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1970 Commercial Paper Market Liquidity Crisis¹

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Yale Program on Financial Stability Case Study
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Abstract

Penn Central Transportation Company (Penn Central), the resulting railroad company of the late 1960s merger of Pennsylvania Railroad and New York Central Railroad, filed for bankruptcy on June 21, 1970. The bankruptcy came in the middle of the 1969–70 recession and sparked a sharp downturn in the commercial paper market. The Federal Reserve did not intervene directly in the commercial paper market but rather increased funding options available to banks via the discount window and an amendment to Regulation Q. The banks then provided funds to corporations unable to acquire them from the commercial paper market. The liquidity crisis abated within a few weeks.

Keywords: Penn Central, commercial paper, Federal Reserve, Regulation Q, discount window, liquidity

¹ This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering the responses to the global financial crisis that pertain to market liquidity programs.

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1970 Commercial Paper Market Liquidity Crisis

At a Glance

Penn Central Transportation Company (Penn Central), the resulting railroad company of the late 1960s merger of Pennsylvania Railroad and New York Central Railroad, filed for bankruptcy on June 21, 1970. The bankruptcy came in the middle of the 1969–70 recession and sparked a sharp downturn in the commercial paper market.

The Federal Reserve (the Fed) took multiple actions to provide liquidity to the commercial paper market, including: (1) reducing nonpecuniary costs to depository institutions borrowing from the discount window, (2) removing the Regulation Q ceiling on the interest rate of large-denomination certificates of deposit (CDs) banks could hold, and (3) preparing to use its emergency lending authority under Section 13(3) of the Federal Reserve Act of 1913 if needed.

The Federal Reserve did not intervene directly in the commercial paper market but rather, using the first two actions, increased funding options available to commercial banks, with the idea that the commercial banks would then provide funds to corporations unable to get them from the commercial paper market.

Summary Evaluation

The relatively short length of the commercial paper liquidity crisis is widely attributed to the quick interventions by the Federal Reserve.

Summary of Key Terms	
Purpose: To support banks' backstopping of the liquidity crisis in the commercial paper market	
Bankruptcy Date	Sunday, June 21, 1970
Discount Window Adjustment Announced to Large Banks	Weekend of June 19–21, 1970
Discount Window Adjustment Effective	Monday, June 22, 1970
Peak Usage of the Discount Window Borrowing	\$1.7 billion (nearly 3x increase)
Regulation Q Amendment Announced	Tuesday, June 23, 1970
Regulation Q Amendment Effective	Wednesday, June 24, 1970

1970 Commercial Paper Market Liquidity Crisis: United States Context	
GDP (SAAR, Nominal GDP in LCU converted to USD)	<p>\$1,038.2 billion in 1969 \$1,088.6 billion in 1970</p> <p><i>Source: Bloomberg</i></p>
GDP per capita (SAAR, Nominal GDP in LCU converted to USD)	<p>\$5,032 in 1969 \$5,234 in 1970</p> <p><i>Source: Bloomberg</i></p>
Sovereign credit rating (5-year senior debt)	<p>As of Q4, 1969:</p> <p>Fitch: Data not available Moody's: Aaa S&P: Data not available</p> <p>As of Q4, 1970:</p> <p>Fitch: Data not available Moody's: Aaa S&P: Data not available</p> <p><i>Source: Bloomberg</i></p>

<p>Size of banking system</p>	<p>\$524.6 billion in total assets in 1969 524,645,322</p> <p>\$570.2 billion in total assets in 1970 570,158,397</p> <p><i>Source: FDIC</i></p>
<p>Size of banking system as a percentage of GDP</p>	<p>50.5% in 1969</p> <p>52.4% in 1970</p> <p><i>Source: FDIC</i></p>
<p>Size of banking system as a percentage of financial system</p>	<p>Banking system assets equal to 29.5% of financial system in 1969</p> <p>Banking system assets equal to 29.5% of financial system in 1970 (1,933 billion)</p> <p><i>Source: Federal Reserve, Flow of Funds</i></p>
<p>5-bank concentration of banking system</p>	<p>Data not available for 1969/1970</p> <p><i>Source: World Bank Global Financial Development Database</i></p>
<p>Foreign involvement in banking system</p>	<p>Data not available for 1969/1970</p> <p><i>Source: World Bank Global Financial Development Database</i></p>
<p>Government ownership of banking system</p>	<p>Data not available for 1970</p> <p>0% of banks owned by the state in 1970</p> <p><i>Source: La Porta et al. "Government Ownership of Banks"</i></p>

Existence of deposit insurance	100% insurance on deposits up to \$20,000 in 1969 100% insurance on deposits up to \$20,000 in 1970 <i>Source: FDIC</i>
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I. Overview

Background

Penn Central Transportation Company (Penn Central) was the result of a 1968 merger of Pennsylvania Railroad and New York Central Railroad (SEC 1972). The resulting company was the largest railroad and the sixth-largest corporation in the country (Treiber 1970). However, due to management and infrastructure coordination issues, Penn Central struggled from the very early days of its merger. The postbankruptcy Securities and Exchange Commission (SEC) report to Congress described Penn Central as, “hav[ing] been born out of the weakness of the two constituent parts ... [and] absent a major restructuring ... the drift into bankruptcy was inevitable. The only question was the timing” (SEC 1972). After failed attempts to secure funding from the federal government or Federal Reserve (the Fed), Penn Central filed for bankruptcy on June 21, 1970 (Brimmer 1989). The ripples of Penn Central’s failure spread fast and far because of the heavy reliance of many nonfinancial corporations on short-term borrowing in the commercial paper market.

The commercial paper market had grown dramatically in the decade leading up to the bankruptcy of Penn Central. Total commercial paper outstanding had quadrupled from approximately \$5 billion in 1960 to \$20 billion by 1968 and then doubled to \$40 billion by 1970 (Calomiris 1993). “As [Penn Central’s] financial condition deteriorated, management relied more heavily on the sale of commercial paper as a means of financing the losses being incurred ... at its peak there was as much as \$200 million of paper outstanding” (SEC 1972).

Although Penn Central represented just 0.5% of the total commercial paper market, fear quickly spread “that other large firms might not be able to meet their obligations” (Treiber 1970). Commercial paper obligations were relatively short term; the average maturity on finance company paper at the time was less than 30 days (Calomiris 1993). Corporations typically maintained backup lines of credit from their banks in case holders of commercial paper were unwilling to roll them over. However, unlike in the commercial paper market, when the banking system created a new loan, banks had to have a percentage of the value of the loan held in reserve. The expected sharp increase in demand for reserves moved the Federal Reserve to ensure banks would be able to borrow money from the Fed to satisfy the reserve requirement to make loans to “borrowers previously dependent on the issuance of commercial paper” (Burns 1970).

Program Description

The Fed took multiple actions to provide liquidity to the commercial paper market, including: (1) reducing nonpecuniary costs to depository institutions borrowing from the discount window, (2) removing the Regulation Q ceiling on the interest rate of large-denomination certificates of deposit (CDs) depository institutions could hold, and (3) preparing to use their emergency lending authority under Section 13(3) of the Federal Reserve Act of 1913 if needed.

The primary tool for Fed emergency lending was the discount window. The relationships, documentation, and technical resources required for depository institutions to borrow had been well established long before the 1970 summer drop in the commercial paper market. At least for a brief period, depository institutions knew they could come to the discount window if they were struggling to find funding from other banks in the interbank market, known as the federal funds market.

Depository institutions incurred three costs by borrowing at the discount window: (1) a higher interest rate than what was offered in the federal funds market, (2) other nonpecuniary costs such as an exam from bank examiners at the Federal Reserve Bank from which they borrowed, and (3) the stigma associated with borrowing from the central bank that has historically signaled that the borrower “must be in trouble” (Gorton and Metrick 2013).

The Fed’s fear was that as the commercial paper market deteriorated, more corporations locked out of the commercial paper market would be unable to meet short-term obligations, would go to their banks for extensions of lines of credit, and the banks would not have sufficient reserves to provide the needed credit.

The funding need that the Fed wanted to influence in June 1970 was not in the interbank market but rather the commercial paper market, which had become a critical source of short-term funding for many large nonfinancial corporations in recent years. Lending directly to nonfinancial corporations in the commercial paper market would have required use of other emergency authorities (use of Section 13(3) authority is discussed later). During the weekend (June 19–21, 1970) leading up to the bankruptcy of Penn Central, leadership at the Federal Reserve Bank of New York (FRBNY) notified large depository institutions in the area that if they borrowed from the discount window with the purpose of funding corporations unable to access funds in the commercial paper market, then the Federal Reserve would allow them to “do so without incurring any costs other than the discount rate” (Calomiris 1993). The intended effect was to reduce the latter two costs of discount window borrowing, namely: the nonpecuniary costs and the stigma.

Fearing the discount window actions would be insufficient and to enable banks to tap additional funding sources, on Tuesday, June 23, 1970, the Board of Governors, after consultation with the Federal Deposit Insurance Corporation (FDIC) and the Federal Home Loan Bank (FHLB), announced the amendment of Regulation Q by suspending ceilings on interest rates payable by member banks on CDs and other single-maturity time deposits in denominations of \$100,000 or more with maturities of 30 through 89 days (Federal Reserve 1970).³

In both the amendment to Regulation Q and the encouragement of use of the discount window, there were no official stipulations that the funds borrowed, at the discount window or via higher-rate CDs, be lent to corporate customers unable to turn over their commercial paper. However, Fed Chairman Arthur Burns reported that “in the nervous days that immediately followed, the country’s large banks played their part by mobilizing on a magnificent scale lines of credit for sound borrowers who were caught in a liquidity squeeze, and thus prevented a dangerous wave of bankruptcies across the country” (Burns 1970).

As the crisis unfolded, the Fed created plans to use its ultimate lender of last resort authority granted in Section 13(3) of the Federal Reserve Act if necessary. After outlining the actions

³ The *New York Times* reported that the Federal Deposit Insurance Corporation (FDIC) “took a parallel action for the banks it regulates” (Dale 1970). The *Wall Street Journal* reported that the Federal Home Loan Bank (FHLB) Board, at the time a lender-of-last-resort-like government sponsored entity for savings and loans institutions, would probably not lift their rate ceiling with the Fed and the FDIC: “because savings and loan institutions depend heavily on relatively low-yielding older mortgages, officials doubt that S&Ls could afford to make much use of greater interest rate leeway” (Wall Street Journal 1970).

taken by the Federal Reserve, Chairman Burns told a joint committee of Congress in July 1970, a month and two days after the Penn Central bankruptcy, "Furthermore, the Federal Reserve could—under unusual and exigent circumstances—utilize the limited power granted by the Federal Reserve Act to make direct loans to business firms on the security of government obligations or other eligible paper, provided the borrower is creditworthy but unable to secure credit from other sources" (Burns 1970; see also Schadrack and Breimyer 1970).

Outcomes

Figure 1: Banking System Changes during the Penn Central Crisis

Banking System Changes during the Penn Central Crisis						
Date	Federal Funds Rate Minus Discount Rate	Total Borrowed Reserves \$million	Borrowed Reserves of Large Commercial Banks \$million	Loans to Business and Finance Companies By Large Commercial Banks, \$million	Large Negotiable CDs at Large Commercial Banks \$million	U.S. Government Securities Held By Federal Reserve Banks \$million
1970						
January	3.04	1,071	807	83,423	10,444	55,568
February	2.41	873	522	83,549	10,839	55,749
March	1.45	1,594	1,334	83,903	11,795	55,621
April	2.43	926	680	84,122	13,022	56,085
May	1.64	979	675	83,265	12,984	57,115
June 3	1.84	1,335	1,063	83,545	12,964	57,698
10	1.98	834	624	83,811	12,956	57,552
17	1.80	459	273	85,785	12,741	57,823
24	1.21	840	613	85,331	12,949	57,005
July 1	1.23	923	671	87,212	14,118	57,714
8	1.34	1,598	1,402	87,161	15,199	57,671
15	1.59	2,036	1,837	87,560	15,980	58,839
22	1.16	1,216	1,044	87,472	16,911	58,138
August	0.34	1,044	941	86,067	20,157	59,618
September	0.05	852	788	88,426	22,227	60,055
October	0.11	418	341	86,514	23,546	59,283
November	-0.59	1,144	1,098	86,385	25,201	61,209
December	-0.68	252	224	89,130	26,075	60,632

¹ All data are end-of-month, unless otherwise shown.

Source: Calomiris 1993.

The discount window saw a substantial increase in use during the weeks following the Penn Central bankruptcy. Writing in the FRBNY's December 1970 *Monthly Review*, Frederick C. Schadrack and Frederick S. Breimyer explained, "Member bank borrowings through the discount window, which had averaged about \$660 million in the week ended June 17, rose to a peak of \$1.7 billion during the week ended July 15, then gradually fell back to the \$660 million level by the end of August" (Schadrack and Breimyer 1970).

Following the amendment to Regulation Q, there was a substantial increase in funds borrowed by depository institutions via large-denomination CDs. The Federal Open Market Committee (FOMC) minutes for its July 21, 1970, meeting note that the subsequent influx of funds was large; in the three weeks ended July 15, large-denomination CDs outstanding at weekly reporting banks increased by about \$3 billion, "the most rapid advance on record" (FOMC 1970b). The regulatory ceiling was never reinstated, and the value of large CDs

increased from \$12.9 billion in June 1970 to \$26.1 billion in December 1970 (Calomiris 1993)⁴. As shown in Figure 1 below, commercial bank loans to businesses increased.

Despite being ready “to make credit available to worthy borrowers facing unusual liquidity requirements that could not be met by obtaining funds from other sources,” the Federal Reserve did not need to make any emergency loans using the Section 13(3) authority (Mitchell 1970).

II. Key Design Decisions

1. Officials at Federal Reserve Banks called large banks of their respective districts, encouraging them to borrow at the discount window.

By Friday, June 19, 1970, the Federal Reserve knew that Penn Central would be filing for bankruptcy before the coming Monday. Over the weekend (June 19–21, 1970), William Treiber, first vice president of the Federal Reserve Bank of New York, made a number of phone calls to large commercial banks in New York City, informing them that as they made loans to corporations unable to access funds in the commercial paper market, the discount window would be available to meet reserve requirements (Treiber 1970).

Writing in the *American Banker* newspaper on October 13, 1970, Treiber said, “We looked sympathetically upon the use of the discount window to take care of the initial pressure” (Treiber 1970). On Tuesday, June 23, 1970, the other Reserve Bank presidents “were briefed on the recent actions, and they were asked to contact commercial bankers in their respective districts” (Brimmer 1989).

There was no official legal requirement that banks must use the reserves borrowed from the discount window to create loans for corporations unable to access funds in the commercial paper market.

2. Interest rate ceilings on CDs of large denominations were lifted by an amendment to Regulation Q.

Fearing the discount window actions would be insufficient and to enable banks to tap additional funding sources, on Tuesday, June 23, 1970, the Board of Governors, after consultation with the FDIC and the FHLB, announced the amendment of Regulation Q by suspending ceilings on interest rates payable by member banks on certificates of deposit and other single-maturity time deposits in denominations of \$100,000 or more with maturities of 30 through 89 days (Federal Reserve 1970).

The Federal Reserve Board announced the amendment of Regulation Q on Tuesday, June 23, 1970. A public announcement was released after the previously scheduled FOMC meeting (FOMC 1970a). The Board had discussed the amendment on Monday, June 22, but a number

⁴ Allan Meltzer, in his book *A History of the Federal Reserve*, noted that Governor George Mitchell “had always supported removing Regulation Q ceilings” (Meltzer 2009). Regarding bankers’ sentiment toward the rate ceiling, the *Wall Street Journal* reported on June 25, 1970, that in the years leading up to the crisis, “banks had chafed under the ceilings” (Review and Outlook; Liquidity, Inflation and the Fed).

of Governors wanted to wait, for a variety of reasons: (1) a desire to wait to see if a crisis materialized, (2) a concern about negative effects on the exchange rate, (3) a desire to coordinate with other relevant government agencies (Meltzer 2009).

The one-day delay gave the Board time to coordinate with Frank Wille, chairman of the FDIC, and Preston Martin, chairman of the Federal Home Loan Bank Board (FOMC 1970a; Meltzer 2009). The official announcement published by the Board referenced the coordination. The FDIC decided to make the same regulatory change to the banks they regulated (Dale 1970). The *Wall Street Journal* reported that the FHLB Board would most likely not make the change for the savings and loans institutions (S&Ls) they supervised because S&Ls would not be able to afford to pay the higher interest rates because of their business model (Wall Street Journal 1970).

The rate ceiling was removed only for CDs in denominations of \$100,000 or more with maturities of between 30 and 89 days (FOMC 1970a). As Chairman Burns put it in December 1970, “this action gave banks the freedom to bid for funds in the market and make loans available to necessitous borrowers” (Burns 1971), effectively replacing a portion of the commercial paper market.

There was no official, legal requirement that banks use the newly acquired funds from the high-denomination CDs to create loans for corporations unable to access funds in the commercial paper market.

3. Plans were created regarding lending under emergency Section 13(3) authority.

The Federal Reserve prepared standby procedures to be used in case the crisis escalated to an “unusual or exigent circumstance.” The emergency procedures referred to those outlined in Section 13(3) of the Federal Reserve Act that allow the Federal Reserve to make “direct loans to business firms on the security of government obligations or other eligible paper, provided the borrower is creditworthy but unable to secure credit from other sources” (Burns 1971). The Federal Reserve Bank of New York helped prepare for this situation (Schadrack and Breimyer 1970). However, no emergency loans to individual corporations were made. The details of the preparations were not made public, and their existence was not mentioned until a month after the bankruptcy.

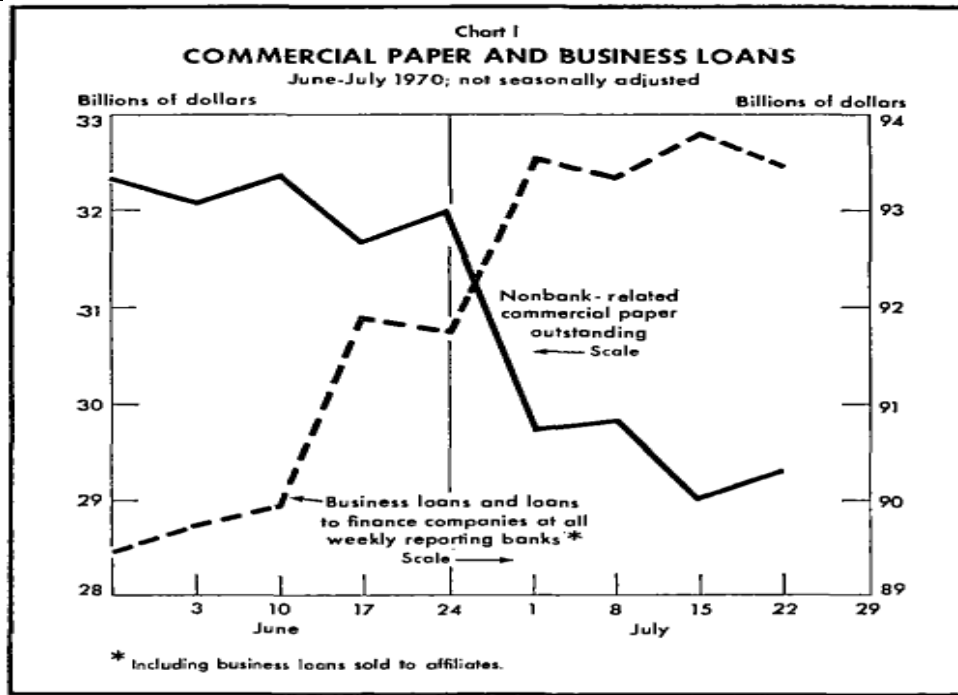
III. Evaluation

The relatively short length of the commercial paper liquidity crisis is widely attributed to the quick interventions in the discount window and Regulation Q by the Federal Reserve. The summary report by the SEC says, “Only quick action by the Federal Reserve ... appears to have saved the day ... What could have blown into a major liquidity crisis vanished almost before it began” (SEC 1972).

In 2014, Frederic S. Mishkin and Eugene N. White conducted an academic review of central bank responses to 11 financial crises of the past 150 years. Their research focused on “pre-emptive” central bank actions meant to “buffer the economy from the shocks emanating from the crisis.” Regarding the Federal Reserve’s response to the summer 1970 commercial paper liquidity crisis, the researchers noted, “The financial disruption from the Penn Central

bankruptcy ... turned out to be small and the recession which started shortly before the Penn Central bankruptcy occurred was mild” (Mishkin and White 2014).

Figure 2: Commercial Paper and Business Loans



Source: Federal Reserve Bank of New York [FRBNY] August 1970

Analysts at the Federal Reserve Bank of New York, writing in the August 1970 *Monthly Review*, illustrated (see in Figure 2) the decline in total commercial paper and the subsequent rise in business loans from banks. The analysts noted, “Banks were able to meet the higher credit demand through additional deposits made possible by the partial suspension on June 24 of Regulation Q ceilings and through increased reserves supplied by the System” (FRBNY August 1970).

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V. Key Program Documents

Press Releases/Announcements

Federal Reserve Amends Regulation Q – the official press release announcing the lifting of interest rate ceilings of certain large denomination certificates of deposit. <https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/fomcm19700623.pdf>.

Media Stories

Problems of Financial Community under Constant Scrutiny (October 13, 1970) – American Banker article written by the First Vice President of the Federal Reserve Bank of New York.

Reserve Suspends Interest on Some Big Deposit Certificates (June 24, 1970) – Wall Street Journal article summarizing Regulation Q changes by the Federal Reserve and the Federal Home Loan Bank Board.

Reserve Removes Interest Ceiling for Big Deposits (June 24, 1970). – New York Times article by Edwin L. Dale Jr. summarizing Regulation Q changes by the Federal Reserve and the Federal Deposit Insurance Corporation.
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