Japan: Special Funds-Supplying Operations

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Abstract

Following the collapse of Lehman Brothers in September 2008, the global commercial paper (CP) market began to tighten as interest rates rose and investors sought more-liquid money market securities. The Bank of Japan (BOJ) introduced several measures in late 2008 to make liquidity available to nonfinancial corporations who were strapped for cash. In December 2008, the BOJ implemented special funds-supplying operations in order to provide unlimited liquidity to banks and other financial institutions so they could continue to fund nonfinancial corporations. The BOJ would provide one- to three-month loans against an equal value of eligible corporate debt at a rate equal to the target uncollateralized overnight call rate, which was consistently 0.1% throughout the operation's lifetime. The short-term credit market gradually improved over the next year amidst consistent usage of the special operations. Approximately ¥38 trillion in loans were provided before the special operations ceased in March 2010. The special operations are viewed as relatively successful as they contributed to shrinking CP spreads during the first few months of implementation and promoted new issuances of CP and other corporate debt.

Keywords: commercial paper, special operations, short-term financing, loans, Bank of Japan, Japan

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At a Glance

In 2008, Lehman Brothers's bankruptcy disrupted short-term funding for nonfinancial companies, particularly through the commercial paper (CP) market. As CP markets tightened and investors turned to safer assets, investor demand for CP fell and interest rates on money market securities rose. The Bank of Japan (BOJ) introduced three facilities to promote liquidity in the commercial paper market. First, the BOJ enhanced its repo operations to cover a wider range of eligible collateral, including CP. The BOJ then introduced two new operations in December 2008: (1) special funds-supplying operations (the special operations), meant to facilitate short-term corporate financing; and (2) a measure to conduct outright purchases of CP, in which the BOJ would purchase 3-month CP and assetbacked CP (ABCP) aimed at shifting credit risk from financial institutions to the BOJ.

Summary of Key Terms	
Purpose: The operations aimed to ensure financial	
stability in Japanese financial markets and facilitate	
corporate financing	through expanded money
market operations.	
Introduction Date	November 21, 2008
Operational Date	January 8, 2009
Termination Date	March 31, 2010
Legal Authority	Article 33/37/38, Bank of
	Japan Act 1997
Size of the Fund	Unlimited
Aggregate Loans	~¥38 trillion (~370 billion)
Covered	Residual maturity between
Maturities	1-month and 3-months
Loan Rate	Avg. of target
	uncollateralized overnight
	call rate; fixed rate of 0.1%

The special operations became active on January 8, 2009, with an initial expiration date of March 31, 2009. Under the special operations, the BOJ could auction loans to financial institutions, providing an unlimited amount of liquidity. Loan amounts were equal to the value of corporate debt instruments by participating counterparties. Under the terms and conditions, collateral that the BOJ deemed eligible included corporate debt, CP, and other bills or deeds for companies, with a residual maturity of between 1-month and 3-months. When loan payments were due at maturity, counterparties had to repay the principal loan amount, in addition to a fee equal to the average of the target uncollateralized overnight call rate, determined monthly by the BOJ Monetary Policy Board.

The BOJ extended the measure three times: once until September 30, again until December 31, and lastly until March 31, 2010. The special operations were also amended to provide only loans up to three months and to not include ABCP as eligible collateral. Throughout 2009 and into early 2010, the BOJ loaned an aggregate amount of approximately ¥38 trillion to counterparties against eligible collateral under the special operations.

Summary Evaluation

One BOJ analysis found that the special operations, partly in conjunction with the measure to purchase CP outright, greatly contributed to a decrease in interest rate spreads on CP in Japanese markets during the first four months of 2009. The BOJ paper also observed that issuance rates of CP also increased during this time, suggesting that the CP market improved thanks to the effects of the special operations.

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I. Overview

Background

Early in the 2007-09 financial crisis, Japan's economy was relatively stable, withstanding spillover effects from the housing crisis in the United States and the deteriorating conditions in Europe. However, after Lehman Brothers declared bankruptcy in September 2008, investors saw nonfinancial corporate debt as increasingly risky. (Komine 2009) Unlike the CP market in the United States, where most borrowers were banks, financial companies, or asset backed CP (ABCP) sponsors, nearly two-thirds of issuers in the Japanese CP market were nonfinancial corporations. For that reason, the deterioration in Japan's CP market hit these corporations particularly hard. (BOJ Market Report 2008, p. 24)

The Bank of Japan (BOJ), seeking to stabilize its commercial paper market and facilitate financing for nonfinancial corporations, cut interest rates in November 2008 and January 2009, and implemented a variety of special market operations. (Ibid.) First, the BOJ expand the frequency and size of its operations to purchase commercial paper (CP) with repurchase agreements. (BOJ Decision, December 2008) Next, on January 8, 2009, the BOJ implemented special funds-supplying operations (the special operations) aimed to provide banks and other financial institutions with unlimited liquidity against eligible corporate debt pledged as collateral. (Ibid.)²

In late January 2009, the BOJ also introduced a ¥3 trillion measure to conduct outright purchases of CP. (Outright Purchases of CP) To read more about the expansion of repo operations and other CP measures undertaken by the BOJ, please refer to Appendix A or Buchholtz 2018.

Program Description

The special operations had an objective "...of ensuring stability in financial markets as well as facilitating corporate financing by conducting appropriate money market operations," using open market operations to provide unlimited loans against the value of corporate debt pledged as eligible collateral. (Special Operation) Initially, the loan duration was between one and three months, the period determined by the BOJ. (Ibid.)

The special operations allowed the BOJ to provide counterparties with loans at an unlimited amount, but equal in value to the eligible collateral pledged by the counterparty. (Ibid.) Eligible collateral under the special operations included corporate debt in the form of corporate bonds, most types of CP (excluding ABCP), bills drawn by companies, and loans on deeds to companies.³ (Ibid.) The loans, which were electronically transferred from

 $^{^2}$ The government also channeled support to the business sector through the Shoko Chukin Bank and the Development Bank of Japan, which was specifically authorized to purchase up to \$2 trillion of CP.

³ At the time, the Japanese financial system was in the process of transitioning from physical certificates to electronic transactions, a process described as "dematerialization." Both physical and electronic transactions were allowed under the outright purchase program (JASDEC 2008).

the BOJ to the counterparty, came with an interest rate equal to the "average of the target for the uncollateralized overnight call rate," which throughout the lifetime of the special operations was kept at 0.1% by the BOJ Policy Board. (Ibid.)

Outcomes

The BOJ announced that the special operations became effective on January 8, 2009, with the first operation occurring the same day. The BOJ Policy Board amended a variety of terms under the special operations within the first few months of enactment. In January, the BOJ amended the terms to exclude commercial paper issued by real estate investment corporations from consideration as eligible collateral against the loans, at the same time announcing that it would begin to accept real estate investment corporation securities as collateral in the CP repo program. (BOJ Amendment, January 2009)

In February, the BOJ increased the frequency of loan auctions from twice a month to once per week and extended the term of each loan to three months. (BOJ Amendment February 2009) The BOJ extended the duration of the special operations three times: once until September 30, again until December 31, and lastly until March 31, 2010. Also, the BOJ amended the special operations to extend all loans to three-month terms. (Special Operations Modifications)

The BOJ conducted its final operation on March 24, 2010, bringing the aggregate amount of loans provided over the special operations' lifetime to approximately ¥38 trillion. (BOJ Market Operations 2009, BOJ Market Operations 2010)

However, even though financial markets improved by this time, demand for the special operations remained high. Figure 1 shows the changes in loans provided at each auction on the left axis and the aggregate loan amount delivered on the right axis. While the amounts of all loans fluctuated auction-by-auction, as the graph shows, auction sizes would often noticeably increase at quarter ends.



Figure 1: Special Funds-Supplying Operations (January 2009 – March 2010)

Source: BOJ Market Operations 2009, BOJ Market Operations 2010; Note: Data for December 29, 2009 auction is missing.

In December 2009, the BOJ introduced a fixed-rate funds-supplying operation (FSO) to further ease monetary conditions in the wake of the "Dubai Shock," which affected U.S. and Japanese stock markets.⁴ (Shino 2011) The FSO was initially limited to providing an aggregate of ¥10 trillion in 3-month loans against pooled collateral, by way of auction. When the special operations expired in March 2010, the BOJ expanded the FSO to continue to "encourage a decline in longer-term interest rates" by raising the outstanding loan amount to ¥20 trillion, increasing the frequency of operations to twice a week, and introducing six-month loans, in addition to the three-month loans. (Ibid.)

II. Key Design Decisions

1. The BOJ introduced special operations to ease capital constraints on financial institutions and improve access to funding for nonfinancial companies

Under the special operations' terms and conditions, the purposes of the operation were to "facilitate corporate financing" by conducting money market operations and to ensure stability in financial markets. (Special Operations) Another aim was to put downward pressure on short-term lending rates in Japan. (OECD 2009)

During the BOJ's Monetary Policy Meeting in November 2008, members of the Policy Board stated that strained financial markets and the deteriorating funding environment had played a significant role in decreased issuances and widening spreads on CP and corporate bonds since September. (BOJ Minutes, November 2008) Because the funding environment for nonfinancial corporations was "less accommodative," members suggested implementing a measure to provide liquidity to support them. (Ibid.) Such measures, BOJ Board members said, should include altering the types of corporate debt eligible as collateral against BOJ loans and should expand existing funds-supplying operations collateralized by that debt.

The special operations were launched under Article 33/37/38, Bank of Japan Act 1997.

2. The BOJ could provide an unlimited amount of loans to selected counterparties.

The only limitation on loans to a financial institutions was the total value of corporate debt a financial institution held that it could pledge as collateral. (Special Operations)

3. The program could lend to financial institutions that were counterparties of the Bank of Japan

Eligible counterparties were already counterparties in the BOJ's open market operations. They included banks and other financial institutions, financial instrument firms, securities

⁴ In November 2009, Dubai World, one of Dubai's largest state-owned companies, announced that it would seek a six-month reprieve of about \$4 billion in debt payments. The standstill was found to be linked directly to payments on a \$4 billion Islamic bond issued by Dubai World's property group, Nakheel. The announcement was met with significant drops across global stock markets. (Financial Times NA 11/25/2009)

finance companies, and tanshi (broker) companies. The financial institutions and banks that could be eligible as a counterparty under the special operations were those listed under Article 37 of the Bank of Japan Act, 1997, with some exclusions as defined in the terms and conditions.⁵ (Ibid.)

Also, the BOJ decided to add to the list of its counterparties the Development Bank of Japan, which had been privatized in October 2008 but retained access to government funds and a mandate to support the government crisis response, with a focus on funding large and medium-sized nonfinancial corporations. The Development Bank began outright purchases of CP in December, at the request of the government. The BOJ also added the bank to its list of open market counterparties and, specifically, to its CP repo program. (Bank of Japan – January 27, 2008)

4. The amount of a loan would be equal to the discounted value of eligible collateral pledged by counterparties.

According to the calculations set forth by the BOJ, prices of eligible collateral were calculated. Different margins for each eligible collateral were dependent upon its residual maturity. Additionally, the margins could be adjusted when necessary to ensure consistency in the margin table as a whole in light of creditworthiness and marketability of the collateral. (Guidelines on Eligible Collateral)

5. Collateral eligible to be submitted by counterparties included a range of corporate debt.

Initially, the measure allowed the BOJ to purchase a range of corporate debt, which included different types of CP. (Special Operations)

However, the BOJ excluded specifically accepting asset-backed commercial paper, and then, excluded CP issued by real estate investment corporations, at the same time announcing that it would begin to accept real estate investment corporation securities as collateral in the CP repo program. (BOJ Amendment, January 2009)

6. The loans were provided at a low fixed rate, equal to the average of the target uncollateralized overnight call rate.

7. Initially, the special operations would provide one to three month loans. Later, the BOJ amended the operations to provide only three month loans.

The BOJ would determine the duration of loans under the special operations for each counterparty, limiting loans to be between one and three months.

⁵ Financial institutions are defined in Article 37, Paragraph 1 of the Bank of Japan Act, Act No.89, 1997. Eligible financial instrument firms, securities finance companies, and Tanshi companies are defined in Article 10, Paragraph 1, Clauses 2-4. Eligible instruments are defined in Article 28, Paragraph 1 of the Financial Instruments and Exchange Act, Act No. 25, 1948. The program excluded bridge banks. (Outright Purchases Terms and Conditions).

- 8. Initially, auctions would be conducted twice a month. The BOJ increased the frequency to once a week.
- 9. Initially, the special operations were set to expire on March 31, 2009. The BOJ extended expiration date of the special operations multiple times.

III. Evaluation

According to an analysis by Hirose and Ohyama, the special operations significantly contributed to reducing CP issue rates during the first four months of operation. (Hirose and Ohyama 2010) While CP rate spreads in Japan were increasing in late 2008, the coordination of implementing the outright purchase measure and special operations helped decrease CP rate spreads in January and February of 2009. However, the study finds that only the special operations, not the outright purchase measure or repo operations, contributed to decreased rates in March, April, and May. (Ibid.)

One cause of this may have been that the special operations were viewed as the least expensive of the three CP measures taken by the BOJ due to its low fixed rate – the BOJ maintained a 0.1% rate throughout the special operations' lifetime. The low cost, in addition to an improving CP market in Japan, may have provided institutions the ability to submit better collateral against these loans. The BOJ believed that outside of extending the special operation's lifetime, any other amendments to the operation might have had a negative impact on financial markets by increasing volatility. (Mizuno 2009) According to one speech, it was the BOJ's view that the special operations had greatly contributed to changing interest rates on CP. Moreover, if institutions chose to rely more on the special operations rather than other monetary measures, it would disrupt the market greatly and damage financing operations once the special operations expired. (Ibid.)

IV. References

Bank of Japan Policy Board. "Minutes of the Monetary Policy Meeting on November 20 and 21, 2008." Bank of Japan. December 25, 2008. (BOJ Minutes, November 2008). https://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2008/g081121.pdf

Bank of Japan Policy Board. "On Monetary Policy Decisions." Bank of Japan. December 19, 2008. (BOJ Decision, December 2008). https://www.boj.or.jp/en/announcements/release_2008/k081219.pdf

Bank of Japan Policy Board. "Establishment of 'Principal Terms and Conditions of the Special Funds-Supplying Operations to Facilitate Corporate Financing." Bank of Japan.

December 19, 2008. (Establishment of Program). https://www.boj.or.jp/en/announcements/release_2008/mok0812c.pdf

Bank of Japan Policy Board. "Amendments to "Guidelines on Eligible Collateral."" Bank of Japan. January 22, 2009. (BOJ Amendment, January 2009). https://www.boj.or.jp/en/announcements/release_2009/mok0901e.pdf

Bank of Japan Policy Board. "Amendments to "Guidelines on Eligible Collateral."" Bank of Japan. February 19, 2009. (BOJ Amendment, February 2009). https://www.boj.or.jp/en/announcements/release_2009/un0902b.pdf

Bank of Japan. "Guidelines on Eligible Collateral" Bank of Japan. October 13, 2000. https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo18.htm/

Bank of Japan. "Introduction of a DVP Mechanism for the Issuance and Redemption of Stocks under the New Book-Entry Transfer System for Dematerialized Stocks." Bank of Japan. January 5, 2009. (Book-Entry Transfer System). https://www.boj.or.jp/en/announcements/release_2009/set0901a.htm/

Bank of Japan. "Principal Terms and Conditions for the Special Funds-Supplying Operations to Facilitate Corporate Financing." Bank of Japan. December 19, 2008. (Special Operations). https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo39.htm/

Bank of Japan. "Principal Terms and Conditions for the Purchase of CP with Repurchase Agreements." Bank of Japan. January 22, 2009. (CP Repo Operations). https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo01.htm/

Bank of Japan. "Principal Terms and Conditions for Outright Purchases of CP." Bank of Japan. January 22, 2009. (Outright Purchases of CP). https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo42.htm/

Bank of Japan. "Financial Markets Report." Bank of Japan. March 2009. (BOJ Markets Report, March 2009). https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo42.htm/

Bank of Japan. "Special Funds-Supplying Operations to Facilitate Corporate Financing (Invalid)." Bank of Japan. 2009. (Special Operations Modification). https://www.boj.or.jp/en/mopo/measures/mkt_ope/ope_j/index.htm/

Bank of Japan. "Market Operations by the Bank of Japan (Monthly) 2009." Bank of Japan. 2009. (BOJ Market Operations 2009). https://www.boj.or.jp/en/statistics/boj/fm/ope/m_release/2009/index.htm/

Bank of Japan. "Market Operations by the Bank of Japan (Monthly) 2010." Bank of Japan. 2010. (BOJ Market Operations 2010). https://www.boj.or.jp/en/statistics/boj/fm/ope/m release/2010/index.htm/

Kerr, Simeon & Jennifer Hughes. "Dubai shock after debt standstill call." Financial Times. November 25, 2009. (Financial Times NA 11/25/2009). https://www.ft.com/content/46b4065c-d9f7-11de-b2d5-00144feabdc0

Hirose, Yasuo & Shinsuke Ohyama. "Identifying the Effect of the Bank of Japan's Liquidity Facilities: The Case of Commercial Paper Operations during the Financial Turmoil." Bank of Japan, Working Paper. December 2010. (Hirose & Ohyama 2010). https://ideas.repec.org/p/boj/bojwps/09-e-7.html

Japan Securities Depository Center, Inc. "Annual Report 2008." Japan Securities Depository Center, Inc. April 2008. (JASDEC 2008). https://www.jasdec.com/download/annual_r/ar2008_04.pdf

Komine, Takao. Government, Business and Markets after the Lehman Shock: A Review of Aid to the Business Sector in Japan. Japan Center for Economic Research. (Komine 2009). https://www.jcer.or.jp/eng/research/pdf/komine.pdf

Mizuno, Atsushi. "The Conduct of Monetary Policy in Japan and Abroad: Excerpts of a Speech at a Meeting with Business Leaders in Okayama." Bank of Japan. August 2009. (Mizuno 2009).

https://www.boj.or.jp/en/announcements/press/koen_2009/data/ko0908b.pdf

OECD. "OECD Economy Surveys: Japan 2009." OECD. September 2009. (OECD 2009). https://books.google.com/books?id=TzQYTboGCsUC&pg=PA54&lpg=PA54&dq=special+fu nds-supplying+operations+bank+of+japan+january+2009&source=bl&ots=UFmk-3QLu8&sig=H8LrwznWTkoUpn84Rzabf2qdDGk&hl=en&sa=X&ved=0ahUKEwiJ1Kff28baA hWQmOAKHen8D4oQ6AEIUjAH#v=onepage&q=special%20fundssupplying%20operations%20bank%20of%20japan%20january%202009&f=false

Shino, Junnosuke. "A Positive Theory of Fixed-Rate Funds-Supplying Operations in an Accommodative Financial Environment." Bank of Japan, Working Paper. May 2011. (Shino 2011).

https://www.boj.or.jp/en/research/wps_rev/wps_2011/data/wp11e04.pdf

V. Key Program Documents

Summary of Program

<u>Principal Terms and Conditions for the Special Funds-Supplying Operations to Facilitate</u> <u>Corporate Financing (Bank of Japan – December 19, 2008)</u> – *Principal terms of the special funds-supplying operations included providing selected counterparties unlimited loans in the form of auctions, but only up to the value of posted collateral. Loans initially had a duration of between one and three months and were to be repaid with a rate equal to the uncollateralized overnight call rate.*

https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo39.htm/

Implementation Documents

<u>Principal Terms and Conditions for the Special Funds-Supplying Operations to Facilitate</u> <u>Corporate Financing (Bank of Japan – December 19, 2008)</u> – *Principal terms of the special funds-supplying operations included providing selected counterparties unlimited loans in the form of auctions, but only up to the value of posted collateral. Loans initially had a duration of between one and three months and were to be repaid with a rate equal to the uncollateralized overnight call rate.*

https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo39.htm/

<u>Guidelines on Eligible Collateral (Bank of Japan)</u> – The Bank of Japan Policy Board prescribes a set of guidelines that the Bank of Japan follows to conduct monetary and currency operations, where collateral is only accepted if creditworthy and marketable. https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo18.htm/

<u>Minutes of the Monetary Policy Meeting on November 20 and 21, 2008 (Bank of Japan –</u> <u>December 25, 2008)</u> – *The Bank of Japan Policy Board introduced the special funds-supplying operations as a response to strained credit markets that aimed to facilitate corporate financing.* https://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2008/g081121.pdf

<u>Minutes of the Monetary Policy Meeting on December 18 and 19, 2008 (Bank of Japan – January 27, 2008)</u> – *The Bank of Japan Policy Board introduced the principal terms and conditions of the special funds-supplying operations.* https://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2008/g081219.pdf

<u>Minutes of the Monetary Policy Meeting on January 21 and January 22, 2009 (Bank of Japan – February 24, 2009)</u> – *The Bank of Japan Policy Board passed a vote to amend the eligible collateral under the special funds-supplying operations.* https://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2009/g090122.pdf

<u>Minutes of the Monetary Policy Meeting on February 18 and February 19, 2009 (Bank of</u> <u>Japan – March 24, 2009)</u> – *The Bank of Japan Policy Board passed a vote to extend the special funds-supplying operations from March 31, 2009 until September 30, 2009.* https://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2009/g090219.pdf

Legal/Regulatory Guidance

<u>Article 37 of the Bank of Japan Act 1997</u> – Article 37 of the Bank of Japan Act 1997 states that the Bank may provide financial institutions uncollateralized loans and when the institutions "unexpectedly experience a temporary shortage of funds necessary for payment due to accidental causes..." https://www.boj.or.jp/en/about/outline/data/foboj12.pdf

Press Releases/Announcements

<u>Statement on Monetary Policy (Bank of Japan – November 21, 2008)</u> – The Bank of Japan announced that it would create a special funds-supplying operation to provide unlimited loans for liquidity purposes to eligible financial institutions and banks in Japan. https://www.boj.or.jp/en/announcements/release_2008/k081121.pdf

Media Stories

BOJ meets as economy in worst slump since 1970s (MarketWatch – 02/16/2009) – news story discussing an upcoming BOJ Policy Board meeting where the BOJ wanted to seek "extraordinary" measures to assist credit-tight companies and alleviate financing conditions across Japanese markets. The Japanese media states that the demand has been strong for the loans.

https://www.marketwatch.com/story/bank-japan-under-pressure-come-up

Bank of Japan may reportedly double lending program (MarketWatch – 03/11/2010) – news story mentioning that the special operations lending facility will be expiring on March 31, 2010, while an expansion of the new fixed-rate funds-supplying operation is being considered by the Bank of Japan.

https://www.marketwatch.com/story/bank-of-japan-may-double-lending-program-2010-03-11

Key Academic Papers

<u>Government, Business and Markets after the Lehman Shock: A Review of Aid to the</u> <u>Business Sector in Japan (Komine – 10/2009)</u> – This paper summarizes the effects of Lehman Brothers and other economic events in the United States on Japan's economy and marketplace. The author reflects on the increase in state intervention to maintain financial stability and the advantages or disadvantages using state intervention has on the market. https://www.jcer.or.jp/eng/research/pdf/komine.pdf

Reports/Assessments

<u>The Conduct of Monetary Policy in Japan and Abroad: Excerpts of a Speech at a Meeting</u> <u>with Business Leaders in Okayama (Bank of Japan – 08/2009)</u> – In a speech, the Bank of Japan Governor said that the Bank decided to extend the outright purchases on commercial paper because although the commercial paper market has been recovering greatly, financial firms hoped the operation would still be in use to "facilitate corporate financing," in case of any imminent debt downgrades or credit slides.

https://www.boj.or.jp/en/announcements/press/koen_2009/data/ko0908b.pdf

<u>Identifying the Effect of the Bank of Japan's Liquidity Facilities: The Case of Commercial</u> <u>Paper Operations during the Financial Turmoil (Bank of Japan – 10/2010)</u> – This paper studies the effects of the Bank of Japan's three commercial paper operations it implemented between October 2008 and May 2009. It found that outright purchases of commercial paper had visible effects at the onset of its implementation, but subsided as the commercial paper market recovered.

https://ideas.repec.org/p/boj/bojwps/09-e-7.html

<u>Financial Markets Report – Developments in the First Half of 2009 (Bank of Japan –</u> <u>08/31/2009)</u> – An analysis by the Bank of Japan found that CP operations have contributed to a decrease in issuance rates, but that effects on CP rated a-1 were greater than CP rated a-1+ or lower.

https://www.boj.or.jp/en/research/brp/fmr/mkr0908.htm

VI. Appendix

Due to the weakening commercial paper market throughout the global economy, Japan's commercial paper market was hit heavily in late September 2008, following the Lehman Brothers' bankruptcy. In response to the spreading financial crisis, the Bank of Japan's Policy Board issued a number of operations to alleviate the commercial paper (CP) market.

First, the BOJ expanded the conditions for the pre-existing repurchase operations for CP to facilitate short-term money market financing for financial institutions as a response to the credit crunch. (CP Repo Operations) The BOJ increased the frequency of the operations from being conducted on a quarterly basis to twice-a-week, while also increasing the fund supply per operation from ¥300 billion to ¥600 billion. (BOJ Markets Report, March 2009) Moreover, the BOJ expanded eligible loan collateral to include dematerialized CP issued by real estate investment corporations and government-guaranteed dematerialized CP. (BOJ Amendment, January 2009)

In early November, the BOJ then introduced special funds-supplying operations (the special operations) that would provide unlimited liquidity in exchange for an equal amount of commercial paper collateral from financial institutions. (Special Operations) The special operations provided a one to three month loan, at a low fixed loan rate equal to the average uncollateralized overnight call rate. The value of the loan would be equal to value of collateral posted by the participating counterparty. Collateral that was eligible to be posted against a loan included corporate bonds, dematerialized CP issued by domestic corporations, dematerialized CP issued by foreign corporates with guarantees, bills drawn by companies, commercial paper (excluding ABCP and, later, CP issued by real estate investment corporations), and loans on deeds to companies. (Ibid.)

Finally, the BOJ passed a measure to conduct outright purchases of CP from financial institutions, aiming to transfer some of the risk from bank balance sheets onto the BOJ's own sheet. (Outright Purchases of CP) The decrease in risky CP would help institutions avoid credit downgrades, thus allowing them to continue borrowing liquidity in the general credit market in order to meet financing needs. However, the amount of CP the BOJ was limited to \$3 trillion overall, limited to \$300 billion per auction date, and limited to \$100 billion per issuer per auction. (Ibid.) Moreover, the purchases included an interest rate equal to the overnight call rate plus a penalty rate, making the outright purchases of CP the most expensive of the three CP operations. (Ibid.)