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Liquidity creation without a central bank: Clearing house loan certificates in the banking panic of 1907☆

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ABSTRACT

We employ a new data set comprised of disaggregate figures on clearing house loan certificate issues in New York City to document how the dominant national banks were crucial providers of temporary liquidity during the Panic of 1907. Clearing house loan certificates were extensions of credit by the New York Clearing House to its members. These certificates were transferable to other clearing house members as a form of final payment for settlement of interbank payments. The certificate issues allowed borrowing banks to maintain (and increase) loans, fulfill cash payment upon depositor withdrawal demands, and enabled gold imports, which took two to three weeks to arrive. The large, New York City national banks acted as private liquidity providers by requesting (and the New York Clearing House issuing) a volume of clearing house loan certificates in excess of their own immediate liquidity needs, in accord with their role as central reserve city banks in the national banking system.

1. Introduction

Modern monetary economics associates lender of last resort activities with a central bank. The United States during the National Banking era (1863–1913) had no central bank and lacked a reliable way to increase the stock of high-powered money quickly. Yet during the Panic of 1907 the six largest national banks in New York City collectively and intentionally engaged in lender of last resort activities, without a statutory mandate or formal institutional arrangements to enable them to do so. Through the New York Clearing House, the Big Six national banks borrowed clearing house loan certificates in amounts that appear to have exceeded their own private needs, providing liquidity for the entire New York money market. While interpreting this as evidence of intentional lender of last resort behavior is open to interpretation, it is clear that the private behavior of the Big Six banks was aligned with the collective interest. To that extent they were acting as a lender of last resort. The New York Clearing House by approving the loan requests and the Big Six banks by borrowing the loan certificates provide an example of private provision of liquidity during a financial crisis.

The severe crisis in 1907 required a rapid liquidity infusion to quell the turbulence in the financial market. Banks initiated a partial suspension of converting deposits into cash, but that just delayed the liquidation of bank deposits. The issuance of clearing house loan certificates was the only mechanism available to increase quickly the supply of a substitute for specie[1] and legal tender in final payments among clearing house members. That substitution would allow the release of cash and specie to the general public. The loan certificates helped prevent the need for costly liquidation of bank assets, like call loans – short-term demandable loans backed by stock or bond collateral – in order to satisfy cash withdrawal demands or unfavorable clearing balances.

Clearing house loan certificates were, however, only a temporary provision of credit. For a more durable solution, the financial system required gold inflows (and/or a reduction in deposits) to restore bank reserves to the legal requirements, but there was a time lag between the arrangement for gold import and the arrival of the gold. The clearing house loan certificate issues enabled the borrowing banks to finance the importation of monetary gold, and

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1 Specie refers to precious metal (silver and gold) coinage.

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that role was important for the eventual recovery of the financial market from the panic.

The Big Six banks engaged in these liquidity-enhancing actions despite binding restrictions on the powers of the New York Clearing House. For example, the New York Clearing House was legally prohibited from printing currency, and it was unable to sell or buy bonds in quantities comparable to modern open market operations. There was no legal basis for the issuance of clearing house loan certificates and, therefore, they could not serve as legal reserves. These restrictions distinguish the New York Clearing House from modern central banking institutions. Still, the New York City national banks and the clearing house loan certificates were comparable to central bank injections of temporary liquidity as observed today in periods of extreme liquidity demands.[2]

We focus on the liquidity provided by the Big Six nationally chartered banks – National City, National Bank of Commerce, First National, National Park, Hanover, and Chase National. These banks comprised nearly 60 percent of the total assets of New York City national banks. Table 1 presents additional evidence on the extent of the Big Six bank dominance of New York City financial activity. The six biggest banks in New York City accounted for over 70 percent of the clearing house loan certificates issued by member national banks in 1907, whereas they provided just over half of the loan volume of all New York City national banks. The Big Six banks were crucial for clearing inter-regional payments; they were storehouses for interior bank deposits (correspondent bank deposits in New York City banks) and accounted for nearly 80 percent of the net liabilities to banks (also known as bankers balances) held by New York City national banks.[3] In 1907, it was essential that the largest New York City national banks requested clearing house loan certificates from the Clearing House because the aggregate resources of the other, smaller banks were likely insufficient to provide the credit necessary to generate the liquidity to alleviate a crisis.

We examine clearing house loan certificates issued during the Panic of 1907 among New York Clearing House member banks by exploiting underutilized data that list the borrowing bank identity, the loan amount, and the issue date. The existing research, to our knowledge, has not examined high frequency data for clearing house loan certificate issues at the borrower level. We emphasize the high frequency time series behavior of the data because the rapid issue of a large quantity of clearing house loan certificates was an important and necessary response to quell the panic.

The Panic of 1907 resulted in extreme financial tightness that altered the typical movements of notable high-frequency data, like short-term interest rates and currency premiums. Spikes in these series are interpreted as indicators of financial market distress. We find that the first issues of clearing house loan certificates coincide with spikes in such indicators of financial market distress. Within several weeks of the clearing house loan certificate issues, the only notable moderation among these indicators was in the interest rate on call money loans, stock market loans backed by the collateral of the purchased stock (or bonds). A return to pre-panic conditions among indicators of financial distress took place only after the dollar volume of gold inflows surpassed $100 million, the restrictions or partial suspension of cash payments was lifted, and the vast majority of clearing house loan certificate issues were paid off and cancelled.[4]

2. Background on the panic and loan certificates

2.1. The panic of 1907

The Panic of 1907 was precipitated by an unusual sequence of events including unwritten but effective restrictions placed as barriers to the free flow of capital to the United States (by the Bank of England). The Bank of England restricted the issue of American finance bills issued in London typically done in anticipation of the arrival of U.S. agricultural shipments. Finance bills were essentially loans on American collateral (financial) security taken from British banks. In essence, the Bank of England warned British banks that had issued credit on American securities to reduce that credit.[5] The restrictions were apparently in response to gold outflows from England to the U.S. in 1906, in part caused by the actions of Treasury Secretary Leslie Shaw in his attempt to stem an impending domestic U.S. crisis. Secretary Shaw subsidized the cost of importing gold into the U.S. from abroad by agreeing to pay the shipping costs, thereby lowering the effective gold shipping point. The gold outflows from England exacerbated an already significant gold drain from England to the US as a result of insurance payments by Lloyds of London to San Francisco policy holders as a result of the destruction caused by the 1906 San Francisco earthquake and the fires that ensued (see Odell and Weidenmier, 2004). The 1906 drain of gold from England nearly caused a panic in London. Tallman and Moen (1998) emphasize the irregular gold flows in 1907 arising from the Bank of England's policy, and emphasize that there was no quick substitute for gold with another form of base money stock. Without an adequate increase of base money, bank credit in New York City was constrained. This was especially problematic heading into the autumn harvest and shipping season.

Various culprits have been offered as the underlying causes of the Panic of 1907. The financial crisis was largely a result of the combination of real and financial conditions. The existing financial system embodied a number of rigidities. The gold standard placed external constraints on base money growth, which restricted growth in credit and deposits. The state chartered trust companies faced lower cash reserve requirements than state banks and nationally chartered banks, so that if deposits shifted from trust companies to banks there would be an effective increase in reserve demand. These structural issues combined with the decline of stock market asset values throughout 1907 provided an unforgiving financial climate. From the real economic perspective, the year was defined by flattening or stagnating growth in real activity. The more flamboyant, proximate cause was the failed attempt to corner the stock of United Copper by Augustus M. Heinze and Charles W. Morse.[6] The Heinze-Morse banks bankrolled the stock corner gambit, some of which were members of the Clearing House. The New York Clearing House removed Heinze and his accomplices from the banking industry and promised to support member banks, quelling any incipient runs on these banks during the week of October 14, 1907.[7]

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[2] See McAndrews and Potter (2002) for a detailed description of activities of the Federal Reserve discount window function during the week of 9/11.

[3] We have no way to determine the proportion of banker balances (net liabilities to banks) held by New York City national banks that represented local versus interior of the country deposits. New York City trust companies held deposit balances at New York City national banks, which qualified as reserves for trusts. Interior national banks placed deposits in New York City national banks, which then qualified as legal reserves for the interior banks.

[4] Goodhart (1969) makes a similar observation about the crucial role of gold inflows to end the crisis.

[5] Sprague (1910, pp. 229 and 241).

[6] See Strouse (1999), Tallman and Moen (1991), or Woods (2004, Chapter 9). Of the Heinze-Morse banks, the Mercantile National Bank was likely the most important, and its management was replaced by the New York Clearing House.

[7] There were runs on New Amsterdam National Bank and the Mercantile National Bank, both of which were associated with Heinze-Morse interests. However, those runs ceased after the New York Clearing House made an unequivocal statement of