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PAST MEETS PRESENT IN POLICYMAKING: THE FEDERAL RESEVE ACT AND THE US MONEYMARKET, 1913 - 1929

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Foreword

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Abstract

This paper contributes to our understanding of how the past is invoked when grappling with the present in the realm of economic policy. To this end, it focuses on the systemic financial reform embodied in the Federal Reserve Act of 1913 that was supposed to transform the money market, and its relationship to the banking system, in the United States. Drawing on a rich body of archival evidence, it explores the historical narratives on which reformers relied in framing policy reform, the design and implementation of policies to achieve reform, and the results of these policies. It argues that the past was remembered and ignored in ways that were crucial in arguing for the necessity and possibility of radical financial reform. It shows that prominent Federal Reserve officials were strongly committed to the pursuit of reform but became increasingly disillusioned in the face of mounting evidence of policy failure. It claims that the way historical experience was invoked and ignored, as well as the attention it was accorded relative to present experience, limited policymakers' understanding of the structural constraints they faced in promoting the US acceptance market. And it shows that their growing frustration in the face of these dimly perceived constraints drove policymakers to look beyond the United States in an increasingly desperate effort to promote the US acceptance market.

Introduction

During the recent economic crisis, the lessons of history were broadly invoked to inform policy prescriptions in the present. That policymakers look to the past in making economic policy for the present has been seen as a cause for celebration by some economic historians. At the same time, the multiple ways in which the past has been invoked make it clear, as Barry Eichengreen notes, "that historical narratives are contested, that policymakers may invoke quite different interpretations of the same historical events".[1] Some economic historians have responded by trying to distinguish between "good" and "bad" historical analogies that policymakers draw on to justify their policies. However, since there is always room for contestation about the "lessons of history", it seems important that historians pay explicit attention, as Eichengreen suggests, to the ways in which policymakers make sense of the past and invoke it in making policy.[2]

To take up his challenge, economic historians have to venture in new directions since, as Per Hansen notes, "the question of memory and forgetting has never been at the top of the research agenda" of economic history.[3] Economic historians are typically interested in evaluating the effectiveness of economic policies rather than studying the process that generates them. As a result, there is little existing research in economic history on which we can draw for insights on the uses of the past in economic policymaking.[4]

Recent efforts to open the black box of economic policymaking have come largely from outside the field of economic history. Of particular interest in this regard are studies of the process of monetary policymaking from sociology and political science.[5] Notwithstanding the different methodologies they employ, these studies show that rich archival sources can be mobilised to offer insights on the dynamics of economic policymaking. As yet, as Hansen notes, only a few scholars “are explicitly

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[1] Barry Eichengreen, "Economic History and Economic Policy", *Journal of Economic History*, 72(2), (2012) : 304.

[2] Barry Eichengreen, 2015, *Hall of Mirrors: The Great Depression, the Great Recession, and the Uses – and Misuses – of History*, Oxford & New York: Oxford University Press, 2015: 377.

[3] Per Hansen, “Hall of Mirrors: The Great Depression, the Great Recession, and the Uses—and Misuses—of History”, *Business History Review*, 89, no. 3 (2015), 557.

[4] That explains why the examples that Eichengreen invokes, other than the Great Recession and Depression, come from the realm of political rather than economic history.

[5] Mitch Abolafia, “Narrative Construction as Sensemaking: How a Central Bank Thinks”, *Organization Studies*, 31, no. 3 (2010): 349-367; Andrew Bailey and Cheryl Schonhardt-Bailey, “Does Deliberation Matter in FOMC Monetary Policymaking? The Volcker Revolution of 1979”, *Political Analysis*, 16, no. 4 (2008): 404-427; Schonhardt-Bailey, *Deliberating American Monetary Policy: A Textual Analysis* Cambridge, MA: MIT Press, (2013).

discussing the role of historical narratives" but he suggests there is nothing to stop their methods being used for that purpose.[6]

Still, even if these studies offer inspiration for the historical study of economic policymaking, there are limits to such research as a model for economic historians. Abolafia, as well as Bailey and Schonhardt-Bailey, are primarily concerned with analysing the process through which policymakers construct narratives about the economy; in contrast, they pay little attention to the design and implementation or impact of policies based on these narratives. For economic historians, however, it makes sense to deal with policymaking in a more comprehensive way by studying the framing of policy reform, the design and implementation of specific policies, as well as their results. I adopt such an approach here in analysing the programme for systemic financial reform embodied in the Federal Reserve Act of 1913.

Most scholars understand the significance of the Federal Reserve Act (FRA) in terms of its implications for monetary reform, notably the creation of the Federal Reserve System in a country traditionally hostile to the notion of central banking. Less widely appreciated is the fact that the FRA envisaged a profound structural reform of the country's financial system to displace New York's call market for stock exchange loans with a new "acceptance" or "discount" market as the backbone of the country's money market. The architects of the Act conceived of the challenges of monetary and financial reform as inextricably intertwined, deeming a central bank to be necessary to the development of an acceptance market and such a market as essential to the central bank's control of credit conditions.

It is worth emphasising the radical character of the reform of the US money market that was envisaged in the FRA. A characteristic feature of the US national banking system was the concentration of bankers' balances in New York banks, which created a need for a liquid market in which these balances could be placed. In contrast to the United Kingdom and continental European countries, the United States did not have a discount market that could serve that purpose prior to the passage of the FRA. The bankers' acceptances that were the backbone of European discount markets were little used in the United States and, indeed, most banks did not even have legal authorisation to accept bills.[7] Thus, as their bankers' balances accumulated, New York banks looked to the call market, where money was lent and borrowed on securities as collateral. Demand loans, secured by stocks an bonds, were by no means unique to the United States but their importance for the country's money market and its banking system was highly distinctive from a comparative perspective.[8]

In envisaging a shift in the centre of gravity of the country's money market from the long-established New York call market to a newly-created acceptance market, the FRA was advocating a programme of

[6] Per Hansen, "Business History: A Cultural and Narrative Approach", *Business History Review*, 86, no. 4 (2012), 696. Indeed, Hansen's own research on central banking in the 1930s suggests rich possibilities for exploring the interaction between economic history and economic policy based on archival sources ("Sensemaking and Financial Crises: Central Banks and the Austrian Crisis of 1931", mimeo, 2018).
[7] Trade acceptances were widely used in the antebellum period but their importance declined even before, and especially after, the Civil War.
[8] Mary O'Sullivan, *Dividends of Development: Securities Markets in the History of US Capitalism, 1866-1922*, Oxford University Press, 2016, chapter 1.

radical institutional change. Bold experiments with respect to financial institutions can be found in the annals of economic history but, precisely because they are bold, there seems no reason to assume they will be successful. Indeed, in a recent article, Janet Hunter argues that the canonical case of success -- the radical financial reform undertaken in Meiji Japan -- may well be exaggerated.[9] Certainly, it seems important to carefully study these policy experiments in radical reform to understand how they came about, the way they were implemented, and the impact they had.

Certainly, there is scope for a new study of the framing, the design and implementation, and the results of the systemic financial reform embodied in the FRA. Economic historians are certainly aware that the past, notably the United States' history of recurrent financial and monetary crises, was an important backdrop to the debates that led to the passage of the FRA. However, even if some prominent monetary historians have hinted that the financial reform envisaged by the Act never made sense, there has been no systematic analysis of how it was framed.[10] There has been limited attention too to the specific policies designed and implemented in pursuit of financial reform even if there is an earlier literature that blames the policies adopted by the Federal Reserve Bank of New York for the disappointing results of reform.[11]

To the extent that economic historians have studied the financial reform envisaged by the FRA, they have focussed on whether it was successful or not. Recent studies in international financial history are noteworthy in this regard since they conclude that reform was a success, albeit a qualified one for some authors given the market's continued dependence on support from the Federal Reserve Bank of New York.[12] However, such assessments have been made from the perspective of international trade finance, notably New York's ability to rival London in this domain. In fact, reformers' main priority was the structure of the domestic US money market and, even if economic historians have not explored financial reform from this perspective, the aforementioned contemporary studies suggest that doing so might generate a more negative assessment,

The limited scope of existing research, as well as the dissonant conclusions from the few studies that do exist, suggest the need to reopen the black box of the radical financial reform envisaged by the Federal Reserve Act. In this paper, therefore, I draw on a rich body of evidence from the Federal

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[9] Hunter, Janet, *Institutional change in Meiji Japan: image and reality* in Blomstrom, Magnus and Croix, Sumner La, (eds.) *Institutional Change in Japan. European Institute of Japanese Studies, East Asian economics and business*. Routledge, 2006, 45-70.

[10] Milton Friedman & Anna Schwartz, *A Monetary History of the United States, 1867-1960*, Princeton, NJ, 1963; Allan Meltzer, *A History of the Federal Reserve*, Vol. 1, 2003, 736.

[11] Willis, H. Parker, 'The Federal Reserve System: A Retrospect of Eight Years', *Political Science Quarterly* 37 (1922): 576-7; Benjamin Haggott Beckhart, "The Acceptance Market", part 3 of Beckhart, *The New York Money Market: Uses of Funds,* volume 3, Columbia University Press, 1932; Homer P. Balabanis, *The American Discount Market*, New York: Arno Press, 1980 (1935).

[12] J. Peter Ferderer, "Institutional Innovation and the Creation of Liquid Financial Markets: The Case of Bankers' Acceptances", *Journal of Economic History*, 63, 2003, 692; J. Lawrence Broz also notes that "the New York discount market attained worldwide status" in the 1920s in *The International Origins of the Federal Reserve System* (Ithaca, New York, 1997), 260; for an assessment of qualified success, Barry Eichengreen and Marc Flandreau "The Federal Reserve, the Bank of England, and the Rise of the Dollar as an International Currency, 1914-1939", 2010, 18, 9, 20.

Reserve Bank of New York archives and the personal papers of key protagonists in the reform effort to explore the historical narratives on which reformers relied in framing policy reform, the design of economic policies to achieve reform, and the results of implementing these policies. In Section 1, I argue that the past was remembered and ignored in ways that proved decisive in making a case for the necessity and possibility of radical financial reform. In Section 2, I study the design and implementation of policies by prominent Fed officials, especially in the FRBNY, and show that they were strongly committed to the pursuit of financial reform but became increasingly disillusioned in the 1920s in the face of mounting evidence of policy failure. In Section 3, I claim that the way historical experience was invoked and ignored, as well as the attention it was accorded relative to present experience, prevented policymakers from comprehending the structural constraints on the development of US acceptances that limited the success of their policies. And in Section 4 I show that their increased frustration in the face of policy failure, as I show in Section 4, with the ineffectiveness of their policies drove them to desperate efforts to support the development of the US acceptance market.

1. Uses of the Past in Framing Financial Reform

Debates about banking and currency reform were recurring items on the political agenda in the United States given the country's history of repeated financial crises. However, it was the panic of 1907 that gave rise to the most far-reaching debate on banking and currency reform since the Civil War and it culminated in the passage of the FRA in late 1913. Not only was the panic a catalyst for reform but the details of the crisis played a crucial role in determining how reform was framed. The panic of 1907 exposed the tight link that the New York's huge market for call loans created between the country's securities markets and the stability of its banking system and subjected it to harsh criticism from across the political spectrum.[13]

Prior to the panic of 1907, there had been limited attention to the call market's role in the US money market in discussions of monetary reform. Instead, Americans were preoccupied with their inelastic currency as the root of their banking and monetary crises and they focussed on currency reform as the solution to their ills.[14] That is quite clear, for example, if we look at the report of the Indianapolis Monetary Commission in 1897, which was chaired by prominent monetary economist, J. Laurence Laughlin. It devoted considerable attention to the history of the US monetary and banking system, and the crises that marked its existence, and presented that history in a way that pointed clearly to the commission's interpretation of "the defects of the system". These defects were located, the report suggested, in "the failure to provide the means for a gradual and sufficient increase of the volume of the currency" to meet the needs of the growing US economy.[15] Its proposed solution -- a so-called "asset-backed" route to creating greater elasticity for the currency – followed directly from its diagnosis.

[13] Ellis Tallman and Jon Moen, "The Transmission of the Financial Crisis in 1907: An Empirical Investigation", Federal Reserve Bank of Cleveland Working Paper, 14-09 (2014).
[14] Harold Kellock, 'Warburg, The Revolutionist', *The Century Magazine*, May 1915.
[15] See, for example, Report of the Monetary Commission to the Executive Committee of the Indianapolis Monetary Convention, Indianapolis, 1897, 197-223 and 346-351. For the defects of the system, see 28-9.

The report did make some reference to the money market and call loans but they were far from the centre of its historical analysis. Ten years later, in a note published in April 1907 in the *Journal of Political Economy (JPE)*, Laughlin acknowledged the dangers that instability in the money market might create for financial stability. Even then, however, he argued that such dangers could not be solved through monetary reform, which he still understood as currency reform. The root of the instability observed in the money market, he suggested, was banks' willingness to extend loans to stock market operators on the basis of questionable collateral; the cure, though "drastic", had been to call these loans. A sanguine Laughlin concluded his note by saying that "[t]he emetic has been given; and the patient has been purged, much to his advantage".[16]

A few months later, with the onset of the panic of 1907, it became clear that the patient had not been purged. By December 1907, Laughlin had changed his tune, arguing in the *JPE* that "[t]he inelasticity of our forms of money is by this time a trite subject" and that it was "the conditions of the money market" that "has brought new interest in measures of reform". He emphasised that there were good reasons for proposed currency reforms but that they were not "a real cure for the evils of such a financial crisis as the present one". That problem, he suggested, needed to be directly confronted by monetary reform through the establishment of "some institution wholly free from politics, or outside influence" that would "be competent to do for the United States what in effect the governor and directors of the Bank of England do for the English money market".[17]

Laughlin refined his arguments in the ensuing years as he again assumed a prominent role in debates on monetary and financial reform. By 1912, it was clear that he had reinterpreted U.S. history to underline the necessity of radical financial reform. In "Banking Reform", Laughlin cast "the weakness of the banking and monetary system of the United States" as a persistent historical problem that meant that "[w]hen it is subject to serious strain beyond the ordinary, as was abundantly shown in the recent panics of 1893 and 1907, it collapses feebly to the injury of all classes of society". He acknowledged that: "[i]n the past, the doctors have disagreed as to the treatment largely because of a disagreement as to the causes at work" but that "the doctors have now come to agree with reasonable certainty that the cause of the trouble is to be found in the organization and control of credit rather than in the issue of notes for circulation in the hands of the public".[18]

Thus, the challenge of reform, as Laughlin saw it in 1912, was no longer currency reform but financial reform. He conceived of that reform as a means for the United States to escape the legacy of its own financial history. Yet, he also looked to history -- the historical experience of Europe rather than that of the United States -- as a source of inspiration for the direction of reform: "[w]e have come to the point where we are willing to learn from seasoned European experience. Although European conditions differ so much from ours that their institutions cannot be boldly transferred to our country, we have much to learn from them". Laughlin did not believe that the United States should follow the European lead in establishing a central bank. Instead, he insisted, the lesson to be learned from Europe's

[16] J. Laurence Laughlin, "Elastic Currency and the Money Market", *Journal of Political Economy*, 15:4, Apr., 1907, 229-231.
[17] Idem., "Currency Reform", *Journal of Political Economy*, 15: 10, Dec., 1907, 603-610.
[18] Banking Reform, n.d., Columbia University, J. Laurence Laughlin papers, Box 5, n.d.

historical experience was that: “[i]n this country we are behind Europe in not having a proper discount market for prime commercial paper”.[19]

Given Laughlin’s prominence in debates on monetary and financial reform, both before and after the panic of 1907, his changing views are a useful barometer of a broader shift in the framing of these debates. Indeed, even before the panic of 1907 broke, more prescient analysts than Laughlin were sounding alarm bells about the call market as a potential source of financial instability. Writing in the *JPE* in 1906, Anna Youngman emphasised the fragility of the US system of “financial banking”, pointing out that call loans were “easily collectible” when “the speculator to whom the loan has been granted can obtain accommodation elsewhere” but asking “what will be the result of an attempt on the part of all the banks to liquidate, as in times of crisis?”[20] Even more explicit was an article by prominent Wall Street banker, Paul Warburg, in the *New York Times* in January 1907, in which he argued that the New York call market, in tying the liquidity of the nation’s banking system to volatile conditions on the nation’s securities markets, was a major threat to systemic financial stability.[21]

Warburg’s assessment was based on an explicit comparison of the historical development of the US banking system with its European counterparts and his conclusion was less than flattering: “The United States is in fact at about the same point that had been reached by Europe at the time of the Medicis, and by Asia, in all likelihood, at the time of Hammurabi”.[22] He emphasised that the historical development of European financial systems had fostered the emergence of discount markets, based on bills of exchange endorsed by banks or “acceptances”, as the centrepiece of European money markets. In the United States, in contrast, no bill or discount market had emerged with the result that the US banking system’s liquid resources were placed in the call market and, as a result, "[o]ur whole elasticity is built up on the bond and stock market". For Warburg, therefore, the challenge of reform was to overcome the legacy of US financial history by adopting the banking practices that had emerged in European financial history:

> Reason, as well as the experience of all other nations, tells us that we in the United States should attempt to reorganize our present system of issuing and handling commercial bills, in order to create the basis necessary for a modern system of currency and finance. Not only, however, should we endeavour to make such bills the medium of equalizing the daily demand for and supply of money, but we should also by all means try to break with the other system, which makes call loans on stock exchange collateral serve for this purpose.[23]

Such views may have been aired before the panic of 1907 but they were not given much of a hearing until the years that followed the crisis. We have seen how Laughlin shifted his views, not least through

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[19] ibid. Laughlin insisted instead on a system of banking cooperation based on decentralised reserves for the United States.
[20] Anna Youngman, “The Growth of Financial Banking”, *Journal of Political Economy*, 14, 1906: 435-43.
[21] Warburg, Paul, “Defects and Needs of our Banking System”, *New York Times*, 6 January 1907, AFR14-15. Warburg’s ideas for this article were developed in 1902, revised in late 1906 and published only in January 1907 (Paul M. Warburg, *The Federal Reserve System: Its Origins and Growth*, (New York, 1930), v. 1, 18).
[22] Ibid.
[23] Ibid., 38.

his interactions with Warburg, who played a more general role in shifting the focus of the debate on reform from currency to financial issues. As Seligman explained, Warburg believed that currency reform, "which was the sole objective of all previous schemes was of only minor importance";[24] the real priority, as he saw it, was financial reform to remedy the structural weaknesses of the U.S. banking system. And his singular achievement -- his "revolution", as Harold Kellock described it -- was to broaden debates about banking and currency reform to focus on financial reform as a major priority.[25]

Of particular importance in this regard was Warburg's success in making his vision of reform persuasive to the National Monetary Commission (NMC). It was established in May 1908 under the chairmanship of Senator Nelson Aldrich to draw up plans for federal banking and monetary reform. When Professor A. Piatt Andrew, special assistant to the NMC, invited Warburg to contribute an analysis of Europe's discount system to its series of studies, the banker seized on the opportunity to shape the debate about monetary and banking reform. In his influential pamphlet on *The Discount System in Europe*, the manner in which Warburg invoked historical experience was crucial to his claim that radical financial reform was both necessary and possible for the United States.

Warburg had already laid out what he believed to be the defects of the U.S. financial system, attributing them to the peculiar course that the country's financial history had taken. Thus, in *The Discount System*, he presented the challenge of reform as breaking with the trajectory of US financial history in a process that he likened to the scrapping of obsolete machinery:

> It is inconceivable that the United States, a nation that leads the way in industrial progress and that more than any other nation weeds out old machinery and replaces it by the newest appliances, should be either unable or unwilling to modernize thoroughly its financial system and to discard old-fashioned financial machinery, which other peoples have long since thrown upon the scrap heap.[26]

Of course, Warburg's analogy begged the question of what the "newest appliances" were and in his pamphlet he made the direction of reform clear through his careful and concise explanation of the functioning of the discount system in European countries. Written largely in the present tense, the pamphlet portrayed the functioning of discount systems in Europe in terms of general principles, abstracting from the characteristics of European discount systems that had grown out of their distinctive histories.[27] Indeed, Warburg was quite explicit in this regard, noting that "[w]hile methods differ in the various European countries, the result in all cases is the same, and, as we are chiefly interested in results, it will be preferable not to cloud the question by going into too much detail respecting the various usages, but rather to state the main principles".[28] Only in the closing paragraphs

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[24] E. A. Seligman, "Introduction", *Proceedings of the Academy of Political Science*, 4, (1914).
[25] Harold Kellock, 'Warburg, The Revolutionist', *The Century Magazine*, May 1915.
[26] Warburg, *The Discount System in Europe*, Washington, 1910, 43.
[27] Warburg, *Discount System*, pp. 13-14. Flandreau and Ugolini make this observation not only about Warburg's pamphlet but about the other reports on the English banking system submitted to the National Monetary Commission (Flandreau, M. and Ugolini, S. (2013). 'Where it all began: lending of last resort at the Bank of England during the Overend- Gurney panic of 1866', in M. Bordo and W. Roberds (eds.), *The Origins, History, and Future of the Federal Reserve: A Return to Jekyll Island* (Cambridge: Cambridge University Press), 113– 61.).
[28] Warburg, *Discount System*, 13

of *The Discount System in Europe* did Warburg say "a few words about its historical development" and then he did so only to dispute the widespread belief in the United States: "that the European central bank and discount system have existed for centuries, that this system is the natural development of conditions as they exist in those countries". To the contrary, Warburg claimed, "[t]he discount system has been developed to its present importance only within the last sixty years" and it was achieved as a result of the same kind of "radical changes" which would be necessary "in order to modernize our system".[29]

The manner in which Warburg downplayed the historical trajectories of European discount systems had profound consequences for the way he framed reform. Essentially it allowed him to argue that radical financial reform was not only necessary but also possible in the United States as long as Americans were willing to follow the general principles that made the discount system work so successfully in European countries. He argued that the presence of an active discount market was "insured in nearly every country in the world claiming a modern financial organization, by the existence of some kind of a central bank, ready at all times to rediscount the legitimate paper of the general banks".[30] For the United States, therefore, the path to financial reform was through the establishment of a central bank.

Warburg's vision of monetary and financial reform, as he articulated it in his subsequent plan for a United Reserve Bank, was to find clear expression in the so-called Aldrich plan issued by the National Monetary Commission in 1911 and, specifically, in the rules it laid down for the discounting and purchasing of paper. Even before the plan was issued, however, Warburg was concerned that he role that powerful New York bankers played in drafting it would lead to its political death. Thus, the details of its drafting were kept from the public and, two days after the plan was issued, Warburg launched an initiative to create the National Citizens' League to "educate" the public about the importance of banking and currency reform. The League was established in March 1911, with its headquarters in Chicago to counter suspicion of Wall Street's influence, and J. Laurence Laughlin agreed to lend his considerable academic prestige to the effort in order to promote the cause of monetary and financial reform.

Laughlin favoured a programme that emphasised key principles of reform rather than the Aldrich plan, ostensibly to maintain the League's perceived political neutrality. But, as we have seen, Laughlin was not an enthusiastic advocate of a central bank for the United States and, sure enough, it did not appear as one of the principles of reform that he articulated. In contrast, what is clear from Laughlin's principles is the extent to which he shared Warburg's vision of the necessity and possibility of radical reform of the money market.

Even after Laughlin broke with the League from mid-1912, he remained committed to the importance of building a discount market to break the destabilising link that the call market created between the banking system and the securities markets. That conviction proved to be important as he found a new political channel to influence monetary and banking reform. His former student, Henry Parker Willis,

[29] Ibid., 42.
[30] Ibid., 38.

had been appointed as secretary to Congressman Carter Glass and Laughlin was a crucial interlocutor for Willis as he developed the proposals for monetary and financial reform that were to occupy a central place in the FRA. These proposals included a series of measures that were intended to displace the call market with a discount market as the centrepiece of the US money market and were expressed in rules on discounting and purchasing paper that were remarkably similar to the Warburg-inspired measures in the Aldrich plan.

Of course, it was one thing for Laughlin and Wills to agree on these issues and another to persuade politicians of what might have seemed like arcane details. By 1913, however, they were pushing on an open door insofar as the Democratic party, especially its radical wing, was concerned. The panic of 1907 had been an epiphany for many Democrats on the dangers of the call market for systemic financial stability. William Jennings Bryan roundly attacked the Republican leadership of the country for rushing to the aid of speculators on Wall Street and the "high financiers" in bailing out the call market. And Bryan was not alone in expressing such views, with western and southern congressmen from both parties decrying a system that concentrated financial resources in New York to be dissipated in speculation through placement in the call market. That perception was substantially reinforced by the Money Trust investigation of 1911-1912 given the relentless attention of its counsel, Samuel Untermyer, to the absorption of the nation's financial resources by the call market to finance speculation on Wall Street "when money was needed for crop-moving and other legitimate purposes".[31]

As a result, notwithstanding the lines that divided the increasingly heated debate on banking and monetary reform in 1912 and 1913, reformers of different political stripes agreed that the Federal Reserve Act should oust the "gigantic evil" of the call market from its central role in the nation's financial system.[32] Thus, in opening the Senate debate on the Glass-Owen bill, Robert Owen, a Democrat and country banker from Oklahoma, might well have been Paul Warburg in identifying "one of the great benefits of the pending measure" in the fact that "it will withdraw from the gambling enterprises of the Stock Exchange the bank reserves of the country".[33] The priority for financial reform, as it was embodied in the Federal Reserve Act, was to develop a discount or acceptance market in the United States so that banks no longer needed to rely on the New York call market for the placement of their liquid funds. The bet that reformers like Owen and Warburg made was that the United States could overcome the legacy of its own history through financial reform and that it could learn the lessons of Europe's historical experience without actually living through it.

2. Designing & Implementing Policies for Reform

Of the mechanisms for achieving financial reform that the Federal Reserve Act introduced, changes in banking rules had the most immediate and straightforward impact. First, the Act gave member banks the power to accept time bills of exchange, growing out of the import or export of goods, in order to

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[31] U.S. Congress, House, *Report of the Committee Appointed Pursuant to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit*, 62nd Congress, 3rd Sess., Washington, DC, 1913, 45.
[32] "Clash in Defense of the Money Bill", *New York Times*, 15 October 1913, 8.
[33] "Owen Says Banks Aid Stock Gambling", *New York Times*, 25 November 1913, 7.

promote dollar acceptances for the financing of US foreign trade. Second, the legislation allowed member banks to operate branches and to own banks in foreign countries with a view to facilitating the development of international banking networks that had proven so important to the London discount market. Third, the FRA introduced new reserve rules that reduced the overall level of banking reserves and mandated that they be held in non-interest-bearing balances with Reserve banks. In this way, it was expected that the pyramiding of bankers' balances in central reserve cities, especially in New York banks, would diminish and with it the systemic pressures to place huge amounts of liquid resources in New York's call market.[34]

Besides these rule changes, the Federal Reserve Act created new policy instruments, notably the powers it bestowed on the Federal Reserve banks to discount and purchase paper. These powers were created as instruments of the Fed's monetary policy but they served too as levers of financial reform. Their intended role in financial reform can be seen clearly in the way these powers were formulated in the Federal Reserve Act and, specifically, in the privileged position given to bankers and trade acceptances, relative to call loans, in the exercise of these powers. Thus, Section 13 of the FRA stated that: "[u]pon the indorsement of any of its member banks" any Reserve bank "may discount notes, drafts, and bills of exchange arising out of actual commercial transactions; that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes".[35] At the same time, Section 13 discriminated explicitly against loans on stock exchange collateral, noting that credits eligible for discounting "shall not include notes, drafts, or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities". Insofar as the Reserve banks' purchase of paper in the open market was concerned, the FRA applied similar rules with respect to the eligibility and ineligibility of different types of paper. These constraints on the discounting and purchasing powers of the Reserve banks were supposed to enhance the attractiveness of acceptances, and create the basis of a US discount market tied to the needs of agriculture, industry and commerce. Just as important, they were intended to make call loans less attractive for member banks in order to reduce the importance of the New York call market.

Still, even if the legislation defined the basic principles of discounting and purchasing by the Reserve banks to promote financial reform, it gave no guidelines on the rates at which, or the extent to which, Reserve banks would engage in discounting or open market operations. Thus, it was left to the men appointed to positions of responsibility in the newly established Federal Reserve System to determine how to use their newly acquired powers. And, in designing the policies they would pursue, they had to decide not only how to pursue financial reform but also what importance to accord it relative to monetary objectives.

Some of the most prominent officials in the early Fed – especially Benjamin Strong at the FRBNY and Paul Warburg, vice-governor of the FRB and then president of the Federal Advisory Council – displayed

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[34] U.S. Comptroller of the Currency, *Annual Report*, (Washington D.C., 1915), vol. 1, 3, 20.

[35] To be eligible for discounting privileges, credits had to have a maturity at the time of discount of not more than ninety days although a partial exception was made for "notes, drafts, and bills drawn or issued for agricultural purposes or based on live stock and having a maturity not exceeding six months" (*Federal Reserve Act*, 16). The only credits backed by securities that were eligible for discounting or open market operations were those of the U.S. government although in 1913 they were deemed unlikely to assume any great importance.

an extremely strong commitment to promoting the financial reform envisaged by the FRA. They invoked the enormous challenges facing the US in developing an acceptance business as justification for aggressive policy action by the Fed. As Strong emphasised repeatedly, the US was a laggard in a business in which Britain, with its long-established discount market, represented a formidable incumbent:

> let me described [sic] just what the situation is as I view it in the development of the American credits. The normal volume of bills in England prior to the war was 500,000,000 sterling, of all varieties, the volume of bills in this country today is probably between $200,000,000 and $250,000,000, certainly not over 10% of London's normal volume.[36]

To build a discount market that could rival that of London, Strong insisted that the US had to overcome a whole series of obstacles to generate a sufficient supply of, and demand for, acceptances.

2.1 Cheap Acceptance Credit as Priority

Acceptances are short-term credit instruments that are created when a bill of exchange is endorsed or "accepted" by a bank or other guarantor. An importer in the United States may order raw silk from a Japanese exporter and promise to pay him once the goods arrive three months later. A bill of exchange may suffice as a promise to pay but an acceptance has the advantage of an additional endorsement or guarantee. The supply of acceptances, therefore, is determined by the willingness of banks to endorse bills of exchange and importers' and exporters' interest in using acceptances as a means of payment. An acceptance offers greater security than a bill of exchange so it is easier to sell it for cash, usually at a discount, rather than holding it to maturity. Clearly, the prevailing rate of interest for turning an acceptance into liquid funds influences the appeal of this discounting option. The discount rate, in turn, reflects prevailing conditions on the demand side of the acceptance market and, in particular, the perceived attractiveness of acceptances relative to alternatives for placing liquid funds.

In the decades prior to World War 1, the London discount market functioned at relatively low rates of interest, which stimulated the supply side of the market, but not so low, given alternatives for placing liquid funds, that it could not sustain the demand for acceptances. Thus, the experience of the London discount market showed that it was possible to have a liquid market for acceptances. However, Benjamin Strong insisted that there were many obstacles facing the United States as it tried to replicate Britain's historical experience.

Some of these obstacles were domestic, as he pointed out, since borrowers and banks in the US had little experience of the acceptance as a credit instrument and the country had no "accepting machinery". In addition, Strong saw major challenges at the international level, emphasising that the

[36] Archives of the Federal Reserve Bank of New York, 440, Acceptances, 1917-1926 (hereafter Acc_1), Strong to Treman, January 10, 1917.

paucity of American banks with branches abroad and foreign banks with branches in New York was a major handicap for the development of a dollar acceptance market:[37]

> Foreign banks who buy bills don't know the name of American banks even, they don't have the benefit of prompt mail communication with New York, they don't understand the credit of American trading houses, they don't get quotations regularly of New York discount rates, they don't get reliable and dependable forward rates, quoted to them, they don't even know how to convert foreign currencies into dollars…[38]

In contrast, Strong emphasised: "the English system has the world covered with branches and agencies, and the great banks of the world are to a large extent represented by their own agencies in London" and, he added, "English trade has given them direct mail routes to the remotest parts of the world and we have practically none".[39] He mentioned further obstacles too, compiling a veritable laundry list of structural disadvantages that reform needed to overcome but, even then, adding that: "[t]hese are not all the obstacles to be overcome in establishing dollar exchange in the different parts of the world".[40]

Given such formidable hurdles, Strong was adamant that the Federal Reserve System had to aggressively promote a US acceptance market by manipulating the discount rate to influence acceptance rates in the market. Still, the question remained as to where that policy should be targeted given, as Strong acknowledged to banker, James Brown, that there was a potential conflict between stimulating the supply of, and demand for, acceptances. Insofar as supply was concerned, "[t]he first object is to create a volume of bills drawn on New York, Boston and Philadelphia, not only dollar volume but volume in names and numbers of acceptors. This demands development of accepting machinery. We have credit to sell; if we keep the price of that credit low enough other money centers cannot compete with us". However, "somewhat conflicting with it" was the challenge of stimulating demand, "to increase the number of buyers" since what they wanted was higher rather than lower acceptance rates.[41]

Faced with this inherent conflict, Strong was sure that priority should be given to stimulating the supply of acceptances since "with 30,000 incorporated banks, some private banks, and other potential buyers, the demand side will develop if the supply is encouraged. To that end, FRBNY officials took the lead in applying low rates in the rediscounting of acceptances "to make our rate, and keep it, so much below the London rate that institutions the world over are forced even against their will to open New York credits".[42] Indeed, Strong wanted rates to be so low: "that the pressure

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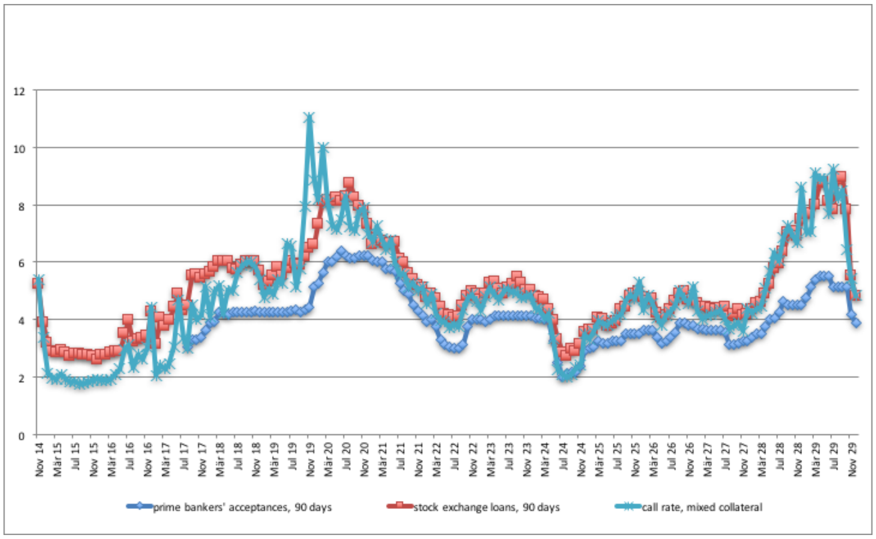
[37] Acc_1, Strong to Treman, January 11, 1917.
[38] ibid.
[39] ibid.
[40] ibid.
[41] Cited in Lester Chandler, *Benjamin Strong, Central Banker*, Washington, D.C., 1958, 91. James Brown was a partner in private bank, Brown Brothers and Company.
[42] Acc_1, Strong to Treman, January 10, 1917. When the Federal Reserve System opened for business, discount rates were relatively high at 5.75 per cent but, as soon as conditions in the money market stabilised, rates were brought down to 3.75 per cent by mid-1915 and stayed at that level until September 1917. And, as Figure 1 shows, that brought them far below rates in London as Strong intended.

on drawers of bills becomes irresistible" and insisted that "it is practically our only leverage".[43] As far as demand was concerned, Strong believed that: "[o]ur first problem is to develop volume of bills, and you may be sure that the market for good bills will take care of itself. It will develop almost overnight with astonishing rapidity whenever rates for that class of paper are permitted to advance".[44]

Figure 1 Interest Rates on the US Money Market



Source: author's analysis based on data on NBER Macrohistory: XIII. Interest Rates, http://www.nber.org/databases/macrohistory/contents/chapter13.html

Notwithstanding Strong's confidence, his policy was initially slow to have its intended effect of stimulating the supply of US acceptances. Even with low discount rates, very few member banks came to the FRBNY, or any other reserve bank, with acceptances to be rediscounted. Thus, the volume of rediscounting remained at low levels prior to US entry into the First World War in April 1917. That created a policy dilemma for the Reserve banks: they could only rediscount if member banks came to them but these banks showed little interest in using their new accepting powers. The dilemma was resolved by an increased reliance on open market operations, which gave the reserve banks the latitude to seek out and buy acceptances not only from member banks but from private banks and trust companies too.[45]

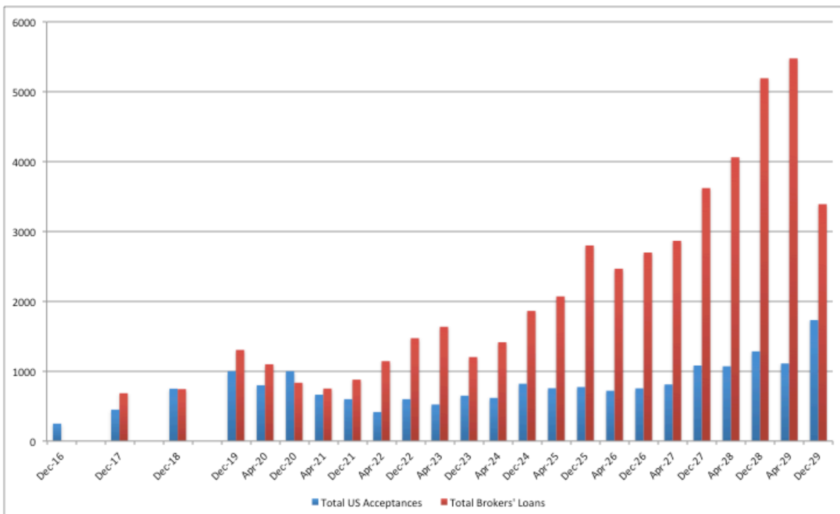
[43] Acc_1, Strong to Treman, January 11, 1917 ; see also Archives of the Federal Reserve Bank of New York, Benjamin Strong Papers, (hereafter BSP), Strong to FRB, January 11, 1917.
[44] Acc_1, Strong to Treman, January 11, 1917.

[45] Acc_1, Strong to E. W. Kenzel, June 8, 1917. Open market operations were initiated in February 1915 and were initially conducted in small amounts but there was a dramatic increase in their volume in 1916. By the end of that year, purchases of acceptances by the Reserve banks were more than three times the volume of bills they discounted.

By early 1917, Strong believed that the FRBNY's reliance on open market operations was starting to bear fruit, pointing to the growth in US acceptances outstanding, shown in Figure 2, as evidence of the policy's success. Moreover, Strong was convinced that he had been right in assuming that demand for acceptances would be forthcoming. He wrote to Paul Warburg to say:

> The experience of the last month or two has, I believe, demonstrated beyond question the accuracy of the statement I made to you some time ago – that there would never be any difficult in developing a nation-wide market for bills and at very acceptable rates, whenever the Reserve Banks withdrew; they are being purchased by banks all over the United States.[46]

Figure 2 Size of the US Acceptance Market, millions of 1926 US dollars



Far from suggesting any easing of this policy, however, Strong called for still lower Federal Reserve buying rates. As he told Warburg: "I think we should advertise our rates as being the lowest in the world, as being the steadiest in the world, and make the New York market so attractive that the business will come willy-nilly".[47] To that end, he advocated "a little stronger policy in both buying bills and holding the rate a trifle below 3 per cent, if possible", explaining that "I really think we are making a mistake in maintaining rates quite as high as they are".[48]

2.2 The Problem with Acceptance Demand

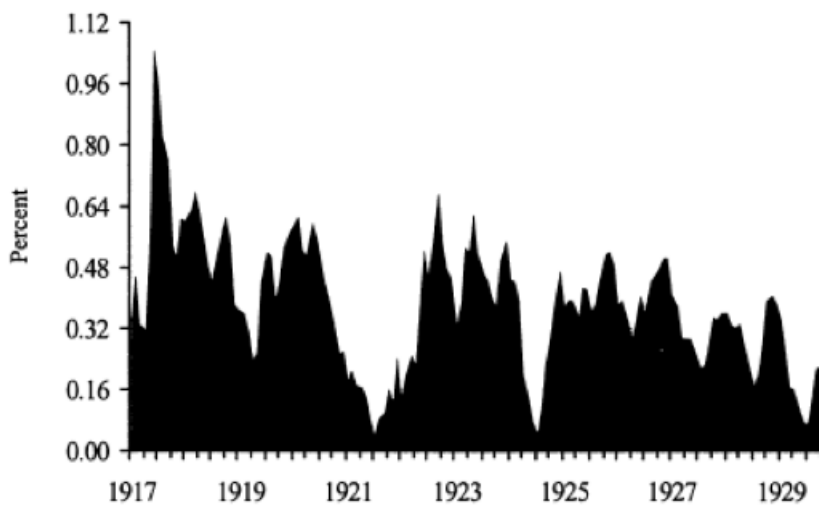
Yet, even as Strong dug in his heels on policy design, some observers complained that low Federal Reserve buying rates for acceptances were undermining the demand side of the acceptance market. Such criticism had been mitigated by the unusual conditions that prevailed in the U.S. money market

[46] Acc_1, Strong to Warburg, March 19, 1917.
[47] Ibid.
[48] Ibid.

immediately after the establishment of the Federal Reserve System but, as call loans began to earn higher rates of interest, there was growing concern that the FRBNY was driving private investors away from the acceptance market by driving down rates there. As a result, the vast majority of acceptances was purchased by the FRBNY itself, something Strong himself acknowledged when he noted that "we are practically the only buyers in the market".[49] Still, he rebuffed calls for higher acceptance rates, arguing that the Fed should remain focussed on its long-term strategic initiatives with respect to the money market.[50]

Promoting the development of the US acceptance market became more challenging still following US entry into the war in April 1917. By the summer of 1917, rates in the call market rose to high levels, creating anxiety about the competition it represented for the US acceptance market. Temporary relief came on September 5, 1917 when the US government created the "Money Committee", chaired by Strong himself, to ensure the successful flotation of government loans to finance the war effort. In capping call rates at 6 per cent, the Money Committee offered some relief for the acceptance market too, but it was still Reserve banks' buying efforts that sustained demand there, absorbing the vast majority of outstanding acceptances as Figure 3 shows.

Figure 3 Federal Reserve Holdings of Acceptances, % of total outstanding



Source: Ferderer, 2003, Figure 3b, 679.

By early 1918, therefore, the prospects of the US acceptance market seemed far from assured. In a detailed memorandum sent to the FRBNY, the discount houses acknowledged that "(c)onsiderable progress has been made" but they pointed to significant limitations on the supply and demand side of the market. Notwithstanding the FRBNY's policy of cheap acceptance credit, they pointed out that

49 Acc_1, Strong to Treman, January 11, 1917.

50 See several letters between Treman and Strong (BSP, Files 373414, 373415, 373416).

"[t]he market lacks a steady supply of bills of diversified names and maturities". [51] Worse still, the discount brokers explained: "[t]he market lacks a steady demand from the largest purchasers of bills, that is banks, trust companies and other banking institutions".[52] After the war, the FRBNY faced increasingly virulent criticisms of its efforts to promote the US acceptance market. They focussed not on the principle of financial reform but on the specific policies that the FRBNY was pursuing to promote it. Its policy of cheap acceptance credit, in particular, came under repeated attack inside and outside the Federal Reserve System.

As demand for acceptances continued to languish, the claim that it was being undermined by the FRBNY's policy of cheap acceptance credit gained force. That the FRBNY itself was well aware that there was a serious problem with acceptance demand is clear from an internal memorandum in early 1919 that acknowledged it represented an obstacle to "the development of a broad and open discount market" and admitted that "practically none of our members was purchasing this form of paper". It called for "an active campaign to bring to the attention of our member banks the value to them of bankers acceptances as a safe, liquid and profitable investment for their surplus funds, and to offer our services in seeking purchases of bills for their account".[53] In addition to its own initiatives to stimulate demand for acceptances, the FRBNY "cooperated closely with the American Acceptance Council (AAC) in its extensive program to educate bankers and other investors in general on this subject". In early 1919, Paul Warburg made the AAC the vehicle for his long-standing campaign to promote the development of the US acceptance market, after President Wilson failed to renew his mandate as vice governor of the FRB.[54]

Notwithstanding the FRBNY's willingness to promote educational campaigns for bankers, it refused to contemplate any change in its policy of cheap acceptance credit to redress the problem of demand for acceptances.[55] That stance became more controversial, however, as changing conditions in the US money market further undermined demand for US acceptances. The war's end sapped the call market of its energy but, from the summer of 1919, a speculative boom on Wall Street prompted a sharp increase in rates and a huge influx of money to be lent on call. As call rates increased to 200 basis points above acceptance rates, the FRBNY's policy of cheap acceptance credit for promoting the US discount market became much more controversial. In a letter to the FRBNY on November 20th, 1919, the discount houses insisted: "the time has come when there should be some relief from the artificial conditions which the Federal Reserve System has placed around the discount market".[56]

The discount houses' criticism represented a frontal challenge to the FRBNY's strategy for promoting the development of the discount market through cheap acceptance credit. And it was echoed

[51] Acc_1, Discount houses to FRBNY, March 19, 1918.
[52] ibid.

[53] Acc_1, Memorandum from Mr. Jay to R. M. O'Hara, November 30, 1920.
[54] The AAC succeeded an older organisation, the American Trade Acceptance Council, established in 1917. "Plan Campaign for Trade Acceptances", *New York Times*, Jan 22, 1919, 16.

[55] Even if it bought and discounted bills in more limited volumes than before. Bills bought – rose as high as $380 million in October 1918 and in November 1918 but then fell to about $180 million in April and May 1919. Bills discounted were at $280 million in Dec 1918 but then fell to $230 million by June 1919.
[56] Acc_1, Discount houses to FRBNY, November 20, 1919.

elsewhere, including on the Federal Reserve Board itself, as Albert Strauss made clear in a letter to E.R. Kenzel of the FRBNY:

> This whole question of a market for bankers' acceptances is one which is giving much concern to the Board. It seems to me, personally, that a broad market for acceptances can, in the long run, be created only if the rates at which acceptances sell are such as to make them a profitable form of investment for banks and institutions desiring to hold investments of a strictly liquid character. I can understand that in the early days of the System and in order to induce a community unaccustomed to the negotiation of acceptances to introduce this form of negotiable instrument, it might have been desirable to make rates unduly favorable to the drawer, but it seems that in the long run a market of this kind can only be maintained if rates are such as to appeal, on the basis of self-interest, to a broad circle of buyers.[57]

Given such concern, the matter was referred to the Federal Advisory Council (FAC), and its conclusion "that the policy of the Federal reserve banks at this time should be to leave the open market for bankers acceptances to member banks and discount houses" represented a major headache for the FRBNY.[58] In Strong's absence it was H. J. Case, as acting governor of the FRBNY, who replied to FRB Governor Harding to disagree with the conclusion of the FAC "as we are convinced that if the support of the system or of this bank were withdrawn from the open market in the present state of its development, its collapse would inevitably result".[59]

2.3 The Problem with Acceptance Demand

By then, the FRBNY was facing a new critique of its policy of cheap acceptance policy, notably for its incompatibility with the tightening of monetary policy deemed necessary to bring credit conditions under control. The speculative wave that manifested itself in rising securities and commodity prices after the war created concern inside the Federal Reserve System about the dangers of credit inflation. During the hostilities, monetary policy had been subjugated to the exigencies of wartime economy and the Federal Reserve System became an important source of credit expansion through the preferential discount rates it offered to member banks on loans collateralised by government securities. When the war ended, however, prominent figures in the Fed pushed for the elimination of these preferential discount rates and, more generally, for greater autonomy to set higher discount rates to counter inflation.

In early 1919, Benjamin Strong advocated "the need to deflate" as paramount, writing to Adolph Miller of the Federal Reserve Board to emphasise the scale of the problem that had built up during the war.[60] To bring deflation about, Strong argued, it was necessary to "furnish the opportunity for the Reserve Banks to increase their rates on all types of paper except international bills".[61] What Strong wanted, therefore, were tough rules to manage credit conditions but an exception for international acceptances

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[57] Acc_1, Albert Strauss, FRB to E. W. Kenzel, December 24, 1919.
[58] Acc_1, Federal Advisory Council to the Federal Reserve Board, X-1837, February 18, 1920. Warburg was not yet a member of the FAC, serving on it from 1921 to 1926.
[59] Acc_1, H.J. Case, Acting Governor of the FRBNY, to Federal Reserve Board, February 25, 1920.
[60] BSP, Strong to Adolph Miller, 5 February 1919.
[61] Chandler, *Strong*, 138

so the Fed could continue to promote financial reform. When he made his case for higher discount rates to the Assistant Secretary of the Treasury, Russell Leffingwell, Strong insisted even more explicitly on an exception for the acceptance market. He admitted that "a special rate for bills arising out of the importation and exportation of goods", if it was maintained at current levels while other rates advanced, would undermine demand for acceptances and "drive a large volume of foreign bills into the reserve banks". However, he defended his exception on the grounds "it would be a later protection to our international exchanges".[62]

In early 1919, such an exception turned out to be a moot point given opposition within the Fed to a broad-based increase in discount rates.[63] Strong went off to Europe to restore his health and, although there was a further proposal to raise discount rates in April 1919, it was rejected too.[64] However, as speculation on Wall Street increased from the summer of 1919, there were growing concerns that the Fed was feeding it through credit creation. Following his return to the US in September 1919, Strong drew attention to the huge amount of credit created by the Fed in its rediscounting of bills backed by government securities and insisted the only way to control credit creation was to raise the discount rate. [65][66] Yet, once again, he insisted on an exception so the FRBNY could continue to promote the acceptance market through low buying rates on acceptances.[67]

So committed was Strong to the goal of financial reform, therefore, that he was willing to promote policies that flew in the face of the strong monetary rules he advocated for credit control. However, his inconsistency in this regard did not go unnoticed and when Russell Leffingwell, Assistant Secretary of the Treasury, appeared before the Federal Reserve Board on November 24, 1919, he challenged the apparent incoherence of Strong's policies: "I am utterly out of sympathy with the policy of the Federal Reserve Bank of New York of continuing to buy at artificially low rates all the bills offered in the New York market… If Governor Strong would apply to the bill market the same doctrine that he seeks to impose upon the Treasury, the situation would be well met".[68]

Prompted by Leffingwell's criticism, Governor Harding of the FRB decided to take the matter further, writing to Strong the same day to tell him that "the Board had felt for some time that the New York buying rate on acceptances was too low".[69] Called upon to explicitly defend the position of the FRBNY, Strong reminded Harding that "[f]rom the very beginning of the Federal Reserve System, when bankers acceptances began to appear in the market, it was deemed necessary to establish a more favourable rate either for the discount of these bills by member banks or for their purchase in the open market". A

[62] BSP, Strong to Leffingwell, February 6, 1919.
[63] Chandler, *Strong*, 140
[64] Friedman and Schwartz, 222-3.
[65] BSP, Memorandum from Strong (no addressee), 3 November, 1919
[66] Chandler, *Strong*, 154.
[67] By that time, he was willing to contemplate an increase in discount rates on acceptances but, as he explained to Leffingwell, that was because "[a]ll of the needed stimulation to the development of that business can be given by our policy in buying bills in the open market when that course seems desirable at rates below our discount rate for such paper".
[68] Chandler, *Strong*, 161.
[69] BSP, Harding to Strong, November 24, 1919; Chandler, *Strong*, 162.

preferential rate for discounting and buying acceptances was justified, therefore, “to stimulate a necessary banking development in the country”.[70] And he insisted that “[t]he policy of the Reserve Banks in this respect has, I believe, been successful in developing this field of banking in the short period of a few years, whereas had we not stimulated the business, it would have had only a negligible development”.[71]

Strong’s unswerving commitment to the goal of building a large and liquid discount market is striking and it is explained by the fact that he deemed such a market essential to conducting effective monetary policy in the United States. As he explained to Leffingwell, the effectiveness of US monetary policy “depends upon the development in the market of an adequate volume of bills (as distinguished from commercial paper) so that the Bank, by voluntary purchases or by refraining from making purchases, can exercise a primary control over the money market which it could not possibly exercise without such a volume of paper that may be purchased, or not purchased, at will”.[72]

Although Strong was utterly convinced that a preferential rate for discounting and purchasing acceptances was justified, he had opened a can of worms insofar as the FRBNY’s acceptance policy was concerned. Over the next few months, the FRBNY found itself assailed from a number of different directions by accusations of the inefficacy of its policy for promoting the acceptance market and its incoherence with the goal of controlling credit creation. In the end, the FRBNY raised its minimum buying rate for open market purchases of acceptances from 5 to 6 per cent between December 1919 and September 1920 and the FRBNY’s open market purchases of acceptances plummeted.

Yet, even if the New York reserve bank was forced onto the defensive by criticisms of its acceptance policy, it soon became clear that the FRBNY had no intention of giving up on the US acceptance market. If anything, FRBNY officials had become even more concerned about “the future of the American discount market and American banker’s credits”[73] and, once interest rates were lowered from May 1921, they redoubled their efforts to promote acceptances through cheap credit. Predictably, they drew fire but FRBNY officials stood their ground, claiming that if the Federal Reserve banks did not support the bill market in this way: “it appears quite clear that soon there would not be enough bills drawn to make a market and the dollar credit would quickly lose such place as it has found in world trade and in foreign markets”. They emphasised that: “The American discount market is still an infant compared with the veteran markets of Europe” and they insisted on the need for reserve banks “to consistently support the bill market” unless “we are to see the efforts of eight years wasted and be required to start all over again”.[74]

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[70] BSP, Strong to Harding, December 17, 1919. Strong also pointed out “that this particular type of paper was a better asset than any other line of commercial paper”.

[71] Ibid.

[72] BSP, Strong to Leffingwell, December 19, 1919.

[73] Acc_1, E. W. Kenzel to C. R. McKay, Deputy Governor of the Federal Reserve Bank of Chicago, March 7, 1922.

[74] For criticism, see Acc_1, Undersecretary of the Treasury, Gilbert, to Case, Acting Governor of the FRBNY, May 25, 1923, June 9, 1923; Acc_1, C. R. McKay, Deputy Governor of the Federal Reserve Bank of Chicago, to E. W. Kenzel, March 7, 1922; for FRBNY officials’ defence, see Acc_1, O'Hara to Case, May 31, 1923; see also Case to Gilbert, June 22, 1923.

The perseverance of FRBNY officials in the face of sustained criticism of their acceptance policy is striking. It can be explained by their belief in the crucial importance of a healthy acceptance market to effective monetary policy in the United States. As an internal memo put it in mid-1923: "[a]s we see it, the successful operation of the reserve system in the future will very largely, if not most importantly, depend upon the existence of an American discount market which will function normally".[75] Yet, even if they were clear about the rationale for their efforts when called upon to defend them, FRBNY officials increasingly admitted to themselves that structural constraints on the demand and supply of acceptances limited the effectiveness of their policies:

> We must, however, recognise facts, and the fact of the matter is that the acceptance market is far from being fully developed. There are many conflicting factors which operate against a healthy development. When rates are low, the supply tends to increase but the demand dries up in competition with other forms of short-term investments carrying higher rates, such as government certificates, stock exchange call loans, etc. when rates rise to a point out of line with the cost of other forms of money or credit, an active demand develops but the supply diminishes as it is cheaper to finance by other methods or through other money centers. Under these circumstances the development of this discount market is between the devil and the deep sea.[76]

Notwithstanding their disillusionment, FRBNY continued to insist on the importance of low acceptance rates for promoting the development of a US acceptance market and, as Figure 4 shows, they relied on a combination of discounting and open market purchases of acceptances to achieve them. In part, what determined Fed policy was the need to remain competitive with the London market to encourage the supply of acceptances. Yet, at the same time, the Reserve banks' discounting and purchase of acceptances were an effort to respond to changing conditions on the New York call market in order to maintain demand for acceptances.[77] In this way, policymakers found themselves caught between the devil and the deep sea in fighting the battle that they had identified as a losing one.

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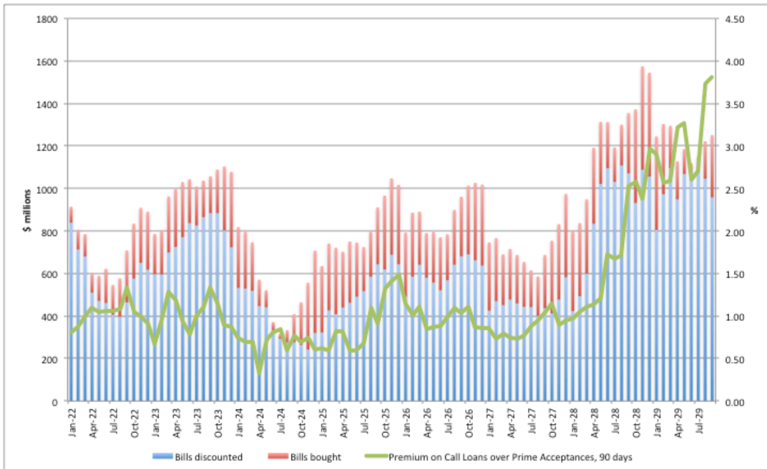
[75] Acc_1, O'Hara to Case, May 31, 1923.
[76] Ibid.
[77] Unfortunately, the Fed's statistics do not allow us to identify exactly how much of Reserve bank credit was created in the pursuit of financial reform as compared with monetary objectives.

Figure 4 Federal Reserve Bank Credit Outstanding vs. Money Market Conditions



Source: Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics*, Washington D. C., 1943, 373

3. BETWEEN THE DEVIL AND THE DEEP SEA

The metaphor of the devil and the deep sea vividly evokes the frustration that policymakers felt when confronted with the ineffectiveness of their policies for financial reform. FRBNY officials claimed that increasing acceptance rates to encourage demand would cause the supply of acceptances to plummet and that lowering them to stimulate supply would prompt a collapse in the demand for acceptances. Certainly, this interpretation suggested dim prospects for the policies that the FRBNY had designed and pursued since it hinted at persistent structural constraints on the development of the acceptance market. However, policymakers were seriously hampered both in their understanding of these constraints, and their ability to do something about them, by the weight of historical interpretations.

4.1 The Demand for US Acceptances

The most virulent criticism of the FRBNY's policy of cheap acceptance credit focussed on its impact on the demand side of the market so, in exploring the reasons for its limited effectiveness, it makes sense to begin there. Following the enactment of the FRA, we have seen that policymakers like Benjamin Strong were confident that the demand for good bills "will take care of itself". The basis for such optimism was to be found in the history of discount markets, as they had operated in the pre-war period in Europe and especially London, where ample demand for acceptances had been forthcoming at discount rates of just over 3 per cent. Thus, to the extent that US policymakers kept discount and purchase rates for acceptances at 3 per cent or higher – which, as Figure 1 shows, they did for most of the period from late 1914 to late 1929 – one can see why they might have expected there to be sufficient demand to sustain a liquid market for acceptances.

However, policymakers soon realised that their optimism had been misplaced. Indeed, it was their growing awareness of the stubborn resistance of member banks to investing in acceptances that persuaded policymakers to launch a major educational campaign in early 1919 to convince banks that acceptances were “a safe, liquid and profitable investment for their surplus funds”. Officials looked further afield too, seeking legal changes that would permit other financial institutions, such as savings banks, insurance companies, and trustees of estates, to place large amounts of their surplus finds in the acceptance market.[78] Thus, at the end of 1920, in an internal memorandum entitled the “Broadening of the Market for Acceptances”, Pierre Jay could emphasise the strenuous efforts the FRBNY had made since the beginning of 1919 to stimulate the demand for acceptances: “In addition to having encouraged our member banks to purchase acceptances, we have also endeavoured to have particularly our New York members adopt the practice of lending funds to the acceptance dealers at rates sufficiently favourable to enable them to carry their portfolios without loss”.[79] Still, even if he insisted “a good deal has already been done to develop the discount market”, Jay acknowledged that “there is much which may be yet accomplished to assist the further development of sales of bankers’ acceptances within this district and throughout the country” and then proceeded to offer no less than ten suggestions for how the current situation might be improved![80]

However, the problem did not go away and, if anything, bankers’ reluctance to invest acceptances became a greater concern. When asked by the New York Reserve bank to report on conditions for acceptances in early 1922, the other Reserve banks were extremely pessimistic about demand. As the vice-governor of the Cleveland bank put it: "while there are at all times a few bills moving, altogether the demand is and for some time has been very light, explaining that "present rates are not attractive, and consequently funds are being diverted to other uses".[81] What constrained domestic demand for acceptances, he explained, was competition from short-term investments that systematically offered investors higher rates of interest. By the mid-1920s, as Figure 5 shows, US banks’ holdings of acceptances were still at modest levels of only $150 million, accounting for only 20 per cent of total acceptances outstanding, and in subsequent years their holdings often declined to $50 million or less.

It was not just the reluctance of member banks to buy acceptances that policymakers perceived as an obstacle to developing a US acceptance market but also these banks’ unwillingness to lend on them. When the discount houses apprised Strong of the enormous problems they had in securing financing for their inventories of acceptances, they emphasised the reluctance of banks to get involved:

> The alternative of a special call money market on bills is very difficult to accomplish owing to the practical impossibility of securing concerted action on the part of the banks. It has been our experience that while certain banking institutions are willing to make a special rate on loans secured by acceptances this is done more in the nature of a favour and is not looked upon as a business proposition.[82]

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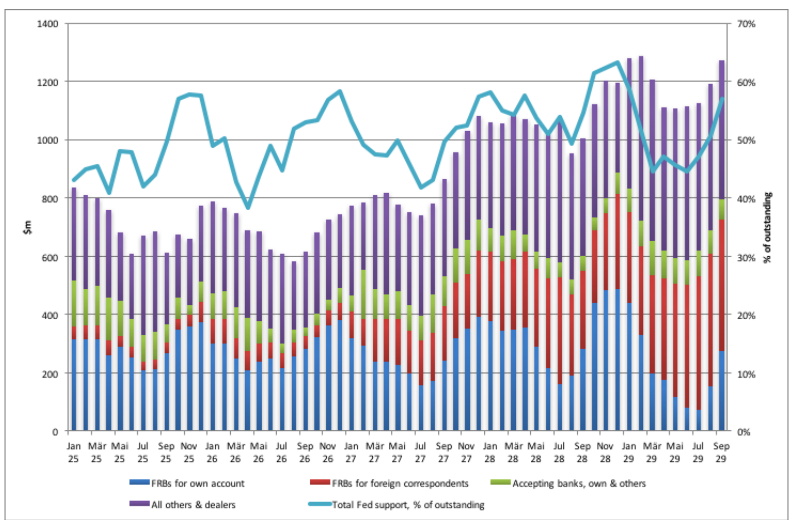
[78] Acc_1, Jay to Kenzel, April 20, 1918.
[79] Memorandum from Mr. Jay to R. M. O’Hara, Broadening of market for bankers acceptances, November 30, 1920, 172.
[80] Ibid.
[81] Acc_1, Fancher to Kenzel, March 1, 1922
[82] Acc_1, Discount houses to Strong, June 14, 1918.

Initially, Strong hoped “that a few frank talks with New York bank men would result in a little more liberal policy on the part of the banks in establishing rates for carrying bills” but he soon acknowledged that these talks had proven “fruitless” since “our banks, thinking only of profit, are unwilling to put the business on a favourable rate basis”.[83] Thus, he saw no other option than for the FRBNY to “step into the breach” to finance dealers through resale agreements even as he expressed concern that doing so would move New York further from best practice in London.[84] He insisted that resale agreements were a temporary measure and that what New York needed was a “call loan market on bills” just like London.[85]

Figure 5 Sources of Demand for US Acceptances



Source: American Acceptance Council, *Facts and figures relating to the American money market*, New York, American Acceptance Council, c1931

Policymakers increasingly acknowledged that they faced a stubborn structural obstacle to building demand for acceptances given the distinct organisation of the US money market compared with its London counterpart. Already in 1918, when Strong was struggling to figure out why US bankers were not interested in funding a call market for acceptances, he wrote to London financier, Ernest Cassels, to ask his opinion. Cassels explained that on the London money market the cheapest money available

[83] Ibid.
[84] Acc_1, Strong to Kenzel, August 17, 1918.
[85] Ibid.

was on bills, not loans on Stock Exchange collateral. That was how it ought to be, he claimed, but it was far from New York's reality:

> With you, until recently at least, this has been the reverse but for the good of the country itself, it would be better if call money in New York were lent against such acceptances rather than Stock Exchange collateral, and I have no doubt that, along with so many other things, changes may be made in your system in this regard.[86]

Cassels' assessment was echoed inside the FRBNY with officials there invoking his letter as evidence of "the disadvantages which we are up against in trying to develop an open market in this country".[87] In his annual address to the American Acceptance Council in late 1920, Warburg emphasised too that the call market : "offers serious obstacles to the untrammelled development of a reliable discount market in the United States…".[88]

What is clear about these assessments is that policymakers had a clear sense, based on London's historical experience, of the correct way in which a money market should be organised. And they understood deviations from that model – notably the persistence of a vibrant call market on securities – as a type of deviancy or peculiarity of the US money market that needed to be suppressed. When the FRA was enacted, they had expected it to deliver a devastating blow to the call market and certainly they were not the only ones to believe in such a prognosis. In 1915, as the *Bankers' Magazine* observed: "It was assumed, when the Federal Reserve Act was passed, that by making only commercial paper available for rediscount, and denying this privilege to paper representing stock transactions, the banks would find it difficult to procure funds for speculative uses".[89]

Despite such expectations, there was no systematic weakening of the call market when the Federal Reserve System came into operation. The acceptance market enjoyed a temporary reprieve when the government exerted control over the call market after the US entered the war. However, as Figure 6 shows, the post-war speculative boom drove the premium that call rates offered over acceptance rates to new heights. The bursting of the bubble, and the ensuing crisis of 1920-1921, might have seemed like an opportunity to change the balance in the US money market. However, as Figure 2 shows, the acceptance market was hit just as hard and, worse still, the call market bounced back with much greater vigour than its counterpart. Writing in 1922, therefore, H. Parker Willis could single out the continued buoyancy of the call market as the FRA's greatest failure:

> the working of the Federal Reserve System has apparently not succeeded in withdrawing from the stock market that overplus or surplus of funds belonging to banks and previously employed in stock-market speculation, which is a peculiar American feature of financial organization.

Figure 6 Premium on Brokers' Loans over Acceptances 90 day paper, Aug 1917-Sept 1929

[86] FRBNYA, Acceptances, Cassels to Hungerford, July 19, 1918.
[87] FRBNYA, Acceptances, Kenzel to Strong, August 14, 1918.
[88] FRBNYA, BSP, Strong to Warburg.
[89] "The Wave of Speculation", *Bankers' Magazine*, November 1915, 595.

Source: author's analysis based on data on NBER Macrohistory: XIII. Interest Rates, http://www.nber.org/databases/macrohistory/contents/chapter13.html

Inside the FRBNY, officials increasingly invoked this "peculiar American feature of financial organization", to account for the difficulties in building a discount market in the United States compared with Britain. As the acting governor of the FRBNY explained to the US Treasury Secretary:

> Here conditions are so different that our discount market is normally starved of money and if left to itself, as you suggest, would, under present conditions, quickly cease to exist. Briefly stated, the reasons are that the Stock Exchange call loan is the traditional American outlet for surplus reserves and they average higher rates than the discount market can pay for money or which they can buy bills.[90]

Here again we see policymakers' emphasis on the peculiarity of the US money market compared to the London money market that they continued to take as their ideal. Their framing of the challenge of financial reform led them to the conclusion that the only way to build a discount market in the United States would be 'if we could only get away from the Stock Exchange call loans as the principal outlet for excess bank reserves'.[91]

However, under the provisions of the FRA policymakers had no policy instruments at their disposal to effect such change so their only hope was persuasion. Besides their efforts to convince banks to invest in, and lend on, acceptances, they tried to exert a more direct influence on the foundations of the call market. Both Warburg and Jay believed that if the New York Stock Exchange could be persuaded to move away from its system of daily settlement, a key source of demand for call loans would be

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[90] Acc_1, Case to Gilbert, June 22, 1923.

[91] Acc_1, Acceptances, Case to Gilbert, June 22, 1923.

eliminated. However, try as they might to persuade the New York Stock Exchange to consider such a major change in its longstanding system of settlement, they were unsuccessful in their efforts.[92]

They were more successful in using persuasion to limit another source of competition for investors in acceptances. In the early 1920s, the dampening effect of competition from tax-exempt government certificates for demand for acceptances became the focus of concern inside the FRBNY and in correspondence between Strong and Warburg.[93] Warburg took the initiative to write to the Treasury to complain that the unfavourable tax status of acceptances "prevents the banks from entering the field and, thereby, destroys the effective cooperation of, what should be, the most important factor in the acceptance market, and it prevents acceptances from getting the lower interest level, which they should command". He asked that: "either the Treasury Certificates and Notes should be placed on a taxable basis, or acceptances should be placed on a tax-exempt basis when held by banks". He claimed that extending tax-exempt status to acceptances would cost little money and would "make the American banking system a success and put Uncle Sam on the map as the real 'World Banker' with a fairly perfect machine".[94] The Treasury replied that "[w]e should like to do everything we can for the acceptance market" but explained that it "would put the Treasury in a false light to recommend tax exemption [for acceptances]".[95] Nevertheless, the Federal Advisory Council, at Warburg's behest, recommended that acceptances be made exempt from the Federal corporation income tax, and its recommendation was ultimately accepted, with the tax exemption taking effect on May 29, 1928.[96]

Still, the victory must have seemed like a pyrrhic one given the increased vigour of the call market by the late 1920s. FRBNY officials became increasingly fatalistic about their chances to counter the competitive threat it posed for the acceptance market. And their continued commitment to the notion that there was a right way to organise a money market, as exemplified by the pre-war London money market, made them genuinely puzzled about the persistence of patterns in the New York money market that they deemed to be inferior. When Strong tried to explain why US bankers continued to plough money into the call market, he gave vent to his frustration in claiming that: "[t]he only thing that they are competing with is long habit and a settled prejudice in favour of collateral loans. Our bankers are stupid in taking that view, but as long as they do, the rates will reflect their point of view".[97] Ten years later, the FRBNY's interpretation of the call market's continued allure to US bankers was more polite in form but much the same in content. As an internal memorandum put it in late 1928:

> When the acceptance privilege was given to member banks it was believed they would welcome the opportunity of carrying substantial portfolios of bankers' acceptances as secondary reserve, adjusting their reserve requirements from time to time by discounting short bills at the reserve banks. Only one bank in

[92] Acc_1, Memorandum from Mr. Jay to R. M. O'Hara, Broadening of market for bankers' acceptances, November 30, 1920); American Acceptance Council, *Annual Report*, First Annual Meeting, December 4, 1919, New York, 1920, 5.
[93] Acc_1, E. W. Kenzel to C. R. McKay, Deputy Governor of the Federal Reserve Bank of Chicago, March 7, 1922; BSP, Strong to Warburg, December 3, 1923.
[94] BSP, Warburg to Garrard B. Winston, Assistant [sic] Secretary of the Treasury, December 20, 1923.
[95] BSP, Garrard B. Winston, Under Secretary of the Treasury, December 26, 1923.
[96] Benjamin Haggott Beckhart, 1932, *The New York Money Market: Uses of Funds*, vol. 3, 428.
[97] Acc_1, Strong to Kenzel, August 17, 1918.

> New York ever importantly followed that practice. They did it with entire satisfaction to themselves and found that they earned on the average through their portfolio quite as good rates as the average call money rate. Other important large banks have had the problem brought to their attention repeatedly by discount houses and the American Acceptance Council, but without material results.[98]

Locating the explanation for the persistence of the call market in the stupidity or prejudice of US bankers reflected policymakers' unwavering commitment to the superior rationality of a system in which banks placed their liquid funds in an acceptance market. Only occasionally did policymakers hint at other possible explanations of bankers' behaviour, as E. R. Kenzel did in claiming:

> it is easier for the New York banks to handle the Stock Exchange loan than the loan on bills. Their loan departments, where this work is done, are neither familiar with bills as collateral nor well equipped to handle them and it is the man in charge of the loan cage who generally has the effective control in the disposition of correspondents' funds.[99]

In emphasising the importance of tried and true practices that US banks had employed for decades, Kenzel was pointing to an important factor that had been completely ignored by reformers. Men like Warburg had spoken of financial reform as a way for the United States to overcome the legacy of its own financial history and he had characterised the process of reform as analogous to replacing old with new machinery. Implicitly, Kenzel was acknowledging that this view was simplistic. The legacy of US financial history meant that US banks had developed certain organisational capabilities for lending on the call market and that they had no such basis on which to participate in the acceptance market. From this perspective, financial reform seemed a more daunting challenge than Warburg allowed since it implied the uprooting of tried and true practices that financial actors had developed over decades and the creation of entirely new practices in a domain with which they had no familiarity.

Still, it seems implausible that the organisational challenges implied by financial reform are enough to explain the persistence of the call market. After all, even the largest New York banks, who did build up expertise in the acceptance market, showed limited interest in placing their liquid resources there, and continued to favour the call market. They played a crucial role in perpetuating the call market not only through the monies they placed there on their own account but also in doing so on behalf of their out-of-town correspondents. As Kenzel of the FRBNY explained to Governor Harrison in March 1929, the New York banks habituated out-of-town banks, especially "the larger banks in the larger cities", to the advantages of the call market for the placement of their liquid funds,

> They are large enough to lend substantial sums on the Stock Exchange and have been trained for years to do it by their New York correspondents, with almost entirely satisfactory results. Even when the rates for Stock Exchange money are lower than could be obtained in the bill market, the New York banks have shown

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[98] Acc_2, Memorandum on the Present Condition of the Bill Market and Hindrances to its Further Development, December 27, 1928.
[99] Ibid.

> no disposition to advise their correspondents to loan their money to the discount market instead of on the Stock Exchange.[100]

The New York banks' continued commitment to call loans seemed perplexing since they had been advocates of the financial reform embodied in the FRA. In 1913, Frank Vanderlip of National City Bank, the largest lender on call at the time, explained to the Committee on Banking and Currency that the call market was "a center of disturbance which may develop into a financial cyclone". He became a tireless advocate of the financial reform embodied in the FRA "so that banks may have some other way of employing their secondary reserve than of loaning it on call against stock exchange collateral". It is little wonder then if policymakers were bemused by US bankers' persistent interest in the call market in the post-FRA era.

For New York bankers, however, it was not stupidity or prejudice or inertia that explained the continued appeal of the call market but the simple rationality of banking. They argued that acceptances were not attractive enough as an economic proposition compared to call loans to justify the effort involved in learning a business that was new to them. As Edward J. Pierce of National City Bank explained: "the differential between acceptances and call loans was far greater than the cost of operating a Loan Department" not to mention the difficulty in handling acceptance loans. For this reason, John Rovensky of the Bank of America insisted to FRBNY officials that there was little to be gained in trying to promote demand for acceptances by appealing to bankers to change their behaviour. Instead, he argued, "the only permanent way to create a real acceptance market is to make the acceptance a more attractive investment than it is at present".[101] As John Cannon of National City Bank observed, a bank "wants for its surplus funds the highest rate commensurate with safety and availability".

There is an important hint in Cannon's use of the phrase "commensurate with safety" since what it suggests is that not only that rates were systematically higher on the call market than the acceptance market but that US bankers were safe in investing there. That view seems difficult to reconcile with the call market's historical reputation for instability but it begs the question of how the call market behaved in the post-Fed years. The post-war boom and bust offered a crucial test of its stability in the new era and the results were striking since there was no drying up of liquidity, no closure of the stock exchange, or anything else that approximated the emergency measures taken in 1914 or 1907. Confronted with signs that the call market might have broken with its history of instability, it is little wonder if US bankers channelled funds into the call market once the crisis was over.

A comparison of the peacetime years before and after the passage of the FRA, as shown in Table 1, confirms the impression of a break with the past in the operation of the call market. Before the FRA, higher rates could be generated from placing money on the US call market compared with the London discount market but the premium was only about 14 per cent and it came at the expense of substantially higher levels of volatility. After the war, in contrast, the call market offered much higher premia of 29 per cent compared to the London discount market and 31 per cent over its New York

[100] Ibid.
[101] Acc_2, Rovensky to Governor Harrison, Jan 4, 1929.

counterpart. More striking still is the fact that these premia seemed to be attainable without assuming any greater volatility. It was only from early 1928, as call rates rose to heights not seen since the post-war boom, that the New York banks began to worry that call loans were getting riskier and began to withdraw from the call market but their loans on account of others continued to soar.

Table 1 Returns and Volatility in the US Money Market, 1900-1929

Money Market	**1900- June 1914**	**1919-Sept 1929**
London Discount, 3 month bills		
Average	3.24%	4.21%
Coefficient of variation	0.30	0.28
NY Discount, 90 day		
Average	n.a.	4.15%
Coefficient of variation	n.a.	0.24
US Call Market, 90 day		
Average	3.70%	5.44%
Coefficient of variation	0.74	0.28
US Call Market, renewal/ new		
Average	3.70%	5.35%
Coefficient of variation	0.69	0.33

Source: author's analysis based on Macrohist.

Ironically, the legislation that had been expected to lead to the demise of the call market contributed to its persistence by seeming to stabilise and, in retrospect, it is not difficult to understand why that happened. It is true that the FRA prevented the Fed from re-discounting call loans for its member banks or intervening directly in the call market but it soon became clear that member banks could respond to pressures in the call market by rediscounting eligible securities that they had on their balance sheets. Thus, there were practical limits of the FRA's definitions of eligible and ineligible paper as Strong acknowledged early on: ‘The eligible paper we discount is simply the vehicle through which the credit of the Reserve System is conveyed to the members. But the definition of eligibility does not affect the slightest control over the use to which the proceeds are put’.[102] That meant that banks had more options than the FRA had envisaged but it meant too that Federal Reserve policy had some indirect influence, as Mark Carlson and Burcu Duygan-Bump show, on lending conditions on the call market.[103] Of particular importance, as Table 1 suggests, is that the Federal Reserve System inadvertently stabilised the call market, thereby rendered it a more attractive alternative than anyone had anticipated for the acceptance market.

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[102] Chandler, *Strong*, 197-8.

[103] Carlson, Mark, and Burcu Duygan-Bump (2016). "The Tools and Transmission of Federal Reserve Monetary Policy in the 1920s," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, November 22, 2016, https://doi.org/10.17016/2380-7172.1871.

4.2 The Supply of US Acceptances

In turning to the supply side of the acceptance market, we might expect to find slimmer pickings than on the demand side for explaining the ineffectiveness of the FRBNY's policies. After all, the principal thrust of these policies was to promote the supply of acceptances through making acceptance credit as cheap as possible. However, as we shall see, there were structural obstacles on the supply side of the market too that impeded the effectiveness of the FRBNY's policies. Policymakers largely ignored these obstacles for reasons that again seem to be related to the lessons they derived from European financial history, especially the history of the London money market.

From the time the FRA went into operation, policymakers expressed concern that US banks were not making greater use of the acceptance privilege conferred on them by the legislation. The fact that "member banks generally have not shown any disposition to indorse bills", as Strong put it, was a major source of frustration to him, as well as to Paul Warburg.[104] They pioneered a series of measures to liberalise the acceptance powers of member banks including their extension to domestic trade and dollar exchange credits. In addition, the constraint limiting member banks from accepting more than 50 per cent of their paid-up capital and surplus was raised, subject to approval of the Federal Reserve Board, to 100 per cent. In general, as Beckhart observes, "the different amendments to the Federal Reserve Act have had the effect of broadening greatly the acceptance powers of member banks".[105]

Initially, these efforts seemed to bear fruit as banks all over the United States showed an interest in accepting, with the number of acceptors soaring to 500 by 1920 at the height of the commodity boom. However, even before boom turned to bust, widespread abuse and ignorance of the acceptance business was reported and the crisis led to an outpouring of criticism of the quality standards that governed the supply of acceptances.[106] Many bankers drew extremely negative conclusions from their participation in the acceptance business, leading to a drastic decline in the number of accepting institutions in the US.[107] As the governor of the Cleveland Reserve bank explained to his colleagues in the New York bank in early 1922:

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[104] Acc_1, Strong to E. W. Kenzel, June 8, 1917; Warburg to Strong, June 30, 1917.

[105] Benjamin Haggott Beckhart, 1932, *The New York Money Market: Uses of Funds*, vol. 3, 272. Further legislative changes were made to permit the establishment of specialised acceptance institutions, such as the Edge Act of 1919, which allowed for the establishment of specialised acceptance corporations operating overseas with a minimum capital of $2 million and the power to accept up to ten times their paid-in capital and surplus (ibid., 273-4).

[106] The misuse of acceptances was, for example, discussed at a meeting of the Federal Reserve Board and the governors of the Reserve banks in late March 1919 (Federal Reserve Bulletin, 1919, 415. Notwithstanding substantial efforts to counter this misuse, a committee of national bank examiners submitted a devastating report on acceptance practice to the US Comptroller of the Currency in June 1922.

[107] From then on, the business of acceptances came to centre more and more on New York City. By the end of the 1920s, the one hundred leading accepting institutions in the United States generated almost all US acceptances and the top 10 acceptors – eight of which were based in New York City – accounted for nearly 60 per cent of the total volume of acceptances outstanding. (Beckhart, 300-301, 338-346)

> bankers have come to realize, in fact some of them have had it painfully impressed upon them, that large acceptance lines in addition to large credit lines are not the thing which they are particularly desirous of encouraging. This, of course, has resulted in some former users of acceptances confining themselves to their credit lines which, under present conditions, they seem to be able to do more advantageously as regards cost than through acceptance credits. Furthermore, because of the frozen nature of some of the transactions which were formerly covered by bankers' acceptances, it is really better that such transactions be carried through the usual credit lines.[108]

However, it was not just a diminished interest among US banks in accepting bills that represented a structural barrier to the supply of US acceptances. As Farchis noted: "[o]ur banks are not being called upon to any great extent for acceptance credits", suggesting a lack of interest in acceptance credit among exporters, importers and other potential users.

As we have seen, policymakers relied on driving down acceptance rates so that the pressure on drawers of bills to use US acceptances would become "irresistible". In this regard, they saw themselves as competing primarily with sterling acceptances and tried to keep the acceptance rate as low as possible compared to London. In the years immediately after the war, Great Britain's macroeconomic difficulties had forced interest rates up, undermining London's capacity to compete with New York in the financing of international trade.[109] By early 1922, however, as Kenzel of the FRBNY explained to the Reserve bank governors and Governor Harding, the US acceptance market faced "much stronger competition [from] sterling credit than we have heretofore experienced". The problem was not just "the advantage that London enjoys over New York in the open market discount rate for bills" but also "the improved condition of sterling exchange".[110] Kenzel warned that if dollar credits ended up being supplanted by sterling bills, it would take a long time for them to re-establish themselves and "all of the advantage of the past years would be lost". To assist "in avoiding such a catastrophe for American credits", Kenzel emphasised the importance of immediate action "with a view to assisting this market to lower levels of rates which would reduce this disadvantage of dollar credits as compared to sterling credits".[111]

Although his proposal proved controversial, Kenzel succeeded in having his way and, except for certain brief periods, US acceptance rates were kept below their British counterparts for the rest of the 1920s. In addition, policymakers went beyond competition on rates in their efforts to make dollar acceptances competitive with their sterling counterparts. In response to complaints from some trading partners that regulatory restrictions on the discounting of acceptances were driving them away from the New York acceptance market, the FRBNY sought to have them removed and with some success.

Certainly, it was important for New York to be competitive with the London money market with respect to the terms and conditions of the cost of acceptance financing. However, policymakers' exclusive even obsessive focus on competition with London led them to ignore the fact that the supply of acceptances

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[108] Acc_1, E. R. Fancher, Governor of Federal Reserve Bank of Cleveland, to E. W. Kenzel, March 1, 1922.
[109] Eichengreen and Flandreau, "Dollar as an International Currency".
[110] Until it strengthened, he explained, the apparent advantage that London enjoyed as far as interest rates were concerned had been mitigated by 'the cost of forward cover for the sterling credit'.
[111] Acc_1, E. W. Kenzel to C. R. McKay, Deputy Governor of the Federal Reserve Bank of Chicago, March 7, 1922.

depended on other factors too and especially on the dynamics of international trade. That US trade patterns had an impact on the supply of acceptances is clearly suggested by the expansion in the acceptance market during the war and again during the post-war boom. We can be much more precise about this relationship once we recognise that the supply of US acceptances was heavily dependent on trade in a limited number of commodities. An analysis of the acceptances held by the Federal Reserve Bank of New York in March 1920, in which the underlying commodity could be identified, shows that bills drawn against shipments of raw materials were overwhelmingly important. Shipments of raw cotton were especially significant in generating US export bills while imports of raw silk from Japan, silver from the "Orient", and hides and skins from South America were crucial for generating US import bills.[112] It was the boom in international trade in such commodities, shown in Figures 7a and 7b, that drove the value of US acceptances so high in 1919 and 1920 and, when boom turned to bust in global commodity trade, the supply of US acceptances plummeted too.

Figures 7a Value of US exports of raw cotton, 1913-1929

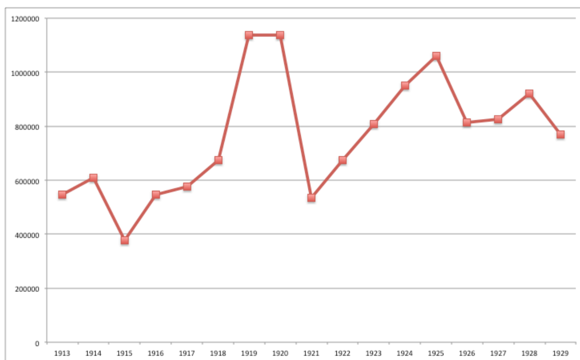
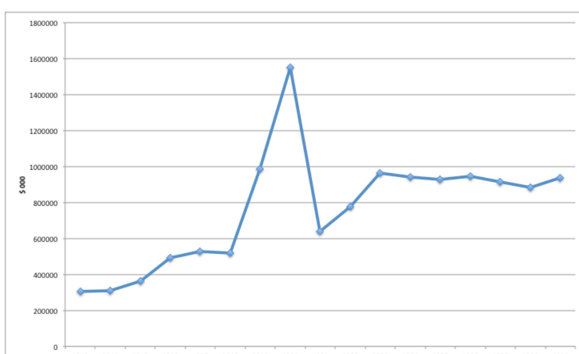


Figure 7b Value of US imports of raw silk, coffee and sugar, 1913-1929



[112] Acc_1, Mr. Paddock to Governor Harding, Memorandum on Bankers' Acceptances purchased in the open market held by the Federal Reserve Bank of New York, March 27, 1920, April 8, 1920.

After the crisis, there was a recovery in trade in these commodities and the fact that it continued until the mid-1920s meant that conditions for boosting the supply of US acceptances were relatively favourable. However, when the value of US trade in these commodities stagnated in the second half of the 1920s, as Figures 7a and 7b show, policymakers in the US fought a losing battle to maintain the supply of US acceptances. The problem can be seen in Table 2 in the decline of bills drawn against shipments of commodities that generated the bulk of US acceptances. And although trade patterns in the second half of the 1920s were more favourable for manufactures, they were no compensation since acceptances were not widely used for financing trade in these goods.

The result of these developments can be seen in the levelling off in the supply of dollar acceptances being generated to finance US exports and imports. The apparent exception to this pattern – the step increase in US acceptances to finance exports in late 1927 shown in Figure 8 – turns out to be an anomaly that reflected a special deal with the Germans to supply dollar acceptances (see below). In general, therefore, we can argue that policymakers efforts to boost the supply of dollar acceptances was substantially constrained in the second half of the 1920s by patterns of US international trade, especially in a few global commodities that played a crucial role in generating the supply of US acceptances.

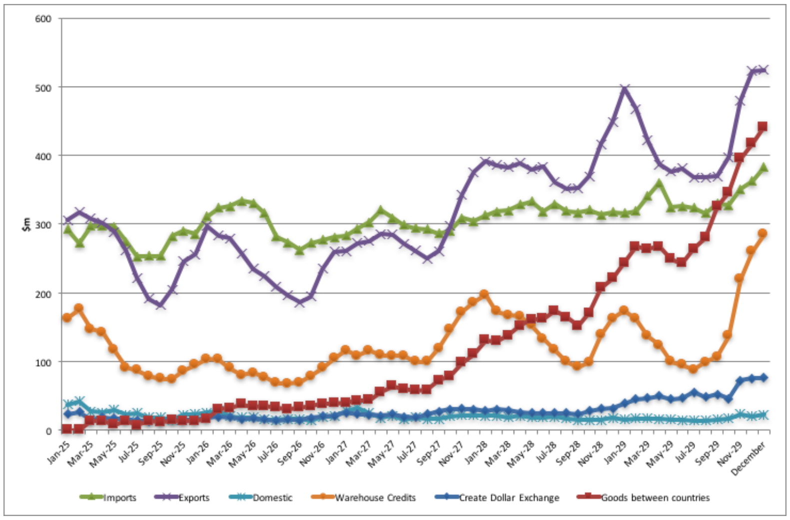
Table 2 Acceptances Purchased by the FRBNY by Underlying Commodities

	1925	**1926**	**1927**	**1928**
Export Acceptances – total	527	441	518	551
Automobiles	6	16	21	24
Copper	35	25	24	32
Cotton	300	229	284	308
Grains	58	46	82	67
Import Acceptances – total	631	605	476	476
Coffee	115	120	71	81
Silk	137	118	71	77
Sugar	85	69	80	47
Hides & Skins	36	33	35	46
Rubber	26	53	36	30
Wool	40	27	20	21

Source: Beckhart, 353

Although policymakers showed some awareness of these commodities' importance for the supply of US acceptances, it is striking how seldom they discussed international trade in their discussions of the challenges of generating a healthy supply of acceptances. Although one might be tempted to invoke some instinctive tendency of Americans to look inward rather than outward for explanations of their economy's dynamics, that seems implausible in this case given how many committed internationalists were to be found among the officials at the centre of the reform effort. More likely, their neglect of this important structural barrier to the effectiveness of their policies was rooted in their interpretation of the history of the London money market.

Figure 8 US bankers' acceptances outstanding by type for all reporting banks, 1924-1929



Source: American Acceptance Council, *Facts and figures relating to the American money market*, New York, American Acceptance Council, c1931

It is striking that nowhere in Warburg's analysis of the conditions for a successful discount market in Europe does he mention the importance of the global dynamics of international trade in the late 19th and early 20th centuries. There is not even a hint of the fact that the canonical example of such a market, the London discount market, was located in an economy that witnessed a huge increase in its openness to foreign trade between 1850 and 1913. It is no great surprise that Warburg neglected the contribution of historically specific conditions to the London money market's success as a centre of international trade finance. After all, the whole thrust of his argument for financial reform was that it was not important to understand such historical details. Other reformers seemed willing to follow his lead in this regard and policymakers do not seem to have reopened the question, instead absorbing the news of desultory trends in the supply of dollar acceptances with a growing fatalism.

4. A FOREIGN SALVE FOR A DOMESTIC PROBLEM

FRBNY officials certainly became increasingly frustrated when confronted with their policies' ineffectiveness. They may not have fully understood the nature of the structural obstacles to the development of the US acceptance market but they knew they were there. Certainly, they were disillusioned given their failure to stimulated sufficient demand and supply of dollar acceptances in the United States. Rather than giving up on reform, however, FRBNY officials pioneered new policies in the mid-1920s in an increasingly desperate attempt to achieve their objectives for the US acceptance market. Particularly striking was an audacious effort to rely on foreigners to boost the US acceptance market as a way of circumventing the problem of inhospitable domestic conditions. The main instrument of the new policy orientation was the targeting of the balances of foreign central banks for investment in US acceptances. Its pursuit brought the FRBNY, led largely by Paul Warburg, down a winding path that made foreigners crucial to both the demand for, and the supply, of US acceptances.

As early as 1917, the Federal Reserve System had created the possibility for Reserve banks to have foreign central banks as correspondents and the FRBNY was assigned responsibility for the system's initial relationship with the Bank of England. By 1920 the FRBNY was holding balances on deposit for several central banks, and placing them in the acceptance market, but the amounts involved remained small through 1923.[113] From March 1924, however, we find evidence of a more strategic approach to the correspondent balances of foreign central banks in a letter from Paul Warburg to Owen Young. Young was working with Charles Dawes on his eponymous plan to overcome the reparations crisis in Germany and stabilize its currency. Warburg suggested that the crisis offered an extraordinary opportunity for the US dollar "to permanently retain a predominant position" vis-à-vis the pound sterling. Moreover, he emphasised "what a far reaching question is involved for us in the matter" by pointing out seizing the opportunity might overcome the frustrations of trying to build a US discount market based on domestic initiatives:

> Personally, I can envisage, that if through the establishment of gold exchange standards in Europe, many countries carry their reserves over here, and invest them in bankers acceptances and balances, the result of that would be the development of a wide open discount market, *such as we have been trying in vain for five years to establish over here*.[114]

The FRBNY was to turn Warburg's vision into reality in the ensuing years, soliciting correspondent relationships with foreign central banks and then privileging the acceptance market in placing their deposits in the US money market. By 1926, an internal memorandum underlined the benefits for the US acceptance market of purchases by the FRBNY on behalf of its foreign correspondents. [115] By early 1927, as Figure 5 shows, such purchases had increased further to more than $100 million, and then continued their expansion to reach almost $400 million by mid-1928. By then, they far outweighed the purchases of acceptances by US commercial banks and even rivalled the FRBNY's purchases of acceptances for its own account.

The impact of the FRBNY's growing reliance on foreigners for boosting the US acceptance market was not limited to the demand side of the market. The widespread adoption of the gold exchange standard from the mid-1920s facilitated the new US policy by allowing central banks to hold some of their reserves in the world's leading currencies. However, it did not ensure that the dollar would be favoured over the pound sterling in the choice of reserve currencies. Since the British were competing hard for

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[113] Beckhart, 427. In these arrangements, the FRBNY guaranteed the bill or added its endorsement so we can track the amounts involved in the contingent liability that the reserve banks disclosed in their statements of condition.
[114] BSP, Paul Warburg to Owen D. Young, March 21, 1924, emphasis added.
[115] Acc_2, Kenzel to Jay, November 29, 1926.

these reserves, Warburg argued the US had to join the fray: "there must be a give and take, and in order to match England's contribution, we would have to be prepared to grant rediscount facilities just in the same manner as the Bank of England has done".[116]

That could be done, he suggested, if "a strong syndicate" of leading US banks and bankers was formed "to rediscount a substantial number of millions of dollars for the note of the issuing bank of Germany, provided this paper complies with the requirements of the Federal Reserve Act, i.e. that it should be of a commercial character". He went on to explain that the paper would probably be "two name paper, representing the seller and the buyer of goods, endorsed by a German bank or bankers, and then again endorsed by the German note issuing institution". He noted, however, that such a scheme would work only if the paper "could be rediscounted at the Federal Reserve Bank provided it appealed to it and provided the Board would be willing to amend its respective regulation".[117]

Less than a month later, Warburg tested the feasibility of his proposed scheme, with the only difference being that he proposed that the newly established *Golddiskontbank*, which he had helped to finance, would endorse the German trade bills.[118] Warburg asked the FRBNY whether such bills, if endorsed by a US bank, would be eligible for purchase in its open market operations. The New York bank replied in the affirmative but informed him that: "the Federal Reserve Board should be apprised of the matter as it presents a question of policy". In forwarding the issue to the Board, the FRBNY noted that "British merchant bankers are arranging a discount credit of £ 10,000,000.- in London on German trade bills, similar to those proposed under the $5,000,000 American credit" and explained that the credit arranged by Warburg "will assist in maintaining the dollar as one of the bases of trade and settlements in Germany, whereas without this credit the pound sterling is likely to become the predominant medium".[119] The Board reported back within a few days that it would not make objection to the FRBNY's purchase of such bills.[120]

The following month, in an exchange of letters with the President of the Reichsbank, Hjalmar Schacht, Warburg discussed further details of schemes for rediscounting German bills with the Federal Reserve System. Schacht described Germany as "suffering from a terrible lack of capital", he explained that "she no longer has the capital necessary for making deliveries without payment" and emphasised that having rediscount credits available from the Americans would be "of great help for the German industry and commerce".[121] Then Warburg started to work on more ambitious plans to discuss with Schacht, such as funding the German railway system's annual purchases of coal from German producers, with an acceptance credit granted by New York banks.[122]

[116] BSP, Paul Warburg to Owen D. Young, March 21, 1924.
[117] Ibid.
[118] On the Gold Discount Bank, see Gerald Feldman, *The Great Disorder: Politics, Economics, and Society in the Great Inflation, 1914-I924*. Oxford/New York, 1993, 831.
[119] Acc_1, Pierre Jay, Federal Reserve Bank of New York, to Federal Reserve Board, April 5, 1924.
[120] Acc_1, Governor Crissinger, Federal Reserve Board, to Pierre Jay, FRBNY, April 8, 1924.
[121] BSP, Hjalmar Schacht, President of the Reichsbank – Direcktorium, to Paul Warburg, May 31, 1924.
[122] BSP, Paul Warburg to Benjamin Strong, August 21, 1925.

However, by then the discussion of Reserve banks' purchasing foreign bills had become contentious inside the Federal Reserve System leading to the deferral of a formal decision on the matter. Pending that decision, the FRBNY continued to purchase foreign bills endorsed by US banks but officials there discovered that London was competing harder than before for German business. In late 1926, word reached the FRBNY that the British had slashed the commissions they were offering to German companies to try to win their business away from the Americans. The FRBNY calculated that even if US banks maintained their existing ¼% commission compared to the 1/8 per cent the British were offering, acceptance credit would still be cheaper in New York given its lower discount rate.[123] However, New York's cost advantage was no longer sufficient for the Germans who said the British offer was their opportunity to escape the onerous regulations imposed by the Americans on their acceptance business.[124]

As Kenzel explained to Jay, there were certain types of credit that were much sought after in Germany and available to them in London. Of particular importance was credit for the domestic transportation and processing of foreign exports in Germany, with a leading example being the raw cotton shipped from the United States to Germany for transformation in German textile mills. Since Federal Reserve regulations did not permit the discount of acceptances to provide what was essentially working capital for German companies, an important question for FRBNY officials was whether US law should be amended to allow 'full' competition with London banks.

It was a controversial question but the FRBNY answered with a decisive "yes" and the FRB agreed to a series of regulatory changes in November 1927 that loosened the restrictions on the types of bills that US banks could accept.[125] When Governor Young of the FRB announced the changes at the annual AAC meeting, bankers celebrated them as a boon to the US acceptance market.[126] Sure enough, the regulatory loosening opened the door to a flood of paper, most of it from central Europe and especially Germany, for discounting at American banks. The implications for the supply of acceptances were dramatic, as Figure 6 shows, with acceptances issued for the shipment and production of goods within and between countries other than the United States accounting for half of the total growth in the volume of acceptances recorded from late 1927.

5. Conclusion

The effectiveness of FRBNY's foreign salve for a domestic problem played a crucial role in bolstering the demand for, and supply of, US acceptances in the late 1920s. That has led some researchers to conclude that efforts to build a US acceptance market were a success. Peter Ferderer, for example, emphasised the significance of the market's expansion and that "reserve bank support of the discount market diminished over the 1920s and early 1930s" to substantiate his claim of successful institutional innovation. It is true that purchases by reserve banks for their own account represented a declining

[123] American banks refused to give ground, claiming that they could not do business profitably at the 1/8% commissions that the British were asking, and agreeing among themselves to stay at ¼%.
[124] Acc_2, Kenzel to Jay, November 29, 1926.
[125] See, for example, Acc_2, R. M. O'Hara to Kenzel, Oct 10, 1927.
[126] *Commercial and Financial Chronicle*, December 3, 1927, 3010. Taken from v. 3, 288.

proportion of the overall demand for acceptances but, as we have seen, the reserve banks, and especially the FRBNY, channelled foreign central banks' deposits into the acceptance market. Although Ferderer recognises that foreign investors were "heavy buyers of bills by the late 1920s", he does not acknowledge that these purchases were channelled by the New York reserve bank in a deliberate attempt to bolster the demand side of the US market for acceptances. When we allow for that fact, it is apparent that total FRBNY purchases amounted to more than 50 per cent of the total volume of acceptances by the late 1920s, making the market heavily dependent on its support for its survival as, indeed, Flandreau and Eichengreen emphasise.[127]

Moreover, if one looks at domestic sources of demand for acceptances, it is clear that private investors were not taking over the burden of sustaining the discount market. To the contrary, demand from US private banks languished in the second half of the 1920s. And purchases by discount houses, although they increased to some extent, remained dependent on continued Fed support through repurchase agreements; far from being the temporary solution that Strong had envisaged, the FRBNY's resale agreements had become a permanent crutch for the discount houses.

Given the acceptance market's continued dependence on the Fed, therefore, it is wrong to conclude that it was a successful example of institutional innovation. But what really made the anticipated revolution in the US money market a failure was the fact that, even with the support of the Fed, it still did not succeed in usurping the call market as the central pillar of the New York money market. Once the depression of 1920-1921 ended, the acceptance market regained some momentum and then, after several years of stagnation in the mid-1920s, it grew to a volume of more than $1 billion by the late 1920s. However, the call market expanded much more rapidly than the acceptance market, making it a more formidable competitor than anyone would have predicted when the Federal Reserve Act was passed.

Officials of the Federal Reserve System as well as bankers openly acknowledged the failure of the anticipated revolution in the money market in the late 1920s. Writing to Governor Harrison of the FRBNY in early 1929, John E. Rovensky of Bank of America noted that: "[i]t is generally admitted that present conditions are unsatisfactory and have been more or less so ever since the acceptance business started".[128] Far from denying Rovensky's claim, Harrison found it "gratifying to have someone as well conversant with the facts" offer proposals for dealing with "this puzzling problem of the future of the bill market in this country, with which we are much concerned".[129] The failure of the anticipated revolution in the money market was discussed in internal FRBNY correspondence with one particularly detailed memo in March 1929 offering a long list of the considerable structural impediments to "the establishment of a bigger and broader discount market in New York".[130]

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[127] In measuring Fed support for the dollar acceptance market, Eichengreen and Flandreau include acceptances purchased by the Fed for foreign correspondents but without offering any explicit justification for doing so.
[128] Acc_2, Rovensky to Governor Harrison, Jan 4, 1929.
[129] Acc_2, Harrison to Rovensky, Jan 9, 1929.
[130] Acc_2, E. W. Kenzel to Governor Harrison, Memo on Governor's Conference (April 1, 1929, Topic I, C), March 29, 1929.

Increasingly, FRBNY policymakers acknowledged that their policies of raising or lowering acceptance rates could achieve little in the face of the structural constraints on the development of the US acceptance market. What they failed to do, however, is to make the link between the difficulties they encountered in achieving financial reform and the claims about the financial histories of the US and Europe that had been so central to framing reform. Thus, we see how powerful interpretations of the past can be in shaping economic policy through their tenacious grip on the ideas and actions of policymakers. My analysis suggests that drawing on the past in shaping economic policy can contribute to the failure of policy reform if it leads policymakers to misunderstand the challenges they face, and the options they have, in the present. In this case we see that problems can arise when policymakers misinterpret the past but also when they accord it so much importance that it obscures new conditions that manifest themselves in the present.

Insofar as misinterpreting the past is concerned, that charge can be levelled with respect to the histories of the US call market and the European discount system. In arguing that financial reform was necessary and possible in the United States, reformers like Warburg failed to acknowledge the extent to which the functioning of money markets relied on institutional arrangements and practices that grew out of the historical experience of the countries where they operated.[131] As we saw, Warburg explicitly downplayed the importance of the historical foundations of the London discount market to bolster his claim that it could be imitated in the United States.[132] Consequently, reformers did not anticipate how difficult it would be to transpose the model of a discount market to the United States where the actors necessary to its effective functioning had invested in the development of entirely different methods of functioning on their own money market.

In this case we see another problem too when policymakers depend on past experience to the exclusion of present experience as a guide to economic policy. Things change and, if they change enough, the past may prove to be a poor guide to the present. That happened in this case in one particularly ironic way given that the creation of the Federal Reserve System, which was supposed to undermine the attractions of the call market for US banks and displace it as the fulcrum of the US money market, made it more attractive. And it happened in an even more significant way when the commodity boom of the late 19th and early 20th centuries came to an unceremonious end after World War 1. The expansion of global commodity trade from the second half of the 19th century, and Britain's centrality to it, had supported the transformation of London's discount market into the global centre of international trade finance before World War 1. In contrast, in the face of the more unfavourable dynamics on commodity markets in the 1920s, the much less-internationally oriented US economy faced a structurally different challenge in trying to build an acceptance market.

In this case, policymakers would have benefitted from a much more critical approach to the original framing of reform embedded in the FRA. That is especially true since so much of that framing emanated from the ideas and analysis of a small number of men and sometimes a single man. Now and then in the files of the FRBNY one finds hints of unease. For example, in a letter in 1918 that the president of the Guaranty Trust Company of New York shared with FRBNY officials, his vice-

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[131] Stefano Battilossi, "Money Markets" in Youssef Cassis, Catherine Schenk, and Richard Grossman, eds., *The Oxford Handbook of Banking and Financial History*, Oxford & New York, 2016.

[132] Warburg, *Discount System*, 42.

president says "we should face the facts, and try to meet the issues, taking into consideration our local conditions, and not conditions ruling before the war in countries where Government Banks were established and acceptance business was done for about two centuries".[133]

Such advice was not taken, however, allowing the framing of financial reform embodied in the FRA to persist unchanged, despite its increasingly evident failure. A new vision of financial reform emerged in the United States only after the country found itself in the throes of the worse financial crisis it had ever confronted. And since the crisis originated in the New York call market, as so many crises in the past had done, it is no surprise that one of the key objectives of the wave of financial legislation that swept the United States in the early 1930s was to repress the seemingly irrepressible call market once and for all.

[133] Acc_1, Albert Breton to Charles Sabin, February 14, 1918.

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