national banks as unwelcome intrusions into their local communities and as a violation of states' rights. But Southerners and Westerners had practical objections as well. As mentioned previously, the National Banking System imposed stricter safety requirements on banks that received national charters. In particular, banks were no longer allowed to accept real estate as collateral for loans, which made it difficult for Southerners and Westerners to obtain loans, further stifling the growth of the economy in these regions.⁵² The regional divisions created by the National Banking System were among the problems that the NMC would later seek to address.

The National Banking era was characterized by economic turbulence, with recessions occurring every few years. Although the impetus for each financial panic varied slightly, common themes highlighted the shortcomings of the National Banking System. The first major downturn happened in 1873, when the well-known private Philadelphia bank Jay Cooke and Company failed because of overextended railroad investments.⁵³ The failure of such a large and

⁵¹ West, *Banking Reform*, 22.

⁵² McCulley, *Banks and Politics*, 19.

⁵³ West, *Banking Reform*, 27.

visible bank unnerved Americans, who began withdrawing money from banks across the country. Because national banks in most towns and cities held most of their reserves in larger cities and New York, many banks were unable to meet their customers' demands, causing them to become insolvent. A long period of economic stagnation followed.

With the economy sliding toward depression, national banking advocates took several measures to stimulate the economy. First, Congress passed the Resumption Act of 1875, which abolished the limit on national bank notes and took several measures intended to finally end the use of Greenbacks. Obviously, this law was unpopular with Southerners and Westerners, and it failed to either boost the volume of bank notes or eliminate greenbacks. The same year, a coalition of discontented farmers and businessmen banded together to form the Greenback Party, which advocated for the continued use of unbacked currency. Realizing their efforts were ineffective, Congress passed the Bland-Allison Act three years later, which allowed the treasury to continue printing Greenbacks, and also introduced silver-backed currency, which was popular across the political spectrum.⁵⁴ At this point, Republicans in Congress had all but abandoned their original goal of a uniform currency of national bank notes. Throughout the remainder of the century, Americans used a confusing mix of currencies – seven different types in total.⁵⁵

While Republicans wrangled with currency reform, the banking system remained essentially unchanged. As a result, another severe panic occurred in 1893. The Panic of 1893 had several causes, but most significant was the failure of a series of railroad companies, which coincided with the end of harvest season in late 1892. Much like in 1873, the banks were unable

⁵⁴ McCulley, *Banks and Politics*, 23-24

⁵⁵ According to McCulley, these were the seven types, in order of most to least prominent: United States Notes, national bank notes, silver dollars, silver certificates, treasury notes of 1890, gold coin, and gold certificates.

to cope with increased withdrawal demand, leading to the failure of hundreds of banks, and a depression that would last until the turn of the century.⁵⁶

Several year later, as the economy recovered from the Panic of 1893, a debate raged about the use of gold- and silver-backed currency. As mentioned earlier, Americans living in agrarian areas tended to favor silver-backed currency, because it provided an influx of currency to the West and South. While Republicans had also generally supported silver currency in the 1870s, many turned against it in the 1890s, beginning to push for gold-backed currency, which was less flexible but more reliable. This faction of Republicans achieved success in 1900 with the passage of the Gold Standard Act, which stipulated that only gold could be used to back paper money. The economy continued to surge in the first few years of the 1900s – while the Gold Standard Act may have reassured the public, it probably had little to do with the economy’s favorable uptick.⁵⁷ But soon, the National Banking System began to feel great strain once again.

Republicans realized that change was necessary, but they failed to enact any meaningful legislation until one more crisis occurred – and this time, it was the worst of all. As the economy recovered from 1893, strong economic growth created a bubble – meaning that business expectations were unreasonably high. A series of external shocks to the economy, including a 1906 fire that devastated San Francisco and the Bank of England’s decision to raise interest rates on loans to American banks, shattered this confidence, leading to bank runs and the collapse of the stock market, which declined 37 percent.⁵⁸ Again, the decentralized nature of the National

⁵⁶ Charles Hoffman, *The Depression of the Nineties: An Economic History* (Westport, Conn.: Greenwood Publishing Corporation, 1970).

⁵⁷ Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States: 1867-1960* (Princeton: Princeton UP, 1971), 148-149.

⁵⁸ Robert F. and Sean D. Carr, *The Panic of 1907: Lessons Learned from the Market’s Perfect Storm*. Hoboken (NJ: John Wiley, 2007).

Banking System, combined with the gold standard, made it impossible to supply extra liquidity,⁵⁹ exacerbating the crisis. The Panic of 1907 was grave enough that even Republicans realized that the National Banking System was unsustainable. Congress' response, the Aldrich-Vreeland Act, created the National Monetary Commission to analyze the flaws of the National Banking System and recommend a new system.

⁵⁹ Liquidity is the availability of assets to a market. In this case, banks could not supply enough cash to the customers that wanted to withdraw it.

Chapter I. Origins of the NMC (1908)

The National Monetary Commission was born as an afterthought. But by the end of its tenure, the NMC would produce one of the most comprehensive bodies of literature on financial history ever gathered, and its final report would lead to the establishment of an American central bank. In 1907, the United States experienced a dire financial crisis. The causes of the Panic were complex, but ultimately, it was the result of an outdated, fragmented banking system that could not provide enough currency in times of trouble. In the year after the Panic, Congress finally recognized the need to address the shortcomings of the National Banking System. The legislation that resulted was the Aldrich-Vreeland Act, an odd compromise that took temporary panic-prevention measures without addressing the larger flaws in the banking system.⁶⁰ The law's one redeeming quality was that it established the National Monetary Commission, a study group that would undertake a rigorous examination of America's banking system and research banking laws around the world to find a more lasting remedy.

The Battle for Currency Reform

After the Panic of 1907, Congress finally attempted to remedy the flaws of the National Banking System. However, rather than examining the causes of the Panic in detail and formulating legislation accordingly, Congress launched into a tumultuous battle over the many currency reform bills that were introduced in both the House and Senate. In an article published in August 1908, Piatt Andrew (d. 1936), a Harvard economist who would later become the leading economic expert of the National Monetary Commission, described the glut of bills

⁶⁰ Not all scholars agree about this – some, such as Elmus Wicker, argue that the Aldrich-Vreeland Act was actually an adequate response to the Panic by itself. This chapter, however, will argue that the act was a temporary and rather underwhelming fix, not a permanent solution.

designed in response to the Panic of 1907: “Scarcely a senator or representative presented himself in Washington without some measure of ‘currency reform’ framed to forestall the recurrence of such distress.”⁶¹ All of these bills sought to improve liquidity⁶² in times of financial crisis, but most of them failed to address the deeper problems that stemmed from the fragmented nature of the American banking system. In the house, Edward Vreeland (R-NY), Charles Fowler (R-NJ), and James McKinney (R-IL) all introduced different proposals.⁶³ According to Andrew, these bills, along with others, offered a wide variety of options:

“Several bills were offered providing for the establishment of a central bank; others contemplated the issue of a special currency by the government treasury; others legalized the creation of certificates and currency by clearing-house associations; while a great variety of bills provided for the issue of an emergency currency by individual banks, upon the pledge of various collateral, the establishment of special reserves, or the payment of special taxes.”⁶⁴

After fifty years, Washington had finally realized that the National Banking System needed to be overhauled, but nobody could agree on how to do it.

Of all the reform proposals, the most drastic and comprehensive was the Fowler Bill, which had originally been introduced in 1906, but did not gain much attention until after the Panic of 1907. Fowler was a proponent of an asset-based currency, a currency that is backed by the general assets of a bank, rather than bonds.⁶⁵ The bill did not stop there – it also reorganized the banking system, establishing up to twenty “bank-note redemption districts.”⁶⁶ In addition, it called for the establishment of a “guarantee fund for the redemption of the notes of failed banks

⁶¹ Abram Piatt Andrew, “The Currency Legislation of 1908,” *The Quarterly Journal of Economics*, 22, no. 4 (1908): 666.

⁶² Liquidity is the availability of assets to a market.

⁶³ Elmus Wicker, *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed* (Columbus, OH: Ohio State UP, 2005), 42.

⁶⁴ Andrew, “The Currency Legislation of 1908,” 666.

⁶⁵ Wicker, *The Great Debate*, 42.

⁶⁶ “A Bill to Establish a Credit Currency,” H. R. 21764, May 4, 1908, Sec. 4, 2.

not secured by United States bonds.”⁶⁷ And finally, the bill provided for the retirement of all greenbacks by January 1909.⁶⁸ Ultimately, the bill never gained much traction because many congressmen thought it was too extreme and its provisions were too disparate. The bill did gain some support from commercial organizations, who approved of the idea of an asset-based currency. However, some of the bill’s other provisions discouraged commercial bankers – the American Bankers Association originally supported the bill in 1906, but by 1908 it withdrew its support because it opposed the establishment of a guarantee fund to insure deposits and the notes of failed banks.⁶⁹ The bill received even less support in the House, where most representatives believe it was too radical. For example, on May 26, Representative Richard Bartholdt (R-MO) discussing the merits of the various currency reform bills, said, “The so-called ‘Fowler bill,’ dividing the banks of the country into twenty districts and providing for the issuance of currency by every bank in each district, involves revolutionary changes which the country would not accept.”⁷⁰ Other representatives shared Bartholdt’s concerns, and the bill never made it out of the House.

The bill that gained the most attention was introduced in the Senate, by Nelson Aldrich. The Aldrich bill was much more conservative than the Fowler bill, simply expanding current banking practices to allow greater currency circulation in emergency situations. But Aldrich decided to include one problematic provision – in addition to traditional bond-backed currency, Aldrich proposed that banks could issue notes backed by railroad mortgage bonds. This one

⁶⁷ “A Bill to Establish a Credit Currency,” Sec. 13.

⁶⁸ “A Bill to Establish a Credit Currency,” Sec. 21.

⁶⁹ Wicker, *The Great Debate*, 42.

⁷⁰ Richard Bartholdt, “Speech of Hon. Richard Bartholdt of Missouri, in the House of Representatives,” Tuesday, May 26, 1908, from the Appendix to the Congressional Record, May 30, 1908.

provision engendered enormous opposition, especially from Western senators, who thought that Aldrich was being too generous to the railroads and favoring New York bankers, who held the most railroad bonds.⁷¹ As a result, that section of the bill was removed, and the remaining bill stipulated that the emergency currency would be based only on government bonds. However, the bill still did not have enough support to pass through the Senate, probably because it did too little to change existing banking regulations.

At this point, Aldrich was strongly opposed to an asset-based currency. Vreeland's bill in the House was fairly similar to Aldrich's except that it allowed banks to issue currency backed by their own loans (an asset-based currency).⁷² For a while, Congress seemed to have reached a hopeless impasse, as the proponents of a bond-secured currency and those of an asset-based currency proved equally intractable. As time dragged on without a solution, each side eventually began to soften. Ultimately, they reached a compromise by combining the Aldrich and Vreeland bills. On May 30, 1908, Congress passed the "Act to Amend the National Banking Laws," commonly known as the Aldrich-Vreeland Act.

The Aldrich-Vreeland Act

The result of an unlikely compromise, the Aldrich-Vreeland Act was a slightly confusing, unpopular piece of legislation. It was designed only as a temporary measure, set to expire in 1914.⁷³ The law's main purpose was to prevent banking panics like the one that had occurred in

⁷¹ Roger Lowenstein, *America's Bank: The Epic Struggle to Create the Federal Reserve* (New York: Penguin, 2015), 78.

⁷² Lowenstein, *America's Bank*, 78.

⁷³ "An Act to Amend the National Banking Laws," HR 21871, Sec 20.

1907, but its only lasting impact would come from the last three sections, which created the National Monetary Commission.

Aldrich-Vreeland allowed national banks to form “voluntary associations to be designated as national currency associations.” The banks had to meet certain requirements, such as having “unimpaired capital and a surplus of not less than twenty per centum, not less than ten in number, having an aggregate capital and surplus of at least five millions of dollars.” In addition, the formation of these national currency associations was subject to approval by the Secretary of the Treasury. Each association could represent a city, state, or region, but there could not be more than one association in a given city.⁷⁴

The purpose of forming national currency associations was that it would make it easier for banks to circulate additional currency when needed. Greater flexibility when issuing currency would theoretically allow banks to head off potential banking panics before they began and to dampen the impact of any economic downturns that did occur. The Aldrich-Vreeland Act allowed the currency associations to apply to the treasury department for the issue of additional circulating notes. In return, the association would deposit securities in the treasury. As mentioned earlier, the law was a compromise between the advocates of bond-backed and asset-backed currencies: The securities that currency associations could deposit with the treasury included both government bonds and commercial paper.⁷⁵ As long as the Secretary of the Treasury deemed the deposited securities acceptable, the treasury could issue additional circulating notes to the national currency association, of an amount not exceeding 75 percent of the value of the

⁷⁴ “An Act to Amend the National Banking Laws,” Sec 1.

⁷⁵ Commercial paper refers to notes representing short-term loans made by banks. The Aldrich-Vreeland act allowed banks to use either bonds or their own loans (commercial paper) to back the currency issued by the treasury. In this way, it was a compromise between advocates of a bond-backed and an asset-backed currency.

deposited securities. The act also placed a total cap of \$500 million on the total amount of additional currency issued under the provisions of the act.⁷⁶

While Aldrich and the bond-secured currency advocates did make some concessions, they did not completely give in to the supporters of asset-based currency. The Aldrich-Vreeland Act placed much stricter requirements on currency backed by commercial paper than on bond-backed currency. First, the law limited the amount of additional currency that could be based on commercial paper. A national bank could not issue “circulating notes based on commercial paper in excess of thirty per centum of its unimpaired capital and surplus.” Second, the law specified the meaning of the somewhat loosely defined term, “commercial paper,” in an effort to ensure that higher-quality loans would be used. The act read, “The term ‘commercial paper’ shall be held to include only notes representing actual commercial transactions, which when accepted by the association shall bear the names of at least two responsible parties and have not exceeding four months to run.” Third, national banks that deposited commercial paper to back additional currency had to pay higher taxes on their deposit than those who used bonds. The Aldrich-Vreeland Act stipulated that banks that deposited bonds would pay a biannual tax of 0.5 percent upon the average value of the circulating notes based on those bonds. On the other hand, banks that deposited commercial paper had to pay a much higher monthly tax, which started at 5 percent and then rose to 10 percent over time.⁷⁷ Clearly, the act was designed to incentivize the

⁷⁶ “An Act to Amend the National Banking Laws,” Sec 1 and 5.

⁷⁷ “An Act to Amend the National Banking Laws,” HR 21871, Sec 1, 5, and 9. The exact structure of the tax on banks that circulated asset-backed currency was the following: “National banking associations having circulating notes secured otherwise than by bonds of the United States shall pay for the first month a tax at the rate of five per centum per annum upon the average amount of such of their notes in circulation as are based upon the deposit of such securities, and afterwards an additional tax of one per centum per annum for each month until a tax of ten per centum per annum is reached, and thereafter such tax of ten per centum per annum, upon the average amount of *such* notes.”

use of bond-secured currency. However, the inclusion of commercial paper as an acceptable deposit to back circulating notes was still significant, since it marked America's first use of an asset-backed currency.

Although many accused Aldrich of favoring large Northeastern cities, as demonstrated by the railroad bond debacle, the Aldrich-Vreeland Act included provisions designed to prevent regional favoritism. As mentioned above, the act precluded the formation of more than one currency association in a given city. Another provision dictated that the Secretary of the Treasury could not issue an amount of currency to a state that was greater than that state's proportion of the total capital of all national banking associations combined. The drafters of the bill explicitly stated that this provision was designed "in order that the distribution of notes ... shall be made as equitable and as practicable between the various sections of the country."⁷⁸ In the interest of practicality, the act made an exception to this rule for emergency situations – in times of crisis, the Secretary of the Treasury had discretion to grant a state's associations an amount of notes greater than their allotted share, so long as other states did not apply for them.

Finally, at the very end of the bill, three short sections established the National Monetary Commission. The NMC would be composed of 18 members, nine from the House, who were appointed by the speaker, and nine from the Senate, who were appointed by the presiding officer of the Senate, the vice president.⁷⁹ Section 18, which laid out the responsibilities and powers of the Commission, read as follows:

"That it shall be the duty of this Commission to inquire into and report to Congress at the earliest date practicable, what changes are necessary or desirable in the monetary system of the United States or in the laws relating to banking and currency, and for this purpose they are authorized to sit during the sessions or recess of Congress, at such times and places as they may deem desirable, to send for persons and papers, to administer oaths, to summons and compel the

⁷⁸ "An Act to Amend the National Banking Laws," Sec 7.

⁷⁹ "An Act to Amend the National Banking Laws," Sec 17.

attendance of witnesses and to employ a disbursing officer and such secretaries, experts, stenographers, messengers, and other assistants as shall be necessary to carry out the purposes for which said Commission was created. The Commission shall have the power, through subcommittee or otherwise, to examine witnesses and to make such investigations and examinations, in this or other countries, of the subjects committed to their charge as they shall deem necessary.”⁸⁰

The wording of this section was vague, and as a result, the Commission had fairly wide-ranging powers and a good degree of flexibility. The law did not specify the exact purpose of the commission other than to “inquire into” what changes would benefit the monetary system of the United States. This rather nebulous wording would later cause disagreement among the members of the NMC, but it also gave the commission extensive investigatory power. Section 19 of Aldrich-Vreeland appropriated money from the treasury to fund the activities of the NMC. The law also did not place any limit on the Commission’s spending, saying only that a “sum sufficient” to carry out the commission’s work would be appropriated from the treasury. Between its trips to Europe and the acquisition of thousands of pages of economic and financial literature, the NMC would take full advantage of this generous allocation of funding.⁸¹ Given that the three sections regarding the NMC were tucked away at the end of the law, it is not altogether surprising that press coverage of the Aldrich Vreeland Act did not tend to mention the establishment of the NMC.⁸² Although the NMC provisions went largely unnoticed at the time, these three short sections would have by far the most impact on American economic history.

Overall, the Aldrich-Vreeland Act implemented fairly conservative changes to America’s currency and banking laws, especially compared to some of its alternatives, such as the Fowler

⁸⁰ “An Act to Amend the National Banking Laws,” Sec 18.

⁸¹ It is important to note that the NMC was careful to document its expenditures and did not spend frivolously, although its expenses were high.

⁸² *The New York Times*, for example, did not initiate coverage of the NMC until the commission began meeting more regularly in July 1908.

Bill. Although Aldrich could not push through the version of his bill that relied only on bond-secured currency, the final version of the Aldrich-Vreeland Act strongly encouraged the use of traditional bond-supported currency over asset-backed currency. Advocates of asset-backed currency made some progress, but ultimately it was a small victory. The formation of national currency associations also signaled the beginning of a shift toward centralization, but again, it was only a minor shift. Rather than totally reorganizing the banking system, as Fowler had proposed, the Aldrich-Vreeland Act simply grouped the existing National Banks together. Whereas the Fowler Bill had called for the end of an independent treasury and the eventual retirement of greenbacks, the Aldrich-Vreeland Act gave the Secretary of the Treasury strong control over the endowment of additional currency. Under the Aldrich-Vreeland Act, the Secretary had to approve the formation of national currency associations, could reject the deposit of securities he deemed unacceptable, and, in emergency situations, could allocate additional currency among the states according to his discretion. Unlike some of the more radical monetary reform proposals of 1908, the Aldrich-Vreeland Act relied mostly on existing institutions and made only small steps toward centralized banking and greater elasticity of currency. Luckily, the law's framers recognized its limited scope, hence their decision to create a study group dedicated to finding a more lasting solution.

Scholars have differing opinions about the significance of the Aldrich-Vreeland Act – some consider it an underwhelming response to Panic of 1907, but others argue that it would have been an effective panic prevention measure. All scholars recognize that the act was intended as a stopgap measure. Most argue that placing time limit on the law was a boon, while a few contend that the Aldrich-Vreeland Act provided sufficient currency reform. Roger Lowenstein exemplifies the first view. He emphasizes that there was “little enthusiasm for the

bill among bankers, and none among the public.” He also points to the establishment of the National Monetary Commission as evidence that not even the bill’s creators were satisfied with the reforms achieved by the bill. In short, he concludes that “the saving grace was that the law would expire in 1914.”⁸³

On the other hand, some scholars like Elmus Wicker argue that the Aldrich-Vreeland Act would have been an effective panic prevention measure by itself. Wicker says, “Had the elimination of banking panics been the sole incentive for establishment of a central bank, Aldrich-Vreeland rendered a central bank redundant.”⁸⁴ His argument rests on a potential 1914 banking panic, which began to stir before the federal reserve banks opened.⁸⁵ Wicker says that the panic was forestalled by the emergency currency provisions of the Aldrich-Vreeland Act, which was extended for a year by the Federal Reserve Act. However, Aldrich-Vreeland was only successful in preventing the 1914 panic because of an amendment added by the Federal Reserve Act, which increased the amount of emergency notes banks could issue. This suggests that the original draft of Aldrich-Vreeland was indeed too conservative. Wicker also admits that the establishment of a central bank achieved multiple objectives outside the scope of the Aldrich-Vreeland Act.⁸⁶ Robert Craig West mentions the same potential crisis in 1914, without much detail, but he emphasizes that disaster was only avoided because of the amendments made by the Federal Reserve Act. Like Lowenstein, West concludes that “the long-term importance of the Aldrich-Vreeland Act was its creation of the National Monetary Commission, which ... played

⁸³ Lowenstein, *America’s Bank*, 79.

⁸⁴ Elmus Wicker, *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed* (Columbus: Ohio State UP, 2005), 44.

⁸⁵ Wicker, *The Great Debate*, 44-49.

⁸⁶ Wicker, *The Great Debate*, 49.

an important role in banking reform.”⁸⁷ Wicker’s hypothetical argument is not strong enough to justify his assertion that Aldrich-Vreeland would have been sufficient to prevent banking panics. Although the law did allow for the issue of emergency currency, the analysis above has demonstrated that the bill’s provisions, such as heavily taxing asset-backed currency, limited banks’ ability to easily change the volume of currency available. On its own, the Aldrich-Vreeland Bill did not do enough to fix the flaws of the National Banking System.

Composition and Scope of the NMC

From its inception, the National Monetary Commission was bipartisan and had members from every region of the country. A few days after the Aldrich-Vreeland Act was passed on May 27, Vice President Charles Fairbanks appointed nine senators and Speaker of the House Joseph Cannon (R-IL) appointed nine house representatives to serve on the commission (See Appendix, Figure 1, for a full listing of the original NMC members). Of these eighteen congressmen, twelve were Republicans and six were Democrats. This split was roughly proportionate to the makeup of the Sixtieth Congress, which had a Republican majority of about 60 percent. In addition, the regional distribution of the congressman was very even – five represented Northeastern states, six Southern states, and seven Midwestern or Western states.⁸⁸ This is particularly significant, since people from different regions would have had very different interests when it came to banking reform.

During the first meeting of the NMC, on May 31, the commissioners handled perfunctory

⁸⁷ Robert Craig West. *Banking Reform and the Federal Reserve, 1863-1923* (Ithaca, NY: Cornell UP, 1977), 51.

⁸⁸ “Proceedings of the National Monetary Commission,” Washington DC, May 31, 1908, Aldrich Papers, reel 57.

matters, such as electing a chairman and choosing assistants. The archived minutes of NMC meeting tend to be quite vague – they usually provide an overview of the proceedings, rarely including an actual transcript of what the commissioners said. In the case of the May 31 meeting, this is not particularly problematic, since the commissioners were dealing with uncontroversial procedural matters. First, Senator Joseph Bailey (D-TX) nominated Aldrich as chairman, who was then unanimously approved. Born into a middle class Rhode Island family, Aldrich, who never actually attended college, married Abby Chapman, a member of the prestigious Rockefeller family, and attained wealth through a series of investments. He had served as the Senator from Rhode Island since 1881 and became known as the “General Manager of the United States,” for his prominent role in monetary and tariff-related legislation.⁸⁹ Next, Senator Eugene Hale (R-ME) moved for Representative Vreeland to be the vice chairman, which was also unanimously approved. Finally, the commission selected several assistants, the most noteworthy of which was secretary Arthur B. Shelton (d. 1954), who had previously worked as Aldrich’s secretary. Shelton would work tirelessly over the next few years, coordinating communication between the commissioners, sending thousands of letters to the commission’s contacts, and obtaining a massive amount of informational materials. The meeting then adjourned, with the agreement that a subcommittee of three senators and three representatives⁹⁰ would meet again in June to “map a plan of organization and of the work to be done by the Commission.”⁹¹

⁸⁹ Biographical details taken from Nathaniel Stephenson, *Nelson Aldrich, A Leader in American Politics* (New York: Charles Scribner, 1930); Jerome L. Sternstein, *Nelson Aldrich: The Making of the General Manager of the United States* (Providence, RI: Brown UP, 1968).

⁹⁰ The subcommittee consisted of Senators Aldrich, Hale, and Bailey, and Representatives Vreeland, Burton, and Padgett.

⁹¹ “Proceedings of the NMC,” May 31, 1908, Aldrich Papers, reel 57.

At this point, the official members of the commission had been selected, but the scope of its activities was still not determined. The minutes of the June 12 meeting of the subcommittee shed almost no light on the intended scope of the commission, simply noting that, “the greater part of the sessions of the subcommittee was occupied in an informal discussion of the scope of the future work of the Commission,” without including any transcript of the discussion.⁹² Later meetings would reveal a lack of clarity on the commission’s scope – Aldrich envisioned an enormous research effort, while some other commissioners favored more limited activities.

In these early stages, the best indicator of the huge reach of the commission’s future investigations was that Aldrich quickly contacted a large number of outside contributors, mostly bankers and economists. At the June 12 meeting, Aldrich brought in Abram Piatt Andrew, a Harvard professor of economics, who had been personally recommended to Aldrich by Charles Elliot, the president of Harvard.⁹³ Andrew met the other commissioners and was appointed as an assistant to the commission, with a yearly salary of \$3,000 (about \$92,000 in 2017 dollars).⁹⁴ Andrew immediately began working for the commission, and he would prove to be more than worth his \$3,000 salary. Andrew, along with Shelton, did most of the legwork in obtaining a massive amount of information about financial history. In addition, he was largely responsible for analyzing and synthesizing the NMC materials, as well as explaining banking and economic theory to the commissioners.

Andrew was the expert most thoroughly involved with the commission, but he was by no

⁹² “Proceedings of the National Monetary Commission,” New York, June 12, 1908, Aldrich Papers, reel 57.

⁹³ Correspondence between Nelson Aldrich and Charles Elliot, May 1908, Aldrich Papers, reel 27.

⁹⁴ “Proceedings of the NMC,” June 12, 1908, Aldrich Papers, reel 57. Inflation calculation from the Federal Reserve Bank of Minneapolis’ Consumer Price Index Estimate for 1800-2017.

means the only one. During the first month of the commission's existence, Aldrich, who had extensive connections in the financial world, had already begun to communicate with other bankers and economists. Some of his most notable consultants were Henry Davison (d. 1922), a banker who worked closely with JP Morgan, Paul Warburg (d. 1932), an economist and central banking advocate from a prominent German-Jewish banking family, and Frank Vanderlip (d. 1937), a former assistant secretary of the treasury who became president of the National City Bank of New York in 1909.⁹⁵ Aldrich's supporting cast was quite typical of a Progressive Era commission. The commission consulted experts in both academia and the private sector. In addition, Aldrich's experts had strong connections to Europe, especially Germany, which was a hallmark of Progressive Era economists. Warburg had grown up in Germany, learning about banking and economics, before coming to New York to work at the prominent investment bank Kuhn, Loeb, and Co., which was led by Jacob Schiff, another German immigrant. Thanks to Morgan, who had gone to college in Germany, Davison had a considerable number of contacts in Europe, many of which he passed along to Aldrich.

Aldrich was not hesitant to extend his connections to the other commissioners. A week after the June 12 meeting, Aldrich sent a letter to JP Morgan, requesting that he meet with Representative Theodore Burton, one of the other commissioners, to discuss British banking issues and their implications for the work of the commission. Aldrich wrote that Burton would "have great influence in determining the report of the Commission."⁹⁶ Some historians point to Aldrich's outside contacts as evidence that Aldrich did not consult with the other commissioners

⁹⁵ The National City Bank of New York is now known as Citibank. Biographical details from Lowenstein, *America's Bank*, chapters 3 and 5.

⁹⁶ Correspondence between Nelson Aldrich and JP Morgan, June 1908, Aldrich papers, reel 27.

when making important decisions.⁹⁷ While Aldrich probably overstated Burton's level of influence on the commission, this correspondence, at the very least, reveals that Aldrich put his fellow commissioners in contact with his connections in the financial world. Additional evidence about Aldrich's relationships with the other commissioners will be discussed in the next chapter. For now, it is important to note that from the very earliest stage of the NMC, Aldrich was intent on bringing in a wide variety of experts, both from academia and the banking sector.

While the scope of the commission's activities was still unclear in the very early stages, Aldrich had begun to lay the foundation for an enormous research effort. Over the next year, Aldrich's ambitious vision would create tension with some commissioners, while others would actively participate in the commission's gathering of materials. The next chapter, which examines the National Monetary Commission's methods of acquiring information, will shed more light on the magnitude of the commission's research and the roles that the commissioners played.

⁹⁷ For example, Lowenstein, *America's Bank*, 80; Wicker, *The Great Debate*, chapters 4 and 5.

Chapter II. The NMC Turns Toward Europe (1908-1910)

“There will be nothing partisan in the information which we obtain, and the preliminary reports will contain simply facts and not theories or conclusions.” – remark by Nelson Aldrich to Joseph Bailey, November 1908

In the early 1900s, financial history was still a relatively undeveloped discipline, and the NMC’s efforts produced what was, at the time, the most complete collection of works in that field. The commissioners certainly did not all play equal roles in the gathering of materials – in fact, some of them demonstrated a marked lack of enthusiasm for the commission’s activities. Much of the day-to-day research work was handled by the commission’s assistants, chiefly Piatt Andrew and Arthur Shelton. However, some of the commissioners directly participated. Shortly after its inception in 1908, six NMC members, along with Andrew, traveled to Europe, conducting interviews and making contacts with bankers in Germany, England, France, and several other countries. Upon their return, they continued to gather materials from around the world, and by 1910, they had accumulated many thousands of pages about financial and economic history. The first section of this chapter will examine the research activities of the NMC, paying attention to the roles of its members and assistants. The second section will take a detailed look at two documents gathered by the NMC about the Reichsbank, the central bank of Germany, assessing which aspects of foreign banking systems most interested the commissioners and pointing out several findings that would influence the commission’s final recommendations.

Acquisition of Materials

The next meeting of the entire NMC took place in July, at the Hotel Imperial in Narragansett, Rhode Island, near Aldrich’s home. The minutes of the July meetings provided a bit more detail than earlier minutes, but still lacked any transcripts of what the commissioners

actually said. As far as the minutes reveal, the July meetings, unlike some later meetings were largely harmonious, with little disagreement between the commissioners. However, the minutes, probably written by the secretary, Arthur Shelton, do hint at the indifference of some of the commissioners. Shelton drily noted: “At 11:30 a.m., after the Commission had been in session about half an hour, Mr. Overstreet [R-IN] appeared.” It makes sense that Shelton, who had already spent many hours organizing these meetings and responding to the commission’s correspondence, would have been slightly bitter about some of the commissioners’ flippant attitudes. In addition, several members’ names do not appear in the minutes after the initial note about who was in attendance. For example, despite his apt name, the only contribution of Senator Hernando Money (D-MS) was to request the adjournment of the final meeting on July 23, at 9:30 pm.⁹⁸

The main point of these meetings was to gain more clarity on the scope of the commission’s research and to delegate responsibility for gathering materials. By the second day, the NMC had settled on four broad areas of interest: “The money question, speaking in the broadest possible sense; ... Banks, national, savings, state, and trust companies; ... Domestic and international exchanges; and the relation of government to the volume of money.” The commissioners also decided to focus on the following countries: “The United States, Canada, England, Scotland, Ireland, France, Germany, Sweden, and Switzerland.”⁹⁹ The commissioners’ interests were still quite broad, but over the next few days, the commissioners did make concrete plans to investigate them. First, Aldrich suggested that they hire experts in each of these

⁹⁸ “Proceedings of the National Monetary Commission,” Narragansett, R.I., July 20-25, 1908, Aldrich Papers, Reel 57.

⁹⁹ “Proceedings of the NMC,” July 21, 1908, Aldrich Papers, Reel 57. This list would later expand to include more countries.

countries to “write a history of the various phases of development of the present banking and money systems in these countries, and also a synopsis of those systems as they are at present.” Next, Representative John Weeks, a Republican from Massachusetts proposed that they select a group of experts to “prepare a compilation of arguments and references for and against the establishment of a central bank.” The commission selected several professors and bankers, including Frank Vanderlip and Paul Warburg. Perhaps the most important event of the July meetings was the adoption of a movement made by Representative Overstreet that a subcommittee, to be appointed later by Aldrich, would visit several European capitals to make contacts with bankers and conduct interviews. The commissioners who remained at home would begin to investigate possible changes to the National Banking Laws.¹⁰⁰ The July meetings were the first time that the press began to significantly cover the activities of the NMC. *The New York Times* published three articles covering the meetings. They were all very short overviews of the meetings, although an article entitled “Currency Men Plan Work,” published on July 22, did make the front page.¹⁰¹ A July 25 article about the commission’s plans to visit Europe included a short press statement by Aldrich, in which he stated that the goal of the commission was to “secure a thorough and as nearly exhaustive examination of the monetary and banking systems of the leading commercial nations.”¹⁰² Aldrich and his fellow commissioners would soon achieve this ambitious goal.

Aldrich and his fellow commissioners were understandably eager to visit Europe, which was probably a more exciting endeavor than staying home to investigate domestic banking laws.

¹⁰⁰ “Proceedings of the NMC,” July 21, 1908, Aldrich Papers, Reel 57.

¹⁰¹ “Currency Experts Meet,” *The New York Times*, July 21, 1908; “Currency Men Plan Work,” *The New York Times*, July 22, 1908.

¹⁰² “To Study Banking Abroad,” *The New York Times*, July 25, 1908.

A letter addressed to Arthur Shelton shows that Shelton booked passage to London with the North German Lloyd Steamship Co. for Aldrich, Vreeland, Hale, Overstreet, John Daniels (D-VA), Lemuel Padgett (D-TN). The commissioners were also accompanied by Andrew, who would essentially act as an economics tutor for the congressmen, Shelton, and several other staff members, including a maid and a messenger.¹⁰³ Representative Burton was already in Europe, and had been meeting with JP Morgan and Henry Davison. The subcommittee left for Europe on August 4 and arrived in England six days later. Over the next few weeks, the commissioners, with the assistance of Davison, conducted interviews of British bankers, both from commercial banks and the Bank of England. In late August, the group split up, with Vreeland, Overstreet, and Daniel going to France, while Aldrich and Padgett, accompanied by Andrew, traveled to Berlin.¹⁰⁴ The commissioners continued to interview both commercial and central bankers in these two countries, with the aid of translators. All of these European interviews were later published by the NMC, and they yielded a wealth of information, much of which was useful for the NMC's final recommendations. The second half of this chapter will analyze in detail Aldrich and Padgett's interview of the leaders of the Reichsbank, Germany's central bank.

By the end of the European trip, Aldrich's goals for the NMC had changed considerably. In July, Aldrich had been ready to launch into an ambitious research effort about banking systems around the world, but he was still unsure about the commission's role in recommending specific monetary reform. Now, he had decided that the ultimate goal of the NMC was to design a specific plan to remedy the national banking system. A *New York Times* article in November

¹⁰³ Correspondence between Herman Winter and Arthur Shelton, July 1908, Aldrich Papers, reel 27.

¹⁰⁴ This timeline of the trip was pieced together from correspondence and notes from August 1908, reel 57 of the Aldrich Papers, along with Nathaniel Stephenson's "Biographer's Notes," June 1925, Aldrich Papers, reel 61. Burton and Hale returned home at the end of August.

1908 reported: “Senator Aldrich, it is understood, is to devote practically all his time to the revision of the monetary system. He is declared to have made up his mind to make this reformation in the currency the crowning work of his career.”¹⁰⁵ Aldrich did indeed devote an enormous amount of time during the last years of his political career toward producing the final report of the NMC.

Aldrich’s views on central banking had also transformed dramatically by the time he returned from Europe. In a November speech before the Merchant’s Association of New York, Aldrich said that “he had given up many of his former views on banking and had entered upon the study of the question with a mind free to accept new conclusions.”¹⁰⁶ At first glance, this statement might seem to be the maneuvering of a politician eager to appear unbiased, but Aldrich was being earnest. Earlier in his career, Aldrich’s beliefs about banking had been relatively conservative. For example, as recently as the currency reform debate of early 1908, Aldrich had expressed great reluctance to use an asset-based currency. But after his European voyage, Aldrich was willing to consider much more significant and controversial monetary reforms.

Later that month, the NMC held a hearing at the Metropolitan Club of New York, where Paul Warburg was invited to share his thoughts about America’s banking system. After the hearing, Aldrich pulled Warburg aside, complimenting him on his ideas. To Warburg’s “intense surprise,” Aldrich’s only critique was that Warburg was too pessimistic. Aldrich told him: “You say we cannot have a central bank, and I say we can.” Shocked at this role reversal, Warburg actually felt the need to warn Aldrich that he was being too ambitious, and “explained to the Senator why any attempt to establish a full-fledged central bank, in the European sense, appeared

¹⁰⁵ “Money Commission Meets: Holds Secret Session in Capitol and Hears Reports of Subcommittee,” *The New York Times*, November 23, 1908.

¹⁰⁶ “Senator Aldrich Tells of His Trip,” *The New York Times*, November 19, 1908.

to ... be inadvisable.” In particular, Warburg cited America’s lack of a large bill market, its deep-seated hostility toward central banks, and the likelihood that political maneuvering would quickly undermine the bank’s purpose. Aldrich, intrepid as ever, did not appear to heed Warburg’s words of caution. However, their brief conversation sparked great hope in Warburg, who later wrote that “what only a few hours before had appeared to be an insurmountable obstacle in the way of progress was now crumbling away and, for the first time, I felt confident that genuine banking reform was within grasp of the United States.”¹⁰⁷ This private conversation affirms that Aldrich had completely rethought his attitude toward banking reform – he was now willing to consider reform as radical as the creation of a European-style central bank. In addition, the makeup of the National Monetary Commission, the breadth of its reports, and the varied background of its contributors support Aldrich’s assertion that he wanted to take an objective, open-minded, and academic approach to banking reform.

The first meeting of the NMC after the trip to Europe was originally scheduled for November 10, 1908. The November meetings are important, because the minutes of these meetings are much more detailed than those of any other NMC meeting. An analysis of the planning of the meeting and its actual proceedings reveal that while the congressmen did not all play equal roles in the work of the NMC, some scholars exaggerate the extent to which Aldrich steamrolled the other commissioners. For example, Lowenstein says, “From the beginning, Aldrich treated his fellow commissioners as ciphers.”¹⁰⁸ Lowenstein gives little evidence to support this claim, other than saying that Aldrich “controlled the meeting agendas” and that

¹⁰⁷ Paul Warburg, *The Federal Reserve System: Its Origins and Growth, Vol. 1* (New York: MacMillan, 1930), 56-57.

¹⁰⁸ Roger Lowenstein, *America's Bank: The Epic Struggle to Create the Federal Reserve* (New York: Penguin, 2015), 80. Wicker and Selgin also make similar claims.

Aldrich preferred to seek help from outsiders like Andrew and Davison rather than his fellow commissioners. It is certainly true that Aldrich was the undisputed leader of the commission, and also that he undertook the most work by far of any of the members. However, it is not fair to say that Aldrich treated his fellow commissioners as “ciphers,” simply because he sought outside help from experts. Aldrich was very open about consulting with these experts, and he even sought to connect his fellow NMC members with these experts, as shown by Aldrich’s request that JP Morgan meet with Burton, described in the previous chapter. In addition, a deeper look at the NMC meeting of November 1908 shows that Aldrich was quite concerned about receiving input from the other members. Some of the other members did not reciprocate Aldrich’s enthusiasm and were unwilling to aid in research and policy development, but others actively participated.

During late October and early November, Aldrich received letters from a number of the commission members, notifying him that they would not be able to attend the meeting.¹⁰⁹ Overstreet sounded particularly uninterested, writing, “Knowing fairly well the general character of the work which will be taken up at this meeting of the Monetary Commission on November 10th, I have decided that I will not attend.” Despite the lackluster response by the committee members, the NMC secretary, Arthur B. Shelton, noted in his response to Overstreet that Aldrich was “especially anxious” to have every commission member at the meeting.¹¹⁰ Aldrich decided to postpone the meeting until November 23, in order to give every congressman the best possible chance of attending. Even so, four commission members were not present at the November 23rd

¹⁰⁹ Including letters from Senator Hale and representatives Bonyng, Burton, Overstreet, and Smith. See *Aldrich Papers*, reel 28.

¹¹⁰ Correspondence between Jesse Overstreet and Arthur B. Shelton. *Aldrich Papers*, reel 28, October 26, 1908.

meeting.¹¹¹

The minutes of the November 23rd meeting suggest that in the commission's early stages, some of the commission members demonstrated a knowledge of banking and made valuable contributions to the gathering of materials, contrary to the claims of some scholars.¹¹² The first day of the meeting was taken up by a perfunctory overview of the work that the Committee had done while abroad in Europe. The next day, however, the conversation was not dominated by Aldrich, but rather by Representative John Weeks, who had significant banking experience – before running for Congress, Weeks had co-founded a prominent Boston banking firm.¹¹³ Weeks, who was the chairman of the subcommittee designated to investigate changes to the National Banking Act, had written a questionnaire about changes to banking laws and sent it to the commissioner of every state bank, as well as to the convention of the American Bankers Association in Denver.¹¹⁴ The responses to Weeks' survey provided invaluable information about state banking laws.

The last day of the meeting, November 25, was by far the most contentious. Aldrich expressed his desire to learn more about the banking conditions in the United States, and he emphasized that all regions of the country should be equally represented. His commitment to this idea was demonstrated by the list of banking officers he planned to invite to a later meeting – they came from a wide variety of states, equally distributed across regions.¹¹⁵ However, when

¹¹¹ Representative Overstreet and Senators Philander Knox and John Daniel did not attend. Senator William Allison, a close friend of Aldrich, had died several months earlier. See "Proceedings of the National Monetary Commission," Washington DC, November 23, 1908.

¹¹² Lowenstein, Wicker, and Selgin.

¹¹³ "The John Weeks Story: A Chapter in the History of American Forestry," U.S. Department of Agriculture, 1961.

¹¹⁴ "Proceedings of the NMC," November 23, 1908, 25.

¹¹⁵ "Proceedings of the NMC," November 23, 1908, 27.

Aldrich mentioned a special investigation into the banking system of New York, it drew objections. Senator Joseph Bailey said that he protested “against obtaining information about savings banks and the ordinary banks of discount and deposit, and [thought] we should limit our investigation to the banks over which the government has control.”¹¹⁶ Aldrich responded by pointing to the text of the Aldrich-Vreeland Act, which gave the NMC a mandate to conduct any investigations or examinations that it deemed necessary. At this point, Senator Money interrupted the debate, asking his fellow congressmen to clarify how exactly they envisioned the purpose of the NMC. After Bailey reiterated his opposition to investigating any banks outside of the national system, the chairman opined that omitting information about any American banking systems would be a disservice to both the commission and the public. Aldrich told Bailey, “there will be nothing partisan in the information which we obtain, and the preliminary reports will contain simply facts and not theories or conclusions.” Aldrich’s opinion that the gathering of economic facts was an inherently objective activity was typical of a Progressive Era reformer.¹¹⁷ This seemed to satisfy Bailey, and the commission now turned to more mundane questions about dividing up the workload. Senator Money, demonstrating his typical lack of enthusiasm, quickly asked if it was “necessary for the entire commission to be engaged in this preliminary work of obtaining information.” Aldrich replied that he would be happy to shoulder the bulk of this work, although several other commission members, including Vreeland and Weeks, expressed a willingness to help him.¹¹⁸

While it is true that Aldrich usually had the final say about the commission’s actions, this

¹¹⁶ “Proceedings of the NMC,” November 23, 1908, 31.

¹¹⁷ For more on the Progressive Era ideal of objectivity and its connections to fact-finding commissions, see Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, MA: Harvard UP, 1998), Chapter 4.

¹¹⁸ “Proceedings of the NMC,” November 23, 1908, 32-33.

was due more to varying levels of interest expressed by the other commissioners than to any political maneuvering by Aldrich. The scheduling of the November 23rd meeting demonstrated that Aldrich actively sought the input of the other commission members and went out of his way to ensure their attendance. Even so, some commissioners, like Overstreet, showed very little interest – Overstreet failed to attend even though Aldrich had postponed the meeting until a date when the representative would be in Washington.¹¹⁹ Even among those who attended, some barely spoke or, like Money, seemed preoccupied and uninterested in participating in the more rigorous aspects of the commission’s work.

The apathy of some commissioners was probably due to several factors. First, many of the congressmen were extremely busy with other legislative activities and probably did not see a fact-finding commission as a priority. Second, most of the commissioners did not have a very complete understanding of banking or economics, which may have discouraged them from participating. And finally, Aldrich had much more clout in Congress than most of the other members, partly because of his long tenure as a senator and also because of his dominating personality, which may have led some of the other commissioners to defer to his judgment. However, other commissioners actively participated, like Weeks, who helped gather information, and Bailey, who pushed back when he thought Aldrich might be overstepping his bounds or demonstrating partisan bias. Although Aldrich was certainly the leader of the commission’s efforts, his decisions did not always go unchallenged, and some of the other commissioners made useful contributions. The role of the other commissioners diminished with time, but especially in the NMC’s early stages, it was not a “one-man show,” as some scholars have argued.¹²⁰

¹¹⁹ Overstreet could not even be bothered to attend the meeting, even though Aldrich had moved it to a date when he would be in Washington.

¹²⁰ Wicker, *The Great Debate*, 50

Some scholars contend that the NMC made little progress in 1909 and 1910,¹²¹ and while it is true that the commission was slow to develop actual policy recommendations, this was because the commission spent these intermediate years gathering an enormous amount of research. Most of the commissioners themselves were busy with other legislation – Aldrich for example, was distracted by a debate over tariffs for parts of 1909. But all the while, Shelton and Andrew continued to devote a huge amount of effort toward gathering volumes and statistics about domestic and foreign banking. The NMC archives at the Library of Congress contain many hundreds of letters between these two and bankers and professors around the world.¹²²

The materials gathered and published by the NMC support Aldrich's claims that he wanted to take an open-minded, academic approach to banking reform. At their July 1908 meetings, the commissioners had decided to investigate banking systems in several European countries, as well as most states. By 1911, the commission had more than achieved this goal, publishing over forty volumes that together contained information on banking practices in ten countries and forty-six states.¹²³ The NMC focused particularly on England, Germany, and France – the countries with economies most similar to the United States'. These three countries were the subject of at least six reports each. However, the commission also requested reports about countries much less similar to the United States, including Switzerland, Japan, Mexico, and Canada, among other countries. It commissioned several other publications that compared the banking systems of different countries, which tended to focus on Germany, England, and France. The materials gathered by the commission, which covered a wide variety of topics in

¹²¹ Wicker, *The Great Debate*, 50.

¹²² Various correspondence, Aldrich Papers, reels 28-43.

¹²³ Information about the commission's publications is from "Publications in Course of Preparation for the National Monetary Commission" (Washington DC: Government Printing Office, 1909).

great depth, suggest that Aldrich was being serious when he said that he wanted to take an open-minded, academic approach to recommending banking reform.

The commission not only studied a wide range of topics, it sought the opinions of a diverse group of contributors. The NMC requested reports from experts of many different backgrounds, including professors of economics and finance, private bankers, government bankers, and journalists. As stated above, the commission worked very hard to obtain reports from all different areas of the country – not just the Northeast or the country’s major population centers. This was difficult work, as the state banking officials were often unresponsive. Shelton often had to contact bank examiners multiple times over the course of the fall of 1908 before receiving a response from them.¹²⁴ Piatt Andrew also helped to gather information about state banking systems, and he too encountered obstacles. For example, when he requested a special study of New York’s banking safety systems from Professor E.W. Kemmerer, of Cornell University, Kemmerer initially declined, saying that he was already working to publish a study that was too similar. Andrew persisted, offering research assistance, promising “satisfactory remuneration,” and complimenting the professor’s expertise.¹²⁵ Ultimately, he was successful in persuading Kemmerer, but this chain of correspondence exemplifies the great effort often required to gather information, especially considering that this was just one of hundreds of studies requested. The NMC had already gathered a significant amount of information about European banking practices during its trip abroad, but it worked to add even more, commissioning new reports and facilitating the translation of already existing materials. In general, foreign bankers and officials actually seemed to be more responsive than domestic

¹²⁴ Notes and correspondence of Arthur B. Shelton, Aldrich Papers, reel 28.

¹²⁵ Correspondence between Piatt Andrew and E.W. Kemmerer, Aldrich papers, reel 28, November 1908.

bankers to requests by Shelton and Andrew.¹²⁶ Regardless, coordinating the transfer of thousands of pages of materials from around the globe was complicated and expensive.¹²⁷ The great lengths to which the commission went to obtain this diverse wealth of information suggested its commitment to producing a holistic, high-quality body of literature about banking.

An analysis of all of the volumes produced by the NMC is beyond the scope of this thesis, because the commission gathered tens of thousands of pages of reports, along with miscellaneous articles, diagrams, and tables of statistics. As a result, this chapter will focus on the NMC materials related to the Reichsbank, the central bank of Germany. I have chosen to focus on Germany because there were strong parallels between the political and economic circumstances of the Reichsbank's creation and the creation of the Federal Reserve. By the dawn of the twentieth century, Germany had become the largest economy in Europe. Just five years after the unification of Germany in 1871, the Reichsbank, a privately owned central bank was established. As Germany continued to industrialize and experienced rapid growth over the next thirty-five years, its economy remained relatively stable – although it experienced some recessions, they were not nearly as severe as the seasonal fluctuations and financial panic experienced by the U.S. In large part, the centralization of German banking was responsible for this stability, as compared to America's fragmented banking system and turbulent economy. Because Germany's economy had a record of stable growth and it was of fairly similar size and character to America's, it is not surprising that the National Monetary Commission thought that the German banking system was worthy of intense study. Aldrich himself said, "the [banking]

¹²⁶ Various correspondence from Aldrich Papers, reel 28.

¹²⁷ It is difficult to assess the total cost of the NMC's activities, but one scholar estimates that the cost of simply obtaining and compiling all the volumes was about \$100,000. See William G. Dewald, "The National Monetary Commission, A Look Back," *Journal of Money, Credit and Banking* 4 (1972): 932.

system of Germany is for us the most interesting of any, because the German Empire has very largely the same industrial and commercial interests that we have in the United States.”¹²⁸

The next section will analyze the transcripts of the commission’s interviews with two leaders of the Reichsbank. The third and final section of this chapter will examine a thousand-page volume about the Reichsbank that the commission obtained. Tracing certain themes throughout these materials demonstrates how researching European central banking practices would have made the commissioners more favorable toward central banking. Ultimately, the knowledge and recommendations the commissioners gleaned from conducting this interview and reading this volume were integral to the final report of the NMC.

The NMC Interviews German Bankers

In late August 1908, Aldrich and Padgett, accompanied by Andrew, headed to Berlin, where they conducted interviews with employees at fifteen different banks, by far the most of any country they visited.¹²⁹ On August 27 and 28, they interviewed Dr. von Glasenapp and Dr. von Lumm, the vice president and director of the Reichsbank, respectively.¹³⁰ The transcripts of the interviews, which were published by the NMC in 1910, reveal very little details about the context of the interview. In fact, the published transcript does not even indicate which commission members were conducting the interview. Other NMC documents show that it was Aldrich, Padgett, and Andrew, but it is impossible to know from the transcript which commissioner asked which questions. None of the NMC members knew German, so they had to

¹²⁸ Wesley C. Mitchell, “The Publications of the National Monetary Commission,” *The Quarterly Journal of Economics*, 25, no. 3 (May 1911), 567.

¹²⁹ “List of Conferences in London, Paris, and Berlin,” (Washington: Government Printing Office, 1910).

¹³⁰ “List of Conferences in London, Paris, and Berlin.”

use a translator. Nathaniel Stephenson, in his biographer's notes on Aldrich, says that although the senator "was no linguist," he was still adept at communicating with the Germans through a translator. He said, "the whole thing was expeditious, like a businessman rather than a politician."¹³¹

The interview ranged from fairly simple inquiries about the bank's organization and structure, to technical questions about discount rates¹³² and loans, to how the bankers would deal with hypothetical situations. The tone of the interviewers was earnest and inquisitive – at times they almost seemed eager to impress the bankers with their knowledge of the German banking system. The central bankers were generally friendly and helpful toward the Americans, although they sometimes seemed a bit surprised at the American's skepticism of central banking practices. Their choice of questions, the answers they received, and their reactions to these answers reveal what aspects of banking systems the commission's members regarded as most important and interesting.

Aldrich and Padgett started by asking straightforward questions about the organization and management of the Reichsbank. The Germans explained that the bank was privately owned, mostly by shareholders in Germany and Holland – the government owned no shares.¹³³ Next, the Americans asked about the management of the bank and were told that it was overseen by three boards, the *Curatorium*, the *Direktorium*, and the *Central Ausschuss*. The *Curatorium*, which represented the government, was headed by the chancellor, who had "supreme power, although

¹³¹ Nathaniel Stephenson, "Biographer's Notes," undated, Aldrich Papers, reel 61.

¹³² The discount rate is the interest rate charged to commercial banks and other depositors who take out loans from a central bank. A lower discount rate increases the money supply by making it easier to borrow money.

¹³³ "Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy," (Washington: Government Printing Office, 1910), 335.

he has never exercised it but once in the history of the Bank.” The *Direktorium* was comprised of nine members, appointed for life by the Emperor. Finally, the *Central Ausschuss*, a fifteen-member board, represented the stockholders. The NMC asked about the character of the relationship between the boards. The Americans’ concerns about conflict between the various boards makes sense in light of the long history of tension between bankers and politicians in America. However, the German bankers curtly dismissed the notion of any tension, assuring them that there was “no lack of harmony.” Next, the interviewers discovered that there were ninety-three branches of the Reichsbank, and that profits were split among the directors of each branch, which incentivized them to prevent losses.¹³⁴ The German bankers’ answers revealed that the Reichsbank had an interesting mix of private and public control – although the government had supervision and final say over the bank’s decisions, in practice, the bank’s operations were almost entirely controlled by bankers and shareholders. This division of control was quite different from anything that the NMC members would have seen in the U.S.

After determining what they wanted to know about the structure of the Reichsbank, Aldrich and Padgett abruptly switched to more technical questions, some of which revealed their less-than-complete understanding of central banking practices. First, they asked about the types of bills that the Reichsbank discounted.¹³⁵ The bankers replied, somewhat coldly, that the Americans could look at Germany’s banking laws to determine exactly what bills the Reichsbank would take, but that in general, there must be the names of at least two parties on the bill – this was also a requirement of the Aldrich-Vreeland Act. Despite the unenthusiastic reply

¹³⁴ “Interviews on the Banking and Currency,” 335-339.

¹³⁵ Discounting bills means that the central bank accepts bill of exchange, which are essentially documents stating that a party is owed money, and in return, loans a discounted amount of cash to whoever deposits the bills.

by the bankers, the commissioners continued to ask about the nature of the bills accepted by the Reichsbank. When the NMC was told that the Reichsbank accepted unsecured notes, they seemed as though they did not believe the answer. The commissioners followed up with a series of hypothetical questions, asking whether the Reichsbank would accept bills in different situations and from various types of depositors, including merchants, American bankers, railroads, manufacturers, and farmers. In every instance, the bankers assured the Americans that they would accept the bills, although some types of depositors would actually be more likely to use commercial banks than to try to take out loans from the central bank.¹³⁶ The NMC seemed to have a hard time coming to terms with the flexibility of the Reichsbank's discount system.

After a long string of questioning, the NMC members finally seemed to wrap their heads around the idea of accepting unsecured bills, and moved on to asking about the Reichsbank's discount rate. The Americans at least had the prior knowledge that the Reichsbank's discount rate was 4 percent, but they seemed a bit confused about the details of how that rate was applied. In particular, they seemed skeptical that the discount rate would be applied equally to all customers, asking, "Would a customer in a little town in South Germany get his bill discounted at 4 per cent to-day?" The German bankers replied confidently: "Yes; and at every branch of the Reichsbank."¹³⁷ Getting to the heart of the matter, the Americans asked if any customer could get a rate lower than 4 percent. They were told that the Reichsbank had only one discount rate, because, "a great central institution like the Reichsbank, with its tasks and duties to the whole of the community, ought not to make a distinction of any class, or make an exception in favor of anyone. It is the policy of the Bank to serve all alike."¹³⁸ Again, the Americans seemed to be in

¹³⁶ "Interviews on the Banking and Currency," 339-341.

¹³⁷ "Interviews on the Banking and Currency," 342-343.

¹³⁸ "Interviews on the Banking and Currency," 343.

disbelief – they asked once more if the Reichsbank would consider every application for loans. And once again, the Germans told them yes, “the Reichsbank is for everybody.”¹³⁹

Overall, the NMC members seemed surprised by how smoothly the Reichsbank functioned and the strength of its commitment to serve all people equally. Their repeated questions about whether there was “any agitation” for various policy changes revealed their skepticism that politicians or the general public could have a favorable attitude toward central banking. The interview of the Reichsbank leaders provided the NMC with valuable information and data, but even more so, it easy to see how the answers of these calm, confident central bankers would have begun to persuade the commission members that the establishment of an American central bank might be the best course of action.

NMC Volumes on Germany and The Reichsbank

The commission accumulated nine volumes about the economy and banks of Germany, more than for any other foreign country.¹⁴⁰ One of the volumes about Germany focused specifically on the Reichsbank. It had originally been published by the Reichsbank itself in 1900, the twenty-fifth anniversary of the bank’s founding. Piatt Andrew contacted Frederick Lieder, a fellow Harvard Professor, to translate the nearly 400-page report.¹⁴¹ This was a common practice – Andrew hired a handful of other professors to translate documents from German and French.¹⁴²

¹³⁹ “Interviews on the Banking and Currency,” 343.

¹⁴⁰ The topics of these reports included statistics about the German economy and banking system, the function and structure of the Reichsbank, the large joint-stock banks of Germany, German banking laws, and other miscellaneous articles. See “Publications in Course of Preparation for the National Monetary Commission,” 1909 for the full list.

¹⁴¹ Correspondence between Piatt Andrew and Frederick Lieder, April-August 1909, Aldrich Papers, reels 32-35. Andrew also hired Lieder to translate several other German documents.

¹⁴² Various correspondence, Aldrich Papers, reels 32-35.

The report begins by describing the German banking system before unification in 1871. At this time, the area was divided into smaller states, so the banking system was fragmented and there was no central body to control the issue of notes – the same problem that the United States had been facing for the past fifty years under the National Banking System. As a result, the German states “attempted through prohibitive measures to keep out of their territory the notes of banks licensed by other states,” greatly inconveniencing local people.¹⁴³ Even before the establishment of the German Empire, one of the German states, the North German Confederation, passed a constitution in 1867 that gave the government power to regulate “coinage, weights, and measures, and the formulation of principles for the emission of funded and un- funded paper money” as well as “general regulations for banking.”¹⁴⁴ Four years later, the German Empire decided to include this provision in its constitution. However, the empire still faced difficulties because the banking systems of each newly incorporated state differed significantly. For example, while Prussia already had the large Prussian Bank, the regions of Alsace and Bremen, recently acquired in a war with the French, no longer had the help of the Bank of France, and lacked adequate access to credit.¹⁴⁵ American advocates of banking reform would clearly have been very interested in this report because of the strong parallels between the early German banking system and America’s similarly decentralized system.

Unlike in America, however, the German public, government, and banking experts generally supported the establishment a central bank in Germany. Support for a central bank

¹⁴³ Frederick W.C. Lieder trans., *The Reichsbank, 1876-1900* (Washington, DC: Government Printing Office, 1910), 13.

¹⁴⁴ Lieder, *The Reichsbank*, 14.

¹⁴⁵ Lieder, *The Reichsbank*, 18.

mirrored more general support for a strong federal government.¹⁴⁶ And because Germany had recently unified, it lacked the fraught history of failed attempts to establish central banks that burdened American reformers. In 1875, the German legislature passed a banking act that converted the Prussian Bank into the Reichsbank, a central bank that was privately owned, but would be supervised by the government.¹⁴⁷ The rest of the Reichsbank report describes in great detail the organization and functions of the central bank.

Overall, the organization of the Reichsbank was balanced between public oversight and private expertise. According to the Bank Act of 1875, the Reichsbank was supervised by a five-person “council of curators,” one of whom was the chancellor of the empire. The bank was also directed by a board consisting of a president, vice president, and six other members, all of whom were appointed by the emperor and approved by the Bundesrat.¹⁴⁸ In addition, the shareholders of the bank were represented by a committee of fifteen members, which provided expert advice to the directors and also “form[ed] a protection for large banks of issue against the dangers which have arisen often enough from too close a connection with the financial administration of the country.”¹⁴⁹ The Reichsbank had the authority to establish new branches anywhere in Germany as needed, although the legislature could also order the bank to open a branch in certain places.¹⁵⁰

According to the report, the most important function of the Reichsbank was its role in issuing notes. The Bank Act had specified that that the right of any bank to issue notes could be

¹⁴⁶ Many of the Progressive Era experts trained in Germany had absorbed this support for a strong federal government, but for the most part, this attitude had not spread to other Americans.

¹⁴⁷ Lieder, *The Reichsbank*, 20.

¹⁴⁸ The Bundesrat is one body of the German legislature.

¹⁴⁹ Lieder, *The Reichsbank*, 26.

¹⁵⁰ Lieder, *The Reichsbank*, 46.

extended only through imperial law.¹⁵¹ As a result, the Reichsbank was not the only German bank that could issue notes, but after 1875, it was the largest of a handful of note-issuing banks, as opposed to the thirty-one that existed before unification. According to the terms of the act banks could issue notes freely up to a limit specified for each bank, at which point they would have to pay a tax of 5 percent on any additional notes issued. The Reichsbank could issue bank notes according to the needs of business until the sum of the notes issued reached a certain limit, which was initially set at 250,000,000 marks in excess of reserves. Above this limit, the 5 percent tax would apply. The report said that “the object of these restrictions is to force the Bank to maintain a sound proportion between cash holdings and circulating notes, thus to prevent too large an increase of uncovered notes, and to insure the redemption of the notes.”¹⁵² The note-issuing function of the Reichsbank presented a potential remedy to one of the problems faced by the United States – a central bank could issue currency to meet the changing demands of business, but regulations prevented an unchecked explosion of currency.

Another topic of great interest to the NMC was the discount system employed by European central banks like the Reichsbank. The report on the Reichsbank had a ninety-page section devoted to this topic, which began by once again reminding readers that the bank must be “at all times in a position to redeem its notes and to meet its other demand liabilities.”¹⁵³ The problem was that the domestic demand for credit fluctuated, and as people took out more loans, the bank’s reserves would decrease. The lower the bank’s reserves dropped relative to its liabilities, the greater the risk that it would not be in the position to cover its liabilities. The

¹⁵¹ Lieder, *The Reichsbank*, 20.

¹⁵² Lieder, *The Reichsbank*, 69. “Demand liabilities” refers to the bank’s obligations to pay back the notes it issues.

¹⁵³ Lieder, *The Reichsbank*, 202.

Reichsbank had to prevent this from happening when the demand for money rose, but it did not want to adopt a policy of arbitrarily refusing valid applications for credit. Instead, the bank could adjust the interest rate on credit, also called the discount rate.¹⁵⁴ A high discount rate would dampen demand for credit, while a low discount rate would stimulate it. For example, if the discount rate was very high, fewer people would want to take out loans, since they would have to pay them back at a very high rate of interest. The 5 percent tax on uncovered notes encouraged bank officials to follow prudent discount policy, but more important than this tax was the “constant care and vigilance on the part of the Bank officials.”¹⁵⁵ To show the importance of bank officials’ decision-making capabilities, the report launched into a detailed description of the bank’s discount policy over its twenty-five-year existence. It concluded that even as the German economy rapidly grew, the Reichsbank’s discount policy ensured that it always remained in a position to cover its liabilities. At the same time, it fulfilled “the endeavor ... to meet legitimate requests for cheap credit,” maintaining a fairly low discount rate that was usually around 3 percent.¹⁵⁶ The judicious use of the discount rate to control credit demand allowed German central bankers to provide steady access to credit, without the Reichsbank’s reserves diminishing to dangerously low levels.

The content of this report demonstrates why the NMC would have been interested gathering thousands of pages of information about the banking systems of Europe, and especially Germany. At the time of its unification, Germany faced many of the same financial challenges as America under the National Banking System. The report on the first 25 years of the Reichsbank explained how a central bank could address many of these problems. This report and others also

¹⁵⁴ Lieder, *The Reichsbank*, 204-205.

¹⁵⁵ Lieder, *The Reichsbank*, 290.

¹⁵⁶ Lieder, *The Reichsbank*, 291

answered many of the questions that the NMC had asked while it was in Europe, in even more depth than the commission's interviews of European bankers. As will be shown in the next chapter, the content of these reports was extremely influential on the final recommendations of the NMC and the proposals of other actors who played a role in the creation of the Federal Reserve.

Chapter III. Final Report of the NMC (1911-1912)

“The plan we propose is essentially an American system, scientific in its methods, and democratic in its control.” – Report of the National Monetary Commission, 1912

After two years of gathering facts and data, Aldrich was eager to publish the results of the commission’s enormous research efforts. Frustrated by the inaction of his fellow commissioners, Aldrich decided to take matters into his own hands in November 1910. Without telling the other congressmen, Aldrich called a meeting at Jekyll Island, a small resort island off the coast of Georgia. Aldrich invited only five guests: Piatt Andrew, who had just accepted a position as assistant secretary of the treasury, Henry Davison, Frank Vanderlip, Paul Warburg, and Arthur Shelton.¹⁵⁷ The secret nature of the meeting gave rise to the development of a litany of conspiracy theories of the years, most of them linking the Jekyll Island meeting to a wider network of super-rich international bankers who worked together to exploit average people around the world. Many of these conspiracy theories were tinged with anti-Semitism, despite the fact that only one of the Jekyll Island participants (Warburg) was Jewish.¹⁵⁸ More traditional scholars have focused on the Jekyll Island meeting as another piece of evidence that Aldrich cared very little about his fellow commissioner’s input.¹⁵⁹ In this case, their claims may be well-founded – by 1910 Aldrich had certainly drifted away from the other NMC members. According to biographer Nathaniel Stephenson, Aldrich wanted to avoid “the intervention of uninformed persons eager to incorporate their ideas” and the “pressure of political forces more insistent upon

¹⁵⁷ Nathaniel Stephenson, “Biographer’s Notes,” Aldrich Papers, reel 61.

¹⁵⁸ For examples, see Eustace Mullins, *The Secrets of the Federal Reserve* (Bridger House Publishers, 2009); G. Edward Griffin, *The Creature from Jekyll Island: A Second Look at the Federal Reserve* (Westlake Village, Calif.: American Media, 1998).

¹⁵⁹ Roger Lowenstein, *America’s Bank: The Epic Struggle to Create the Federal Reserve* (New York: Penguin, 2015); Elmus Wicker, *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed* (Columbus: Ohio State UP, 2005).

party expediency than on sound legislation.”¹⁶⁰ By the end of the Jekyll Island meeting, Aldrich had a draft of a monetary reform bill.

Although Aldrich had not invited the other commissioners to the Jekyll Island meeting, he did seek their input on his bill, holding a series of NMC meetings upon his return in December. The NMC archives provide very little insight into the content of these meetings, so it is difficult to know exactly how much he took the other commissioners’ suggestions into account. By January, Aldrich had composed a final report of the NMC, which was approved unanimously approved by the commission.¹⁶¹ The final report described the commission’s activities, enumerated the problems with the National Banking System, and explained Aldrich’s proposed bill in plain English. It was then released to the public, along with a copy of the bill itself. The report painted Aldrich’s bill as a brilliant and unique system, going to great lengths to emphasize the American nature of the plan. A few aspects of the proposal were genuinely novel compared to European central banks, such as the system’s federal nature and the degree to which its leaders were democratically elected. However, the plan was heavily influenced by the research conducted by the NMC on European banking, and many of its features were based directly on information from the Reichsbank materials described in the previous chapter. Aldrich’s impulse to distance his plan from a European-style central bank was understandable, if not entirely honest – he knew that the American political climate was still very hostile to the notion of central banking.

Aldrich’s public relations campaign, however was misdirected – the public was more concerned about regional favoritism by wealthy Republican politicians than they were about the

¹⁶⁰ Stephenson, “Biographer’s Notes,” Aldrich Papers, reel 61.

¹⁶¹ Stephenson, “Biographer’s Notes,” Aldrich Papers, reel 61.

establishment of a central banking authority. A coalition of Democrats, Progressives, and populists waged a campaign against the Aldrich Plan, bringing up the allegations of favoritism toward Northeastern elites that had plagued Aldrich throughout his career. In this case, the allegations were largely unfounded, because Aldrich's plan was markedly more egalitarian than the current National Banking System. Regardless, the general public bought into the paranoia about Aldrich's "money trust." The crusade against Aldrich was successful, and the Aldrich Plan languished in Congress, never gaining the necessary support. Although the Aldrich Plan itself did not pass into law, the legacy of the NMC did not end in 1912. The commission's work and its final report were instrumental to the drafting of the legislation that did ultimately create the Federal Reserve.

The first section of this chapter will discuss the beginning of the NMC's final report, which recounted the NMC's work and summarized its findings about the flaws of America's banking system. Many of these findings stemmed from comparison between American and European banking systems, which was made possible by the extensive research conducted by the commission. The second section will explain the NMC's proposed remedy for the defective banking system, a piece of legislation that became known as the "Aldrich Plan." This section will also explain how European central banks served as an example for many provisions of the Aldrich Plan. Finally, the third section will discuss the political fate of the Aldrich Bill, which failed to pass through Congress. However, many aspects of the Aldrich Plan were ultimately included in the legislation that would become the Federal Reserve Act. The similarity between the Aldrich Plan and the Federal Reserve Act will be discussed in the conclusion, because it is a crucial link between the research of the NMC and the establishment of the Federal Reserve.

The Principal Defects of the American Banking System

The first section of the NMC's final report explained the activities and purpose of the NMC. It began by reiterating the broad mandate given to the commission under the Aldrich Vreeland Act of 1908, which allowed the commission to "send for persons and papers, to administer oaths, to summons and compel the attendance of witnesses," among other powers. The report then detailed how the commission made use of its powers to collect statistics from "National and State banks and trust companies, national-bank examiners, and State bank supervisors," to interview foreign and domestic bankers, to conduct public hearings with economists and bankers, and to requisition a large body of literature about banking systems.¹⁶²

The report of the NMC clearly outlined the commission's contribution to the field of financial history. According to the report, the NMC tried to follow the guidelines laid out by Aldrich-Vreeland in as thorough and scientific a manner as possible. The commission members were surprised by the "paucity" of high-quality literature about banking systems in America and Europe. The report said: "Most bankers, economists, and legislators who had written upon banking had discussed banking questions in much the same language and from much the same point of view as English authorities who debated banking reform in England during the decades before the act of 1844."¹⁶³ The tone of the report here is somewhat condescending – it essentially suggested that the discourse about banking was outdated by 60 years and that the NMC was responsible for modernizing it. The report claimed that the NMC collected "more complete statistical information with regard to the banks of these countries than has ever been collected before," and that its research about domestic banking was the "first ... to present reports from all

¹⁶² *Report of the National Monetary Commission* (Washington, DC: Government Printing Office, 1912), 3.

¹⁶³ *Report of the National Monetary Commission*, 5.

of the banks in the country upon a uniform basis.”¹⁶⁴ Although these claims may seem self-aggrandizing, many scholars agree that the materials gathered by the NMC represented the most comprehensive body of literature on banking and financial history ever produced at that point in time, and there is no reason to doubt their claims.¹⁶⁵ In addition, the report acknowledged that the NMC’s accomplishments were not achieved without help, saying: “It would be impossible to enumerate all of the bankers, economists, editors, Government officials, business men, and banking and commercial organizations that have generously and patiently cooperated in the work.” While the tone of the NMC’s final report could seem boastful at times, the commissioners had good reason to be proud of the breadth and quality of the work they had produced.

The NMC’s final report was also careful to highlight the commission’s academic approach and the diversity of sources it used. It said that the “scope and authority” of the volumes collected by the NMC would give them “enduring scientific value.” While the NMC, and especially Aldrich, certainly had incentives to exaggerate the importance of their work, the claims laid out in the final report have merit. Even a brief glance through the list of NMC publications, hearings, and interviews will back up the assertion that the NMC sought input from a diverse group of experts, both in terms of their occupations and nationalities. The NMC sought the opinions of “leading financial editors, bankers, government officials, and university professors in Europe and America and in the Orient.”¹⁶⁶ The collection of the NMC contained volumes about the banking systems of ten foreign countries – and not just European powers, but

¹⁶⁴ *Report of the National Monetary Commission*, 6.

¹⁶⁵ Lowenstein, *America’s Bank*; Wicker, *The Great Debate*; Allan H. Meltzer, *A History of the Federal Reserve* (Chicago: U of Chicago Press, 2009); Robert Craig West, *Banking Reform and the Federal Reserve, 1863-1923* (Ithaca: Cornell UP, 1977).

¹⁶⁶ *Report of the National Monetary Commission*, 5.

also Canada, Mexico, and Japan. They also held hearings with banking experts from every region of the United States, as well as academics, journalists, and government employees. It was not an exaggeration to say that the high quality of the NMC's work would give it enduring value – some of its volumes are still studied today.¹⁶⁷

After describing the scope and value of its research, the final report summarized the commission's findings about the flaws of America's banking system. The commission acknowledged its roots in the Panic of 1907, saying that "one of the primary purposes" of the NMC was to prevent or mitigate similar panics. However, the NMC was created to study all changes that were "necessary or desirable in the monetary system," not just to address the problem of banking panics.¹⁶⁸ The Commission found flaws that ran even deeper than the causes of the Panic of 1907.

The final report listed seventeen "principal defects" in the United States banking system. A common theme was that these flaws stemmed from the decentralized nature of the system. The list can be broken up into three types of defects: the first was reasons why American banks struggled to provide adequate amounts of currency and credit in response to changes in demand; the second was factors that contributed to regional inequalities; and the third was the United States' lackluster reputation in the international financial community. Overall, the comprehensive list might have surprised those who had accused Aldrich of favoring New York bankers.

The first category of flaws concerned banks' poor panic-prevention ability. Aldrich wrote that the "scattered cash reserves" of American banks could not be mobilized or concentrated for

¹⁶⁷ See the conclusion for a specific example of modern-day use of NMC volumes.

¹⁶⁸ "An Act to Amend the National Banking Laws," HR 21871, Sec 18

“use wherever needed in times of trouble.”¹⁶⁹ Next, the commission denounced the “antiquated federal and state laws” that restricted banks’ use of reserves and hindered their ability to increase their loaning powers, which could be especially problematic in times of unusual demand.¹⁷⁰ Further, because the volume of bank notes was still largely dependent on United States bonds, issuing bank notes was not a sufficient response to the changing demands of the economy, and so it could not expand or contract automatically.¹⁷¹

Especially concerning to the commissioners was the lack of any means to ensure cooperation among banks. The closest mechanism was the clearing houses located in some major cities. These organizations acted as middle men for financial transactions, such as the purchase or sale of securities like bonds.¹⁷² The clearing houses could provide valuable services for their respective cities, but there was no cooperation between them. As a result, they were unable to “prevent panics or avert calamitous disturbances affecting the country at large.”¹⁷³ All of these flaws contributed to the Panic of 1907, and the many panics before it. These flaws would have seemed especially glaring to the commissioners after having become familiar with the banking systems of Germany and England, which allowed for much more flexibility in the use of reserves and gave banks greater loaning powers. The Aldrich Plan, contained in the second half of the NMC report, would attempt to address these flaws.

As mentioned in the introduction, the National Banking System had several features that

¹⁶⁹ *Report of the National Monetary Commission*, 6-7.

¹⁷⁰ *Report of the National Monetary Commission*, 7.

¹⁷¹ Even though the Aldrich-Vreeland Act had provided for the use of asset-based currency in emergencies, the banking system still relied predominantly on bond-secured notes, which could not be issued as freely as asset-based notes.

¹⁷² An example of a clearing house is the New York Stock Exchange, which acts as the middle man in the market for securities such as stocks, bonds, and mutual funds. The exchange matches together buyers and sellers.

¹⁷³ *Report of the National Monetary Commission*, 7.

created and exacerbated regional inequalities. The commission pointed to the lack of an effective agency to facilitate exchanges between different regions or cities as a serious flaw of the banking system. Especially in times of crisis, financial exchanges across regions could be “disastrously disrupted.” Another issue was the “unhealthy congestion of loanable funds in great centers and hinders the development of the productive forces of the country.”¹⁷⁴ This problem was mostly caused by the lack of an established national standard to judge commercial paper,¹⁷⁵ which made smaller banks reluctant to accept it. Contributing further to this problem was the “narrow character of [the] discount market,” which means that there were not very many safe investments for banks around the country. As a result, excess money around the country ended up going to New York, where it was usually loaned out on the stock market. The flow of money to New York deeply troubled the commission, both because the money was often invested in irresponsible ways and because the concentration of funds in New York “imposes upon the managers of the banks of that city the vast responsibilities which are inherent in the control of a large proportion of the banking resources of the country.”¹⁷⁶

The dual problem of a constricted discount market and stringent restrictions on the use of reserves created a reliance on individual banks and “put farmers and others engaged in productive industries at a great disadvantage in securing the credit they require for the growth, retention, and distribution of their products.”¹⁷⁷ Further, certain areas of the country had significantly poorer credit facilities than others, which contributed to “retarded development, and great disparity in rates of discount,” in the worse-off regions. For example, it would be quite

¹⁷⁴ *Report of the National Monetary Commission*, 8.

¹⁷⁵ Commercial paper refers to the notes representing short-term loans.

¹⁷⁶ *Report of the National Monetary Commission*, 8.

¹⁷⁷ *Report of the National Monetary Commission*, 8.

difficult for a cotton farmer in Mississippi to find a bank willing to loan him a significant amount of money to buy better farming equipment. By contrast, New York merchants and businessmen had easy access to credit. The commissioners ultimately traced all of these problems to the lack of a central authority that could equalize discount rates across the country, help regional banks meet surges in demand for credit and currency, and enforce uniform standards for “capital, reserves, examinations, and the character and publicity of reports of all banks in the different sections of the country.”¹⁷⁸ Again, it is clear that the commissioners’ way of thinking stemmed from their experiences in Europe. During their interviews, the German central bankers had emphasized that the equalization of discount rates, the allocation of currency to local banks, and enforcing certain standards among individual banks were all central functions of the Reichsbank.¹⁷⁹ The fragmented nature of America’s banking system became much more obvious once it was compared to centralized European systems, such as Germany’s.

Finally, two of the defects listed by the report dealt with America’s position in the world economy. First, the commissioners pointed out that there was no institution that could address “broad questions which, from an international standpoint, affect the credit and status of the United States as one of the great financial powers of the world.”¹⁸⁰ An example of such a problem occurred in 1906, when the Bank of England decided that American national banks were being too liberal with their credit. The Bank of England hiked interest rates and capital flowed out of the United States, leaving American banks unable to cover their customer’s demands and initiating the Panic of 1907. A central banking authority would have been able to better supervise banks’ use of credit and also communicate with the Bank of England, so that

¹⁷⁸ *Report of the National Monetary Commission*, 9.

¹⁷⁹ “Interviews on the Banking and Currency,” 342-343.

¹⁸⁰ *Report of the National Monetary Commission*, 9.

American bankers would not have been blindsided by the interest rate hike. Second, America did not have any banking institutions abroad, which hampered the development of foreign trade. This is yet another example of an unfavorable comparison between America's banking system and those of the European powers. In this instance, the commissioners explicitly voiced their concern that America was not fully able to occupy its rightful position as one of the world's pre-eminent financial powers.

The commissioners' concerns about all of these defects, and especially the way they chose to word their complaints, can be traced to their research on European banking. In their final report, the NMC members carefully worded their list of flaws to reflect the lack of a European-style central bank. As pointed out above, almost all of the problems listed in the report were discussed in some capacity during the interviews with European bankers, and also discussed in the volumes about German and English banks. Eight out of the seventeen problems listed are constructed to draw attention to the lack of a central banking authority, using wording such as: "We have no effective agency to...".¹⁸¹ This word choice shows that the commissioners had come to think of the lack of a central banking authority as the predominant problem with America's system. It also reflects a general enthusiasm for centralized government solutions that was common among Progressive Era reformers. After researching European banking, the commissioners had come to realize that European-style central banks could solve many of the serious defects in America's banking system.

The Aldrich Plan

After enumerating the many flaws of America's banking system, the remainder of the

¹⁸¹ *Report of the National Monetary Commission*, 6-9.

report was devoted to explaining the NMC's proposed solution – a bill that would become known as the Aldrich Plan. The bill itself, officially entitled “A Bill to incorporate the National Reserve Association of the United States, and for other purposes,” was attached to the end of the report, but the second half of the report itself explained the provisions of the bill in plain English. Despite the claim of the commissioners that the plan was “essentially American,” it was strongly influenced by the commission's European research. Many of the plan's details had very clear roots in the commission's interviews with German and English bankers and the thousands of pages gathered by the commission about the banking systems of those countries. This section will describe the bill's provisions, and trace them to their origins in the research of the NMC on European banking.

The Aldrich plan proposed the creation of the National Reserve Association, a central authority that would oversee an association of American banks. Although the commissioners took pains to avoid calling the NRA a central bank, in reality, it was a modified form of a European-style central bank. The final report at least admitted that the commission's bill represented a “comprehensive reorganization of credit and a thorough reconstruction of our banking systems and methods.”¹⁸² Despite the commissioners' concerted efforts to distance their plan from European models, their influence can be clearly seen in the plan's details.

The National Reserve Association was designed to create a much more elastic currency through the grouping together of banks' reserves. Banks had to fulfill a number of qualifying conditions in order to buy stock¹⁸³ and subscribe to the association. The conditions for banks and trust companies to subscribe were requirements for capital and reserves, gradated based on the

¹⁸² *Report of the National Monetary Commission*, 10.

¹⁸³ Stock in the National Reserve Association could not be traded and could not be owned by any entity other than a subscribing bank.

population of that bank or company's city.¹⁸⁴ The bill required a minimum paid-in capital stock¹⁸⁵ of at least \$100 million, or over \$2.6 billion in 2017 U.S. dollars.¹⁸⁶ Once incorporated, the NRA would consist of fifteen district branches, each divided further into 10 local associations. The head office of the reserve association would be in Washington, DC, and would be responsible for setting policy, such as choosing the discount rate, which applied equally to all branches, and for managing relations among the branches.¹⁸⁷ Each local association would act much like a clearinghouse – serving as a middleman for financial transactions.¹⁸⁸ The district branches, not the central body, would hold the reserves and issue currency. This new currency would be backed by gold, bonds, and commercial paper, which would be held to certain standards.¹⁸⁹ The critical change was that this new system of discounting, which was much more flexible, would allow the amount of currency circulating to respond to the demand created by economic activity. Under the previous system, the volume of currency had been problematically tied to the amount of investment in bonds. There was also a requirement that the association maintained reserves of “not less than 50 percent against all of its demand liabilities.”¹⁹⁰ This provision would help to ensure that the banks were always in a position to cover their liabilities.

Although this model was less centralized than the banking systems of European powers like Germany, and England, it derived many of its features from them. Unlike the European

¹⁸⁴ “A bill to incorporate the National Reserve Association of the United States, and for other purposes,” Sec. 3.

¹⁸⁵ This means the minimum total amount paid by the subscribing banks to buy stock in the association.

¹⁸⁶ *Report of the National Monetary Commission*, 10. Inflation-adjusted figure from Federal Reserve Bank of Minneapolis’ Consumer Price Index Estimate for 1800-2017.

¹⁸⁷ *Report of the National Monetary Commission*, 12 and “A bill to incorporate the National Reserve Association,” Sec. 1.

¹⁸⁸ West, *Banking Reform*, 73.

¹⁸⁹ *Report of the National Monetary Commission*, 16-17.

¹⁹⁰ *Report of the National Monetary Commission*, 17.

Central Banks, it was the district branches of the NRA that issued currency rather than the central office in DC. However, the discount system was very similar to that employed by European central banks, because it allowed for the deposit of a wider variety of assets. The idea to use this type of discount system can be traced to the NMC documents about the Reichsbank, which describe the many different types of assets that the central bank accepted. The provision that allowed the central Reserve Association to set a uniform discount rate also had its origin in the NMC's European research. For example, during the NMC interview of the Reichsbank directors, the German bankers explained the importance of applying an equal discount rate to all regions and types of customers. At Jekyll Island, Warburg had argued against a nationwide uniform rate, saying that each district should be allowed to choose its own rate. But Aldrich chose not to listen to him, showing the deep influence of the Reichsbank research on his decisions.¹⁹¹ Similarly, the requirement that the association maintain reserves that were at least 50 percent of its demand liabilities was exactly in line with the recommendations of the NMC report on the Reichsbank, which emphasized the importance that a central bank must be "at all times in a position to redeem its notes and to meet its other demand liabilities."¹⁹² However much Aldrich and his fellow commissioners tried to emphasize the "American-ness" of their plan, European influence permeated the bill.

The method proposed for selecting the association's leaders was largely democratic, although the government did have a small amount of say. The Reserve Association in Washington would have a forty-six-member board of directors. Each district branch could elect two directors, one of whom would represent the "agricultural, commercial, industrial, and other

¹⁹¹ Lowenstein, *America's Bank*, 114.

¹⁹² Frederick W.C. Lieder trans., *The Reichsbank, 1876-1900* (Washington, DC: Government Printing Office, 1910), 69.

interests of the district, and cannot be an officer, nor, while serving, a director of a bank, trust company, insurance company, or other financial institution.”¹⁹³ In addition to these 30 directors, nine more would be chosen by the branch directors, with “each representative to cast a number of votes equal to the number of shares in the National Reserve Association held by the banks in the branch he represents.”¹⁹⁴ And finally, there would be seven ex officio members: a governor, who would be the chairman, two deputy governors, the secretary of the treasury, the secretary of commerce and labor, the secretary of agriculture, and the comptroller of the currency.¹⁹⁵ This meant that of the forty-six members, only six were appointed by the president, while the rest were chosen democratically by the district branches.¹⁹⁶ Even more significantly, fifteen of the directors would not be bankers, but rather ordinary citizens chosen to represent the agricultural, commercial, or industrial interests of their district.

When designing this method of selecting directors, the commissioners took into account the fears that one region, namely New York, would be able to exert undue influence on the NRA. They wrote, “Those who express fears of the future domination of Wall Street seem to lose sight of the fact that the domination of New York is an accomplished fact.” In their view, the only way to reverse this domination was a “thorough reorganization of the banking system,” as provided for by the Aldrich Plan.¹⁹⁷ The report pointed out that although New York controlled 29 percent of the country’s banking resources, it would only appoint 8 percent of the association’s directors. The Southern states by contrast, had only 11 percent of the resources, but represented 23 percent

¹⁹³ *Report of the National Monetary Commission*, 12.

¹⁹⁴ *Report of the National Monetary Commission*, 13.

¹⁹⁵ *Report of the National Monetary Commission*, 13-14.

¹⁹⁶ The president appointed the five cabinet members on the board, and he also chose which governor was appointed to the board.

¹⁹⁷ *Report of the National Monetary Commission*, 32-33.

of the board.¹⁹⁸ The Aldrich Plan would have created an egalitarian banking system, at least compared to the current National Banking System. Regardless, Aldrich's political opponents, without much evidence, levelled against him the usual accusations of favoring New York bankers.¹⁹⁹ The one part of the Aldrich Plan that actually did benefit New York was a provision that allowed national banks to do business in foreign countries, which would have disproportionately benefitted large New York banks, who were in the best positions to expand overseas.²⁰⁰ Overall though, the bill would have greatly improved representation and access to currency for undercapitalized areas of the country, such as the South.

Aldrich and his fellow commissioners emphasized that the structure and leadership of the National Reserve Association were very different from those of European central banks, but there were actually some significant similarities. In the NMC report, the commissioners wrote that the NRA “differs radically from the ... European central banks. Its sources of authority are democratic and not autocratic.”²⁰¹ While it is true that the leadership of the NRA would have been selected democratically, it was misleading to characterize the European central banks' authority as “autocratic.” The commissioners would have known from their volume on the Reichsbank that the German central bank had a mix of public and private control – while the chancellor did appoint a council and board, the bank's private shareholders were also represented by a committee. It was true that the Reichsbank had a higher proportion of government-appointed directors than the NRA would have. And it is also true that technically, the chancellor

¹⁹⁸ *Report of the National Monetary Commission*, 33-34

¹⁹⁹ Accusations of Aldrich favoring New York bankers will be discussed later in the chapter, but for now, see Appendix, Figure 2, for a political cartoon that humorously suggests Westerners' preconceived notions about Aldrich.

²⁰⁰ Lowenstein, *America's Bank*, 114.

²⁰¹ *Report of the National Monetary Commission*, 15.

ultimately had power over the bank's final decisions.²⁰² But during their NMC interviews, the Reichsbank directors emphasized that the chancellor had never once exercised his supreme power. The bank's operations were almost entirely controlled by bankers and shareholders, who had a harmonious relationship with the government.²⁰³ Aldrich himself had pointed out the independence of European central banks several years earlier, in a 1909 speech before the Economic Club of New York. He said, "No one of the great European banks I have described has ever been influenced in its action by any political party, and no such charge has ever been made."²⁰⁴ The National Reserve Association's activities would have also been primarily controlled by economists and banking experts. The Aldrich plan did give some representation to the agricultural and industrial sectors through the fifteen seats on the board of directors reserved for non-bankers. But ultimately, Progressives and populists ignored this provision, claiming that the Aldrich plan did not allow for enough government oversight of the National Reserve Association.

The Aldrich Plan in Congress

The Aldrich Plan was divisive – while bankers and businessmen were supportive, Democrats, Progressives, and populists generally opposed it for a variety of reasons. It makes sense that the plan would have appealed to bankers, since the national Reserve Association would have been largely controlled by bankers with relatively little government oversight. Aldrich and his colleagues moved quickly to secure the endorsements, starting with the

²⁰² Lieder, *The Reichsbank*, 26.

²⁰³ "Interviews on the Banking and Currency," 335-337.

²⁰⁴ Nelson W Aldrich, "Address Before the Economic Club of New York" (Washington, DC: Government Printing Office, 1910), 27.

American Bankers Association, which was by far the largest banking organization in the country. Aldrich, Piatt Andrew, and several other economists and bankers that had helped to draft the plan, communicated regularly with George Reynolds and James Forgan, two leaders of the ABA, during the first few months of 1911. The bankers demanded some changes to the bill that would favor banks, including more relaxed discounting rules and a slightly higher share of profits for member banks of the NRA. Realizing the importance of securing the ABA endorsements, Aldrich agreed to implement most of these changes, except that he refused to raise the dividends that the NRA would pay to its member banks.²⁰⁵ In the coming months, the plan gained more endorsements, including from the Citizens' League, a group representing businessmen who favored banking reform, and from 29 state banks. President Taft and Treasury Secretary Franklin MacVeagh also voiced their support.²⁰⁶ At this point, the Aldrich Plan had a strong coalition of support from Republicans, bankers, and businessmen.

Public sentiment, however, soon turned strongly against the Aldrich Plan. Aldrich made legitimate efforts to reach out to Westerners – he toured several Western states, giving speeches that explained the value of his plan and asking that it be fairly evaluated.²⁰⁷ For example, in October 1911, Aldrich gave a long speech before the Indiana State Bankers' Association. Aldrich did not shy away from flattery – he began the speech by complimenting Indianan politicians, including the late Jesse Overstreet, a former NMC member who had died a year earlier. He then gave a detailed history of banking in Indiana. When it came to selling the Aldrich plan, he emphasized that Western regions would receive outsize representation on the

²⁰⁵ Lowenstein, *America's Bank*, 129-131.

²⁰⁶ Lowenstein, *America's Bank*, 133-134.

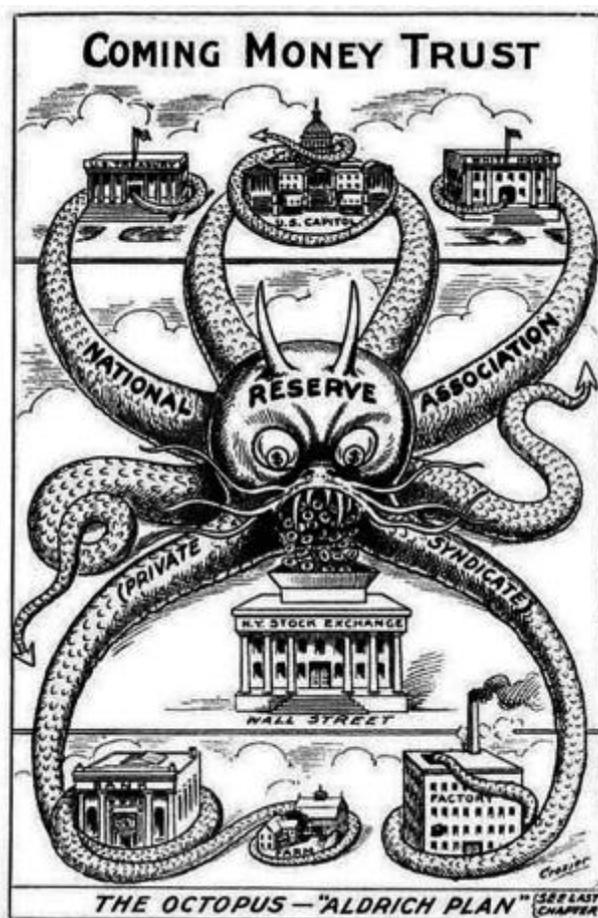
²⁰⁷ Correspondence between Paul Warburg and Nelson Aldrich, October 1911, Aldrich Papers, reel 46.

National Reserve Association board, saying that the makeup of the board would “follow closely the political divisions of the United States, but providing in each case for large minority representation.”²⁰⁸ Aldrich gave a series of similar speeches throughout the West, but his pleas fell on deaf ears.

Populists and Progressives, especially in agrarian areas, reflexively recoiled from the Aldrich Plan, assuming that it was simply a ploy for New York bankers to gain even greater control over the financial system. For example, Alfred Owen Crozier, a Midwestern attorney who wrote several books arguing against central banking, published a popular cartoon that depicted the National Reserve Association as an octopus snaking its tentacles around banks, factories, farms, and political institutions.²⁰⁹

Fears about the monopolization of the banking industry, which had been brewing among populists for the past century, exploded into the

general public in the second half of 1911 after the revelation that the National City Bank, a large



Cartoon by Alfred Owen Crozier, depicting the National Reserve Association as an octopus that would strangle the financial system, economy, and government.

²⁰⁸ Nelson Aldrich, “Speech to the Indiana State Bankers’ Association,” October 1911, Aldrich Papers, reel 63.

²⁰⁹ “The 1907 Crisis in Historical Perspective,” Center for History and Economics, Harvard University, 2010.

New York bank, announced that it was creating an affiliate that could and did purchase stocks in other banks. National City was now owned by Frank Vanderlip, who had played a significant role in drafting the Aldrich bill.²¹⁰ This move set off an explosive reaction, as people feared that National City would be able to gain total control over the National Reserve Association if the Aldrich Plan was passed. Now, the plan faced an onslaught of criticism from across the political spectrum. Obviously, Populist demagogues like William Jennings Bryan crusaded against the Aldrich Plan, but even some Republican congressmen began to call for a congressional investigation of the ties between Aldrich and Vanderlip.²¹¹ Realistically, the fears about National City were baseless, because even a bank as large as National City would have been tiny compared to the National Reserve Association. No one bank would have been able to control the NRA. And as explained in the previous section, the Aldrich Plan would have greatly increased the representation and resources of Southern and Western banks, while decreasing the proportion of resources available to New York banks. But the damage had been done. In November 1911, *The New York Times* remarked that trying to gain widespread acceptance of the Aldrich Plan in the wake of the National City announcement was “a waste of breath.”²¹² This prediction would prove correct, as the Aldrich Plan was never able to recover from this blow.

After the erosion of support caused by the National City debacle, the Aldrich Bill’s prospects in Congress were dismal. In the Sixty-second Congress, the Republicans had a majority in the Senate, but not in the House. As a result, Aldrich chose to introduce his bill to the Senate, in January 1912. But at this point enough Republicans had turned against the plan that

²¹⁰ Lowenstein, *America’s Bank*, 134.

²¹¹ McCulley, *Banking Reform*, 255.

²¹² “The National City Company,” *The New York Times*, November 4, 1911.

even with a Republican majority, the bill never made it out of the Senate.²¹³ The 1912 election doomed the Aldrich Plan, as Democrats won control of the Senate and the presidency. The Aldrich Bill was introduced again to the Sixty-third Congress, but it was a futile gesture – there was no hope of the bill making it through a now heavily Democratic Congress. Although the current incarnation of the Aldrich Plan died in 1913, the legacy of Aldrich and the NMC did not end here. The same year, a Democratic representative from Virginia, Carter Glass (d. 1946), took up the mantle of banking reform.

²¹³ Wicker, *The Great Debate*, 72.

Conclusion

The Federal Reserve Act and the Aldrich Plan

“It was not an ‘original proposal’ ... but, on the contrary it was the digested product of elaborate and careful study of European banking experience as adapted to American necessities and requirements.” –Henry Parker Willis²¹⁴

On December 23, 1913, President Woodrow Wilson signed the Federal Reserve Act into law. While the law differed from the Aldrich Plan in some significant ways, it went a long way toward fixing the defects of the National Banking System discovered by the NMC. The act established a system of twelve regional reserve banks that could lend money to other banks, and a central board in Washington, DC that could supervise, examine, and regulate the reserve banks. The board consisted of seven members, including the secretary of the treasury, the comptroller of the currency, and five members appointed by the president and approved by the Senate.²¹⁵ Overall, the Federal Reserve Act achieved the goals of by the NMC. The establishment of the Federal Reserve made the currency more elastic and provided a mechanism to supervise American banks and promote cooperation between them. While the system was far from perfect, it went a long way toward correcting the defects of the National Banking System.

Representative Carter Glass was the primary architect of the bill. He worked closely with Henry Parker Willis, a professor of economics at George Washington University, who played a similar role for Glass as Piatt Andrew had for Aldrich.²¹⁶ Glass, like most Democrats, was averse to centralization in general, but he recognized the severe deficiencies of the National Banking

²¹⁴ Henry Parker Willis, *The Federal Reserve System: Legislation, Organization, and Operation* (New York: Ronald Press, 1923), 523.

²¹⁵ “Federal Reserve Act,” Public Law 63-43, H.R. 7837, Dec. 23, 1913.

²¹⁶ Biographical details from Roger Lowenstein, *America's Bank: The Epic Struggle to Create the Federal Reserve* (New York: Penguin, 2015).

System. Together with Willis, he drafted a plan for a Federal Reserve System that would not actually have a single central bank, but rather a number of regional reserve banks throughout the country. In addition, the Glass Plan gave the federal government greater power over the banking system, since the Federal Reserve Board was appointed by the president. The Glass bill appealed to Democrats, who approved of the apparently more decentralized system and felt that its design would mitigate the influence of Wall Street over the banking system. The increased level of government oversight as compared to the Aldrich Plan also made the plan more palatable to Progressives. As a result, Glass was able to succeed where Aldrich had failed, and his plan passed into law.

The question of how heavily the framers of the Federal Reserve Act relied on the final report of the NMC when drafting their bill was highly contentious at the time. Glass and Willis, who recognized the bill as the crowning achievement of their careers, were understandably sensitive when accused of “plagiarizing” the Aldrich Plan.²¹⁷ Willis’ statements about this issue paint a murky picture. In his 1924 book, Willis wrote, “In principle, the Federal Reserve Act had little relation to the Aldrich Bill.”²¹⁸ However, he also wrote in the same passage that the Federal Reserve Act “in various places made use of the language of the Aldrich bill on matters relating to banking technique.” And finally, he acknowledged that the act “was not an ‘original proposal’ ... but, on the contrary it was the digested product of elaborate and careful study of European banking experience as adapted to American necessities and requirements.” These statements seem to contradict each other, but what Willis meant was that the Federal Reserve Act differed fundamentally from the Aldrich Plan because of its more decentralized structure and greater

²¹⁷ Nathaniel Stephenson, “Biographer’s Notes,” 1913, Aldrich Papers, reel 61.

²¹⁸ Henry Parker Willis, *The Federal Reserve System*, 523.

government oversight. These claims were somewhat dubious, as will be discussed later. But even Willis admitted that the general banking practices underpinning the Federal Reserve System were drawn from the Aldrich Plan, and hence from the European research of the NMC.

The attitude of Aldrich and his advisors toward the Federal Reserve Act was similarly ambiguous. Aldrich, tired and bitter after his futile struggle to establish the National Reserve Association, railed against the Glass Bill and the Democrats. In October 1913, while the bill was still being considered in Congress, Aldrich denounced it in a speech, saying, “It is the irony of fate that in a measure whose sole purpose is to give strength and stability to our banking institutions it should be found necessary ... to make the national banks unwilling instruments in the work of their own destruction.”²¹⁹ However, some of the other architects of the Aldrich Plan appraised the Federal Reserve Act in more measured tones. Piatt Andrew, for example, wrote years later that although he generally did not approve of President Wilson’s policies, Wilson deserved “great credit for his clear recognition of [the Federal Reserve Act’s] constructive importance and his promptness and courage in getting in enacted.”²²⁰ Paul Warburg, who had been advocating for a central bank long before Aldrich and Andrew, actually assisted Glass and Willis with the drafting of the bill, attempting to convince them alter the bill to centralize the Federal Reserve System further. Warburg wrote in a letter to Glass, “While my heart bleeds at many things that went into the bill, and at many things that were left out, I rejoice at the many features that, after all, the law will contain.”²²¹ Warburg was appointed to the Federal Reserve

²¹⁹ Speech by Nelson Aldrich on Oct. 15, 1913, from Stephenson, “Biographer’s Notes,” Aldrich Papers, reel 61.

²²⁰ Correspondence between Piatt Andrew and H.A. Vale, Aug. 1924, Aldrich Papers, reel 61.

²²¹ Lowenstein, *America’s Bank*, 253.

Board in 1914, becoming vice chairman in 1916. He would also later serve on the advisory council of the Federal Reserve Board, acting as its president from 1924-1926.²²²

Modern scholars largely agree that the Federal Reserve Act was heavily influenced by the Aldrich Plan and the work of the NMC.²²³ Robert Craig West lays out a thorough comparison of the two plans. He says that “the Glass Bill, especially in its first draft, is identical to the Aldrich Bill.”²²⁴ During the legislative process, the Glass Bill did undergo some revisions, but these affected the structure of the Federal Reserve System much more than its functions, powers, or responsibilities. The final draft of the Glass Bill gave much more power to the regional reserve banks, whereas the Aldrich Bill had proposed a central organization with regional branches. At the regional and local levels, however, the organization was quite similar. The other significant difference, as mentioned above, was that the Glass Bill gave the President the power to select six more members of the central board than he would have had under the Aldrich Plan. However, these differences were fairly superficial. West writes, “any claim that the National Reserve Association was less representative of local conditions, or more likely to be captured by banking interests than the system proposed by Glass and Willis, is difficult to substantiate.”²²⁵ In practice, the structural changes failed to remove bankers’ influence to the degree that Democrats and Progressives had hoped. Although the president appointed the Federal Reserve Board members, Wilson, and especially later, more conservative presidents, often appointed people with strong

²²² “Paul M. Warburg,” Board of Governors of the Federal Reserve System, federalreservehistory.org.

²²³ Examples include Lowenstein, *America’s Bank*; Elmus Wicker, *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed* (Columbus: Ohio State UP, 2005).; Robert Craig West, *Banking Reform and the Federal Reserve, 1863-1923* (Ithaca: Cornell UP, 1977); Richard T. McCulley, *Banks and Politics During the Progressive Era: The Origins of the Federal Reserve System* (Ithaca: Cornell UP, 1992).

²²⁴ West, *Banking Reform*, 106.

²²⁵ West, *Banking Reform*, 108.

ties to the banking world. In the end, bankers and economists maintained a strong hold on Federal Reserve policy, much like in European countries. In addition, the more decentralized system designed by Glass did not solve the problem of New York's outside influence over the financial system, since the New York Reserve Bank quickly became the most powerful.²²⁶ Ironically, the Aldrich Plan, which allocated seats on the National Reserve board in a manner favorable to the South and West, would probably have done more to curb the power of Wall Street.

Structurally, the Glass and Aldrich bills had some noticeable, if not terribly significant, differences, but in terms of actual banking procedures, the two bills were quite similar. The one major difference between the two concerned the discount rate.²²⁷ Under the Aldrich Bill, the central board of the National Reserve Association would have set a uniform national discount rate, whereas the Federal Reserve Board had the power to set discount rates, but they did not have to be the same in every region. This change differed from the example set by the Reichsbank, whose director had emphasized their uniform discount rate. However, as discussed in Chapter Three, there was a disagreement between Aldrich and Paul Warburg about the issue of a uniform discount rate. Aldrich, convinced by his discussion with the Reichsbank leaders, favored a uniform rate, while Warburg, who was himself educated in Germany, actually favored a more flexible system with rates that could vary across the country. Although the Federal Reserve Act did not follow the example of the Reichsbank's uniform discount rate, its discount system was still influenced by Warburg, a German economist. Aside from this one difference, the discount system and inspection powers granted by the Glass and Aldrich bills were extremely

²²⁶ McCulley, *Banks and Politics*, 301.

²²⁷ West, *Banking Reform*, 110.

similar.²²⁸ And as explained earlier, the discount system and inspection powers designed by Aldrich were derived directly from the National Monetary Commission's research on European central banks. Although Aldrich's National Reserve Association never came into being, the legacy of the NMC lived on through the establishment of the Federal Reserve.

Lasting Significance of the NMC

The legacy of the National Monetary Commission lives on through its impressive collection of literature on economic history. At the time, this collection provided an unprecedented wealth of information about financial history, and was extremely useful for many American bankers and economists. The NMC volumes have enduring value, and some, like O.M.W. Sprague's *History of Crises Under the National Banking System*, are still frequently cited by economists today.²²⁹ Many of the over forty NMC volumes have still not been thoroughly studied by economists or historians. More research on these volumes and other NMC documents would help to better understand the circumstances of the Federal Reserve's creation.

The National Monetary Commission also exemplified the Progressive Era ideal of incorporating expert opinion into government decision making. Progressive Era historians like Daniel Rodgers and Thomas Leonard have argued that the uptick in American economists, political scientists, and other academics who studied at European universities during the mid-1800s revolutionized the American university and brought the academic world much closer to government. In addition, these reformers saw that in European countries, especially Germany, academics formed an elite class who had a large degree of influence on the government. Soon, a

²²⁸ West, *Banking Reform*, 109-110.

²²⁹ See Lowenstein, *America's Bank*, 80. And Hugh Rockoff, "O.M.W. Sprague: The Man Who 'Wrote the Book' on Financial Crises," National Bureau of Economic Research, December 2013.

similar class of elite experts began to form in the U.S., and by the dawn of the 1900s, it was becoming very common for politicians to consult with experts, often forming congressional commissions to study important policy decisions. Rodgers, in particular, emphasizes the transatlantic nature of Progressive thought, arguing that Progressive reforms were the product of the increased interaction between Europe and America that occurred as trade and capitalism brought the two continents closer. The National Monetary Commission, which has largely been ignored by Progressive Era historians, typified this trend. The commission hired a huge number of outside experts, including professors, bankers, and journalists. Many of these experts were from Europe or at least had extensive connections to Europe. Paul Warburg, who hailed from a powerful German banking family and had studied economics there, was a perfect example. In addition, the fact that the creation of the Federal Reserve was heavily influenced by the commission's research in Europe is a direct example of Rodgers' argument that Progressive Era reforms stemmed from the transmission of ideas across the Atlantic. Between its 1908 trip to Europe and the thousands of letters sent to European banking experts and economists, the NMC itself formed an extensive transatlantic network.

The example set by the National Monetary Commission also imparts valuable lessons for modern day policy makers. As mentioned above, the National Monetary Commission demonstrated the importance of incorporating thorough research and expert opinion into policymaking. The congressmen assigned to the commission, recognizing their limited knowledge of economics and banking, worked closely with a team of economists and financial experts, also consulting with hundreds of outside specialists. The commission's emphasis on gathering a large body of research from a wide variety of experts was the primary reason that it ultimately achieved its goal of remedying the flawed National Banking System. Nelson Aldrich

and Carter Glass heavily based their bills on the commission's research, and although their legislation was inevitably altered by political pressure, the most important recommendations of the NMC experts remained in the Federal Reserve Act. Aldrich and Glass' deference to expert opinion was the main reason that the Federal Reserve system was a significant improvement over the National Banking System. In recent years, several members of congress have introduced bills to "audit the Fed" – the most recent bill, introduced by Representative Thomas Massie (R-KY) and Senator Rand Paul (R-KY) in January 2017, has received support from President Trump.²³⁰ The proponents of this bills claim that the Federal Reserve is unduly powerful and is not properly supervised by the government. However, the name of the bill is misleading – the Federal Reserve is already audited by accounting firms in the same way as other government agencies. The true effect of the bill is that it would give Congress the power to review every monetary policy decision made by the Federal Reserve. As a result, politicians would be able to pressure Federal Reserve Board members into tailoring monetary policy decisions to suit political needs.²³¹ This bill goes directly against the spirit of the NMC by threatening to take policymaking out of the hands of experts. If monetary policy decisions are made based on the whims of Congress rather than the careful research and analysis of economists, the growth and stability of our economy will be seriously threatened.

Although the Federal Reserve has changed significantly since its creation in 1913, economic policymakers are once again in an unfamiliar situation after the 2008 recession. In the wake of the recession, the Federal Reserve has used unprecedented methods to bolster the

²³⁰ Edmund L. Andrews, "Panel Votes to Broaden Oversight of the Fed," *NY Times*, Nov. 19, 2009; Peter Schroeder, "'Audit the Fed' Bill Gets New Push Under Trump," *The Hill*, Jan. 4, 2017.

²³¹ For more information on the effects of the "Audit the Fed" bill, see Ben Bernanke, "'Audit the Fed' Is Not About Auditing the Fed," Brookings Institute, January 2016.

economy, such as quantitative easing, which is when a central bank purchases securities from the market, lowering interest rates in the process. Although the economy has recovered significantly in the past nine years, interest rates have remained historically low since the recession.²³²

Navigating monetary policy in this new economic environment will require a balance of creativity and prudence. The National Monetary Commission exemplified this balance. The commissioners, together with their team of experts, gathered a wealth of materials from all around the world, researching banking practices that were considered unorthodox and un-American. But before acting, they analyzed and synthesized this huge body of research, taking the time to develop a carefully crafted piece of legislation. Modern economic policymakers should strive to emulate the diligence and open-mindedness of the National Monetary Commission in order to promote growth and stability.

²³² For more information, see Michael T. Kiley and John M. Roberts, “Monetary Policy in a Low Interest Rate World,” Brookings Institute, March 2017.

Appendix

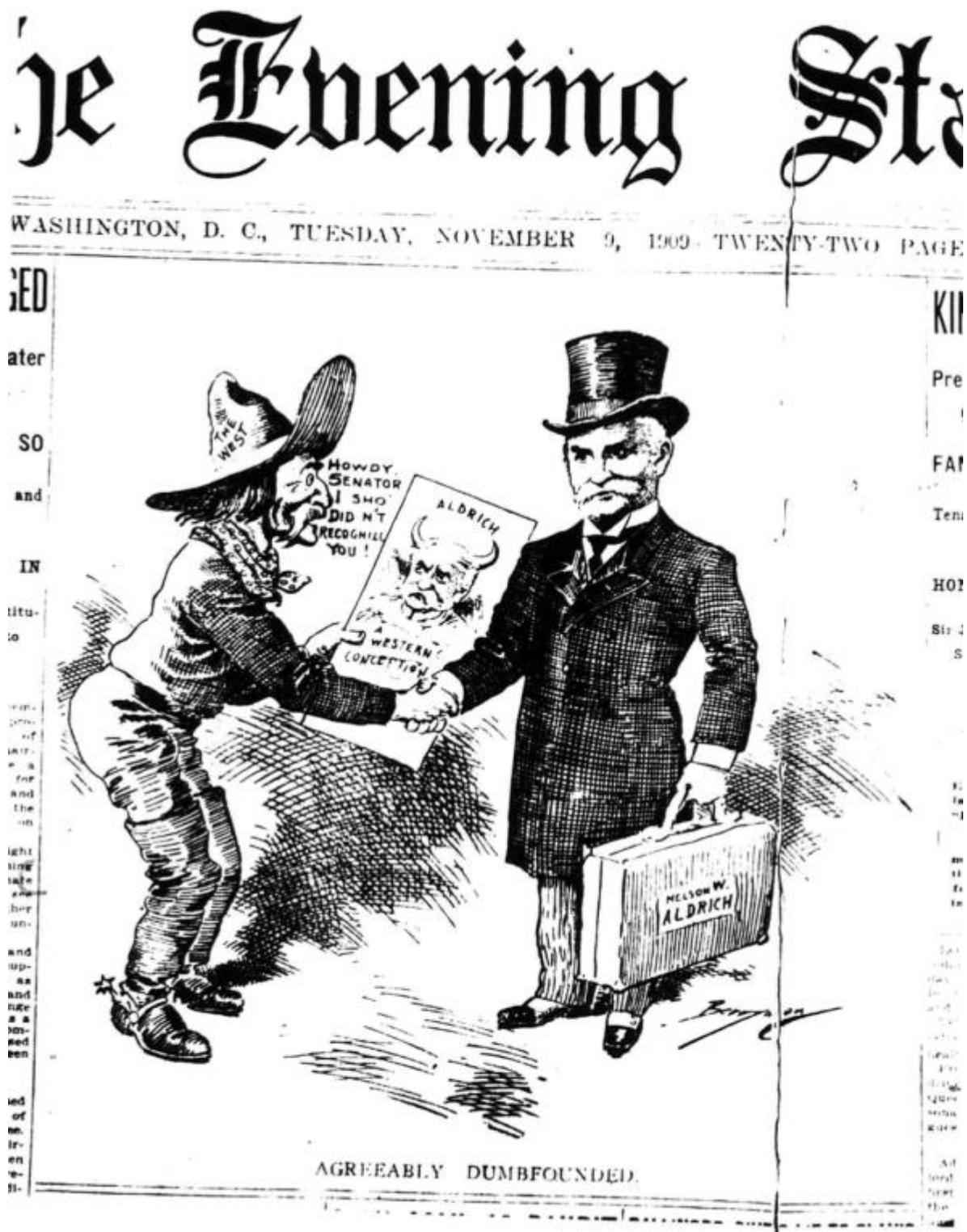
Figure 1. Original Members of the NMC

<i>Senator</i>	<i>Party</i>	<i>State</i>	<i>Years in Senate</i>	<i>Notes</i>
Nelson W. Aldrich	Republican	Rhode Island	1881-1911	Chairman of NMC
William B. Allison	Republican	Iowa	1873-1908	*Died in August 1908
Julius C. Burrows	Republican	Michigan	1895-1911	
Eugene Hale	Republican	Maine	1881-1911	
Philander C. Knox	Republican	Pennsylvania	1904-1909, 1917-1921	*Resigned in 1909 to serve as Taft's secretary of state
John W. Daniel	Democrat	Virginia	1887-1910	*Died in June 1910
Henry M. Teller	Democrat	Colorado	1885-1909	
Hernando D. Money	Democrat	Mississippi	1897-1911	
Joseph W. Bailey	Democrat	Texas	1901-1913	*Resigned in August 1911, because he felt he did not have time to write a minority report. ²³³
<i>Representative</i>	<i>Party</i>	<i>State</i>	<i>Years in House</i>	<i>Notes</i>
Edward B. Vreeland	Republican	New York	1899-1913	Vice chairman of NMC Chairman of the Committee on Banking and Currency (1909-1911)
Jesse Overstreet	Republican	Indiana	1895-1909	*Died in May 1910
Theodore E. Burton	Republican	Ohio	1889-1909	Successfully ran for the Senate in 1908
John W. Weeks	Republican	Massachusetts	1905-1913	Had significant banking experience after co-founding a Boston financial firm
Robert W. Bonyng	Republican	Colorado	1904-1909	Failed to be re-elected in 1908
Sylvester C. Smith	Republican	California	1905-1913	*Resigned
Lemuel P. Padgett	Democrat	Tennessee	1901-1922	
George F. Burgess	Democrat	Texas	1901-1917	
Arsene P. Pujo	Democrat	Louisiana	1903-1913	Appointed chairman of the Committee on Banking and Currency in 1911

*indicates that the congressman was no longer on the NMC by the time its final report was published in 1912.

²³³ "Bailey Quits Money Board," *The New York Times*, August 11, 1911.

Figure 2. Political Cartoon Depicting Westerners' Conception of Aldrich²³⁴



²³⁴ "Agreeably Dumbfounded," *The Evening Star*, Washington D.C., Nov. 9, 1909. From Nathaniel Stephenson's "Biographer's Notes," Aldrich Papers, reel 61.

Bibliography

Primary Sources/Collections

- Aldrich, Nelson W. "Address Before the Economic Club of New York." Washington, DC: Government Printing Office, 1910.
- Aldrich, Nelson W. *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*. Washington, DC: Government Printing Office, 1910.
- "All Records Broken in the Making of Money," *NY Times*, November 24, 1907.
- "An Act to Amend the National Banking Laws," HR 21871, May 30, 1908.
- "A Bill to Establish a Credit Currency," H. R. 21764, May 4, 1908.
- Andrew, Piatt A. *Tabular Summary of the Laws Practices, and Statistics of the Principal Banks of the Leading Countries*. Washington, DC: Government Printing Office, 1910.
- Andrew, Abram Piatt. *Diary of Abram Piatt Andrew, 1902-1914*. Harvard University Archives.
- Andrew, Abram Piatt. "The Currency Legislation of 1908." *The Quarterly Journal of Economics*. 22, no. 4 (1908): 666-676.
- "Bailey Quits Money Board." *The New York Times*, August 11, 1911.
- Bartholdt, Richard. "Speech of Hon. Richard Bartholdt of Missouri, in the House of Representatives," Tuesday, May 26, 1908. From *Appendix to the Congressional Record, May 30, 1908*.
- "Currency Experts Meet." *The New York Times*, July 21, 1908.
- "Currency Men Plan Work." *The New York Times*, July 22, 1908.
- "Federal Reserve Act." Public Law 63-43, H.R. 7837, Dec. 23, 1913.
- "Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy." Washington: Government Printing Office, 1910.
- Lieder, Frederick W.C., trans. *The Reichsbank, 1876-1900*. Washington, DC: Government Printing Office, 1910.
- "List of Conferences in London, Paris, and Berlin, Held By Representatives of the National Monetary Commission and of Papers and Statistics to Be Prepared for the Commission." Washington, DC: Government Printing Office, 1908.
- Mitchell, Wesley C. "The Publications of the National Monetary Commission." *The Quarterly Journal of Economics*, 25, no. 3 (May 1911): 563-593.
- "Money Commission Meets: Holds Secret Session in Capitol and Hears Reports of Subcommittee." *The New York Time*. November 23, 1908
- Nelson W. Aldrich Papers*. Library of Congress.
- Publications of the National Monetary Commission*, available through FRASER.
- Reisser, J. *The German Great Banks and Their Concentration in Connection With the Economic Development of Germany*. Washington, DC: Government Printing Office, 1908.
- Report of the National Monetary Commission*. Washington, DC: Government Printing Office, 1912.
- "Senator Aldrich Tells of His Trip." *The New York Times*. November 19, 1908.
- "The National City Company." *The New York Times*. November 4, 1911.
- "To Study Banking Abroad." *The New York Times*, July 25, 1908.
- Vidal, E. *History and Methods of the Paris Bourse*. Washington, DC: Government Printing Office, 1910.

- Von Philloppovich, Eugen. *History of the Bank of England and Its Financial Services to the State*. Washington, DC: Government Printing Office, 1911.
- Warburg, Paul M. *The Discount System in Europe*. Washington, DC: Government Printing Office, 1910.
- Warburg, Paul M. *The Federal Reserve System: Its Origins and Growth, Vol. 1 and 2*. New York, MacMillan, 1930.
- Warburg, Paul M. *Papers of Paul Moritz Warburg*. Yale University Library.
- Willis, Henry Parker. *The Federal Reserve System: Legislation, Organization, and Operation*. New York: Ronald Press, 1923.
- Withers, Hartley, and R.H. Inglis Palgrave. *The English Banking System*. Washington, DC, Government Printing Office, 1910.

Secondary Sources

- Andrews, Edmund L. "Panel Votes to Broaden Oversight of the Fed." *NY Times*, Nov. 19, 2009.
- Bernanke, Ben. "'Audit the Fed' Is Not About Auditing the Fed." Brookings Institute, January 2016.
- Broz, Lawrence J. *The International Origins of the Federal Reserve System*. Ithaca, NY: Cornell University Press, 1997.
- Bruner, Robert F. and Sean D. Carr. *The Panic of 1907: Lessons Learned from the Market's Perfect Storm*. Hoboken, NJ: John Wiley, 2007.
- Conti-Brown, Peter. *The Power and Independence of the Federal Reserve*. Princeton: Princeton UP, 2016.
- Dewald, William G. "The National Monetary Commission, A Look Back." *Journal of Money, Credit and Banking* 4 (1972): 930-956.
- Friedman, Milton, and Anna Jacobson Schwartz. *A Monetary History of the United States: 1867-1960*. Princeton: Princeton UP, 1971.
- Gordon, Robert J. *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War*. Princeton: Princeton UP, 2016.
- Griffin, G. Edward. *The Creature from Jekyll Island: A Second Look at the Federal Reserve*. Westlake Village, Calif.: American Media, 1998.
- Helderman, Leonard C. *National and State Banks: A Study of Their Origins*. New York: Houghton Mifflin Company, 1931.
- Hoffman, Charles. *The Depression of the Nineties: An Economic History*. Westport, Conn.: Greenwood Publishing Corporation, 1970.
- Kiley, Michael T. and John M. Roberts. "Monetary Policy in a Low Interest Rate World." Brookings Institute, March 2017.
- Kloppenber, James T. *Uncertain Victory: Social Democracy and Progressivism in European and American Thought, 1870-1920*. New York: Oxford UP, 1986.
- Lears, T. J. Jackson. *Rebirth of a Nation: The Making of Modern America, 1877-1920*. New York: HarperCollins, 2009.
- Leonard, Thomas C. *Illiberal Reformers: Race, Eugenics, and American Economics in the Progressive Era*. Princeton: Princeton UP, 2016.
- Livingston, James. *Origins of the Federal Reserve System: Money Class, and Corporate Capitalism, 1890-1913*. Ithaca, NY: Cornell UP, 1986.

- Lowenstein, Roger. *America's Bank: The Epic Struggle to Create the Federal Reserve*. New York: Penguin, 2015.
- Meltzer, Allan H. *A History of the Federal Reserve*. Chicago, IL: U of Chicago, 2009.
- McCulley, Richard T. *Banks and Politics During the Progressive Era. The Origins of the Federal Reserve System*. Ithaca, NY: Cornell UP, 1992.
- Moore, Carl H. *The Federal Reserve System: A History of the First 75 Years*. Jefferson, NC: McFarland, 1990.
- Mullins, Eustace. *The Secrets of the Federal Reserve*. Bridger House Publishers, 2009.
- “Paul M. Warburg,” Board of Governors of the Federal Reserve System, federalreservehistory.org.
- Redlich, Fritz. *The Molding of American Banking*. New York: Hafner, 1947.
- Rockoff, Hugh. “O.M.W. Sprague: The Man Who ‘Wrote the Book’ on Financial Crises.” National Bureau of Economic Research, December 2013.
- Rodgers, Daniel T. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge, MA: Harvard UP, 2000.
- Rothbard, Murray M. *A History of Money and Banking in the United States: The Colonial Era to World War II*.
- Schroeder, Peter. “‘Audit the Fed’ Bill Gets New Push Under Trump.” *The Hill*, Jan. 4, 2017.
- Selgin, George. “New York’s Bank: The National Monetary Commission and the Founding of the Fed.” *Cato Institute Policy Analysis* 793 (2016).
- Stephenson, Nathaniel. *Nelson Aldrich, A Leader in American Politics*. New York: Charles Scribner, 1930).
- Sternstein, Jerome L. *Nelson Aldrich: The Making of the General Manager of the United States*. Providence, RI: Brown UP, 1968.
- “The 1907 Crisis in Historical Perspective.” Center for History and Economics, Harvard University. 2010.
- “The John Weeks Story: A Chapter in the History of American Forestry.” U.S. Department of Agriculture, 1961.
- Timberlake, Richard H. *The Origins of Central Banking in the United States*. Cambridge, MA: Harvard UP, 1978.
- Wells, Donald R. *The Federal Reserve System: A History*. Jefferson, NC: McFarland, 2004.
- West, Robert Craig. *Banking Reform and the Federal Reserve, 1863-1923*. Ithaca, NY: Cornell UP, 1977.
- Wicker, Elmus. *The Great Debate: Banking Reform, Nelson Aldrich, and the Origins of the Fed*. Columbus, OH: Ohio State UP, 2005.
- Wood, John H. *A History of Central Banking in Great Britain and the United States*. Cambridge, UK: Cambridge UP, 2005.