Review of the Causes of 1907 Panic and Aftermath

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Abstract: The Panic of 1907 is often known as the Panic that initiated the development of the Federal Reserve System (Bordo, 1985). The Panic of 1907 was "The beginning of the end of unregulated capital markets and banking system without the lender of the last resort in the United States." (Fohlin, Gehrig and Haas, 2015, page 2). Numerous causes lead to the Panic of 1907 including: shadow banking, the San Francisco earthquake and fire, stock price manipulation, seasonal agriculture fluctuations, an outflow of gold, and higher interest rates. This paper reviews the primary literature on these causes, and how they led to the Panic of 1907 and the subsequent regulations culminating in the Federal Reserve Bank.

Keywords: 1907 Panic, Shadow Banks, NY Clearing House, 1906 San Francisco Earthquake and Fire "Silent Crush".

INTRODUCTION

"The Bank Panic of 1907 was one of the most severe financial crises in the United States before the Great Depression." (Moen and Tallman, 2009, page 1). This paper reviews the events leading to the Panic pf 1907 and the subsequent actions of the New York Clearing House (NYCH), and the Congressional hearings which led to the formation of the Federal Reserve Bank. During the 19th and early 20th centuries, bank runs were frequent and severely reduced people's wealth. In most of the United States branch banking was not allowed; this all but eliminated most forms of diversification in both banking assets and deposits, and made banks much riskier relative to a wide-spread multi-branch banking system. This made the United States financially vulnerable (Bordo, 1985).

The Panic of 1907 is recognized as the panic that gave rise to the Federal Reserve System (Bordo, 1985). The Panic of 1907 was "The beginning of the end of unregulated capital markets and weak central monetary authority in the United States." (Fohlin, Gehrig and Haas, 2015, p. 2) Events that led to the Panic of 1907 were: shadow banking, the San Francisco earthquake and fire, stock price manipulations, seasonal agriculture fluctuations, gold outflows, and higher interest rates.

AGRICULTURE

The United States' main commercial crops at the time were cotton, corn, and wheat. They were harvested within a span of months from late summer through autumn (Sprague, 1910). Rural areas had a high demand for cash during the spring planting, and during the fall harvesting (Sprague, 1910). These created seasonal demands for cash. To finance the farm economy during spring planting and throughout the growing season, farmers withdrew deposits and borrowed from banks. Rural banks depended upon financial center banks (primarily in New York City and Chicago) to acquire liquid assets demanded by the farm sector. Typically, these seasonal demands drained reserves from financial center banks (Kemmerer, 1910).

Agriculture affected general business: "(1) by affecting the community's consumption of other goods; (2) by affecting the solvency and credit of farmers and those engaged in dealing with them; (3) by affecting the balance of trade and bank reserves; (4) by affecting transaction of interests; (5) by affecting manufacturing interests for which the agricultural products is a raw material." (Piatt 1906, p. 328). In the early twentieth century in the US one-third of employment was either in agriculture or related industries. Agricultural exports increased gold inflows and the expansion of credit (Piatt, 1906).

Most financial crises were caused by fluctuations in productivity in agriculture, especially cotton production (Miron, 1986). Exogenous shocks such as weather depressed agricultural exports and reduced international demand for American assets which; 1) depressed stock prices in the US, 2) increased interest rates, 3) drained bank reserves, and 4) raised the probability of financial panics, 5) and adversely affected the business cycle (Miron, 1986).

Chari asserts that when productivity in agriculture increased the high demand for cash and withdrawals made New York banks more vulnerable to further

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shocks and exacerbated or created financial crises (1989). To test these hypotheses, Calomiris and Gorton (1991) examined the relationship between financial crises and harvest size by assuming a positive relation between rural demand for cash and crop production. They concluded that "seasonal money-demand shocks originating in the countryside cannot possibly be the cause of panics" (p. 148). Furthermore, in "years in which panics occurred in the Fall… were not years of unusually large harvests for corn, wheat, and cotton" (p. 137).

1906 SAN FRANCISCO EARTHQUAKE AND FIRE "SILENT CRUSH"

Odell and Weidenmier (2005) contend that the damage caused by the San Francisco earthquake and fire in April 1906, was about $200,000,000 (more than 1% of GDP) and provided a foundation for the 1907 panic. British companies were the major underwriters for San Francisco: payments by British insurance companies to the policy holders increased gold outflow to the United States. As a result the Bank of England raised its discount rate to reduce gold outflows (Odell and Weidenmier, 2004). Bruner and Carr (2009) argue that the San Francisco earthquake set the stage for the Panic of 1907 by: 1) causing the Bank of England's tight monetary policy; 2) the subsequent 48% decline in the stock market prices, 3) a tight American monetary policy from September 1906 to March 1907; and 5) an outflow of gold to London in 1907 caused a "silent crash" in the United States commencing in May 1907 (p.2).

An increase in the United States interest rates due to external shocks along with the usual high demand for currency and credit in rural areas during the fall harvest, and the absence of a central bank to accommodate this seasonal increase in demand, caused interest rates to spiked (Miron, 1986). This "perverse" elasticity of the money supply had sometimes triggered banking panics and was central in the "great debate" over the need for a central bank (Wicker, 2000).

ROLE OF TRUST COMPANIES AS "SHADOW BANKS"

In the late nineteenth century trust companies emerged as intermediaries in the New York financial market (Betz, 2013). "In the ten years ending in 1907, trust company assets in New York State had grown 244 percent (from $396.7 million to $1.364 billion) in comparison to 97 percent (from $915.2 million to $1.8 billion) for those of national banks, and 82 percent (from $297 million to $541 million) for state banks in New York." (Moen and Tallman, 1992, p. 612). The disposition of trust assets was significant in the New York money market. By 1907 the New York City trusts had grown in total assets and had become comparable in size to national banks (Moen and Tallman, 1992). Trust companies were able to purchase and sell corporate equity and debt as well to underwrite and distribute securities; besides being able to compete with national banks, they also had the advantage of investment opportunities that national banks were prohibited from engaging (Moen and Tallman, 1992). The runs on deposits that sparked the Bank Panic of 1907 were at two of the largest New York City trust companies, the Knickerbocker Trust, and the Trust Company of the United States (Sprague, 1910).

The clearinghouses on June 1, 1904 agreed to increase cash reserve from 7.5% (set on June 1903) to 10% to 15%. As a result, most New York trust companies withdrew from the clearinghouses (Sprague, 1910). Subsequently nonmember trust companies were not able to borrow funds to meet the cash demand of their depositors from the existing lenders of last resort: the clearinghouses (Sprague, 1910). The Trust Company of the United States held, on average, 12% of their assets as stocks and 18% as bonds, further bonds could not amount to more than 1/3 of required reserves (Herrick, 1908). According to Barnett (1910), trust deposit accounts served as "surplus funds of individuals and corporations deposited for income and pending investment." (P. 133) The trust deposit was demand deposits which check could be drawn against, but never the less were not frequently used as transaction accounts (Sprague, 1910). Trust companies were state chartered institutions, in New York compared to national banks, state banks or national average trusts were less regulated and could own stocks (Herrick, 1908).

Relative to commercial banks a larger percentage of trust companies' assets earned interest due to lower reserve requirements, as the trusts also paid higher interest rates on deposits than state and national banks, which lead to attracting depositors from state and national banks (Sprague, 1910). Lower reserve, lower capital to asset ratio, riskier asset portfolios than national banks and lack of access to a "lender of last resort," trusts were subject to much higher risks than national and state banks (Sprague, 1910).

During the panic of 1907 New York City trust companies due to depositors' withdrawals, faced a huge reduction in deposits and loans, while state and national banks did not experience similar shrinking of deposits and loans (Moen and Tallman, 1992). According to Moen and Tallman, in 1907, only trust companies were subject to extensive runs and large depositors' withdrawals (1992).

Donaldson (1992) contends that the large New York banks, especially the members of the New York Clearinghouse, were able to earn risk-adjusted rates of return from loans during the banking panics. During the Panic of 1907 widespread withdrawals from the trust companies, created new risks to the entire payments system arising from outside the traditional payments scheme; they were considered a danger to the clearinghouse system (McAndrews and Roberds, 1995). 1907 panic began on Tuesday, October 22nd, which resulted in failure of Knickerbocker Trust Company with total asset of $69 million one of the largest trust companies in New York City (Sprague, 1910). During this time New York City Banks, the center of money market, faces relatively tight cash position (Sprague, 1910). 1907 panic several other trust companies were also subject to large withdraws, unlike previous panics, the trust companies faced the sever decrease in loans and deposits (Sprague, 1910). Given that trust companies held low percentage of cash reserve on their demand deposits, to meet the cash demands, they were forced to sell asset and call on loans (Sprague, 1910). Among trusts, the Knickerbocker, the Trust Company of the United States, and Lincoln decrease in their assets was most significant and faced the most publicized runs by depositors (Sprague, 1910).

The New York Clearinghouse acted as a lender of last resort for its members, in previous financial crises (Timberlake, 1984). Trust companies only had indirect access to clearinghouse through their member banks, therefore were not significant part of payment systems (Timberlake, 1984). In 1907, trust companies had a high demand for cash which was much higher than available liquidity in the market, this gave few financial institutions with significant cash "monopoly power" over the limited supply of cash (Timberlake, 1984). According to Moen and Tallman "The primary mechanism for the transmission of financial distress throughout the financial system was the contraction of loans, primarily collateralized loans held by trusts, nearly 90% of trust company loans were backed with collateral, compared to 57% for New York City national banks" (1992).

KNICKERBOCKER TRUST COMPANY

Sarah McNelis (2012) writes that Fritz Augustus Heinze and his two brothers (who made fortunes in Montana copper) moved their operations to New York City and purchased control of the Mercantile National Bank. The brothers also founded organized a brokerage business, Otto C. Heinze & Company (King, 2012). In early October 1907, Otto Heinze suspected that several securities brokers had been short-selling shares in the Heinze-controlled United Copper Company, to profit from a drop in a security's price (King, 2012). Otto Heinze, mistakenly believed that he and his brothers controlled most of the company's stock, Otto's brokerage company began purchasing United Copper shares in an effort to "corner" the market and then "squeeze" the short-sellers, the miscalculation of their ownership, was devastating (King, 2012). On October 14, the price of United Copper shares opened near $40, when the speculative margin purchases began, rose as high as $60, but soon dropped as the stock "corner" unraveled, plunging to $10 within two days (King, 2012).

Several brokerage houses, including Otto Heinze & Company, failed, and depositors began to line up outside Mercantile National Bank, which had loaned heavily to the failed Otto Heinze & Company (King, 2012). F. Augustus Heinze resigned as president of the bank, but this did not calm the surge of depositor withdrawals (King, 2012). The New York Clearing House refused to loan to Knickerbocker Trust Company but came to the aid of Mercantile National Bank, which was a member of the New York Clearing House Bank. Still, the Mercantile National Bank failed, and the local panic quickly metastasized into a contagion and spread to other banks and trust companies linked to the Heinzes and their associates (Bruner and Carr, 2008). As the number of banks on the verge of collapse increased, J. P. Morgan came to the rescue. The Knickerbocker Trust Company closed on Tuesday, October 22, and depositors rapidly began withdrawals from other trust companies (Bruner and Carr, 2008). According to King, the Heinze brothers market speculations "would provide the spark for an economic conflagration that would consume the United States banking system" (2012). The crisis confronting New York bankers did not restore calm the panic until mid-November 1907.

According to Moen and Tallman (1992) between August 22 and December 19, 1907 the volume of loans at trust companies fell by 37%, while the volume of loans at banks only fell by 19%. Clearinghouse acted as an emergency lender to its members in crisis times, the trusts were not members of clearinghouses, and did not have access to reserves to increase liquidity, contraction of loans. Subsequently the panic spread to the real sector (Moen and Tallman, 1992).

The Bank Panic of 1907 was not any different than previous financial crisis which characterized by fall in stock prices, increase in interest rate, slow economic growth, sharp contraction in the real economy, banks and other financial institutions suffered extreme deposit withdrawals international credit markets were also tight before the Panic (Sprague, 1910). In 1906 the Bank of England raised its discount rate from 4% to 6% in response to unusually large gold outflows to the United States (Moen and Tallman, 1992).

BANKING WITHOUT DEPOSIT INSURANCE

According to Tallman and Moen (1990), on October 24, to restrain the Panic, the Treasury Department deposited $25 million in New York banks followed by J. P. Morgan's elaborate bailout. Morgan using a large amount of his own money along with that of other city major bankers (Tallman and Moen 1990) enabled the New York Clearing House Association on October 26 to issue Clearing House loan certificates for its member banks, and Treasury Certificates were issued on November 19th and 20th. (Tallman and Moen, 1990).

Between November 22 and December 7, 1907, the Bank of France stated that it would discount the United States' commercial paper for gold Eagles held in the Bank's reserves (Rodgers and Payne, 2012). This had the effect of reducing the downward spiral of equity prices and inject liquidity into the markets (Rodgers and Payne, 2012). In contrast to Morgan's one-time injection of funds, the actions of the Bank of France provided ongoing stability (Rodgers and Payne, 2012).

Wilson and Rodgers (2011), contend that fluctuations in U.S. capital markets explain the motivation behind the actions of the Bank of France. During the Panic of 1907 bond and stock payments occurred outside of the banking system; due to the gold clauses in most bond indentures, coupon and principal payments were specified in gold, which helped to integrate these securities into the international markets (Wilson and Rodgers, 2011). Many of the American bond issues were jointly listed and traded in New York and in Europe, allowing an active arbitrage to develop between these markets. The Bank of France's actions allowed investors to continue receiving payments even when banks deposits were not converted to currency (Wilson and Rodgers, 2011).

CONCLUSION

The Panic of 1907 lasted from October 1907 to January 4th 1908 (Sprague, 1910). During the Panic of 1907, about $500 million loan certificates were issued, about 4.5% of money stock, this private money circulated as hand–to–hand currency, initially at a slight discount from par (Gorion 1985). The severity of the Panic of 1907 started the discussions for changing the financial system, to provide a lender of last resort and additional regulations for the stock market to reduce destabilizing activities (Calomiris and Gorton, 1991).

As a result of the bankers' Panic of 1907, on May 28, 1908, Congress passed the "Aldrich-Vreeland Act" an emergency currency law, to ease the ongoing credit crunch, further, during the crisis it provided emergency currency to inject liquidity into the financial system (Calomiris and Gorton, 1991). The Aldrich-Vreeland allowed more money into circulation by allowing national banks to issue notes on a wider range of securities "in addition to federal government bonds, the Aldrich-Vreeland allowed banks to use the bonds of states, cities, and counties, along with commercial paper." (United States History, n.d. para 1). Aldrich-Vreeland Act, came into play in the summer of 1914, according to Friedman and Schwartz "by November 1914 "the country had recovered from the immediate shock of the declaration of war in Europe, thanks in no small part to the availability of Aldrich-Vreeland emergency currency." (1963, p. 172).

Additionally, the National Monetary Commission examined the Panic of 1907 and recommended procedures to regulate the banking system and capital markets (Calomiris and Gorton, 1991). The National Monetary Commission submitted its national report in 1912, pointing out the need for an official lender of last resort, and on December 23, 1913, Congress passed the Federal Reserve Act. and President Woodrow Wilson signed the Federal Reserve Act on December 1913, to establish economic stability by introducing a central bank to oversee monetary policy and financial stability in the United States (Calomiris and Gorton, 1991). Additionally, Money Trust hearings in Congress led to the Clayton Antitrust Act, which defined unethical business practices, such as price fixing, monopolies, and anti-competitive mergers, also declared strikes, boycotts, and labor unions legal under federal law (United States House of Representative, n.d.).

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