Japan's Outright Purchases of Commercial Paper (Japan GFC)

Alec Buchholtz
Yale Program on Financial Stability

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Japan: Outright Purchases of Commercial Paper

Alec Buchholtz

Yale Program on Financial Stability Case Study
March 18, 2019, revised: October 10, 2020

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 operations in late 2008 to promote liquidity in the CP market. In January 2009, the BOJ began to purchase CP and asset-backed CP outright from banks and other financial institutions. The BOJ could purchase up to ¥3 trillion of CP with a residual maturity of up to three months, among other short-term securities, via 10 purchases of up to ¥300 billion each. The BOJ limited its purchases to CP with a credit rating of a-1 or guaranteed by a company rated a-1. The BOJ would conduct purchases until March 31, 2009; it later extended the measure until December 31, 2009. As the CP market normalized, usage of the outright purchase measure decreased, with the last bid occurring in September 2009. The measure is seen as relatively successful, as interest rates on CP decreased during its first few months and the program provided needed liquidity to financial institutions during a period of market stress.

Keywords: commercial paper, asset-backed commercial paper, Bank of Japan, Japan

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1 This case study is part of 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.

Cases are available from the Journal of Financial Crises at https://elischolar.library.yale.edu/journal-of-financial-crises/.

2 Alec Buchholtz – Research Associate, YPFS, Yale School of Management.
At a Glance

In 2008, Lehman Brothers’ bankruptcy greatly disrupted short-term funding for nonfinancial companies, particularly through the commercial paper (CP) market. As CP 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 a special funds-supplying operation to provide unlimited liquidity in return for eligible CP collateral. Finally, the BOJ authorized a measure to conduct outright purchases of CP in January 2009. Under the program, the BOJ purchased CP and asset-backed CP (ABCP) with a credit rating of a-1 and a residual maturity of up to three months. The measure was initially set to expire on March 31, 2009. The BOJ could purchase up to ¥3 trillion of CP, doing so in 10 purchases of ¥300 billion each. The purchases would occur under a reverse-auction format, where the issuing counterparty would present a yield spread—the difference between desired yield by bank and the minimum yield determined by the BOJ—and the BOJ would then purchase CP with the smallest spread. Purchases were limited to ¥100 billion per issuer.

The BOJ extended the measure twice, once until September 30 and again until December 31. During its February 2009 Monetary Policy meeting, the BOJ also extended the range of collateral eligible for purchase under the measure. According to the BOJ, firms issued more CP as a combined result of the measure and other BOJ CP facilities. Throughout the measure’s lifespan, the BOJ purchased ¥2.68 trillion worth of CP and other eligible short-term securities. The BOJ also noted that there was a progressive undersubscription to the measure throughout 2009 as CP markets stabilized, and average yield spreads between banks and the BOJ’s minimum yield decreased. Although the measure was still open to Japanese banks, it wasn’t used after September 2009.

Summary Evaluation

Some studies and regulators concluded that the measure was an attractive method of moving credit risk to the BOJ, especially during a time when many banks saw declining credit ratings because of the riskiness of the CP and other corporate financing vehicles they held. CP rates decreased noticeably. One study found a correlation between the implementation of the measure and the issuance of new CP in Japan. By March 2009, as CP markets began to stabilize, issuers used the measure less, relying instead on other official liquidity operations. This may have been because the penalty rates on purchases discouraged counterparties from using the measure; banks viewed other BOJ operations as less expensive and more equipped to offload risky CP.
<table>
<thead>
<tr>
<th><strong>Outright Purchase of Commercial Paper: Japan Context</strong></th>
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<tbody>
<tr>
<td><strong>GDP (SAAR, Nominal GDP in LCU converted to USD)</strong></td>
</tr>
<tr>
<td>$4,680.1 billion in 2007</td>
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<tr>
<td>$5,321.2 billion in 2008</td>
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<tr>
<td><em>Source: Bloomberg</em></td>
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<tr>
<td><strong>GDP per capita (SAAR, Nominal GDP in LCU converted to USD)</strong></td>
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<tr>
<td>$35,275 in 2007</td>
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<tr>
<td>$39,339 in 2008</td>
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<tr>
<td><em>Source: Bloomberg</em></td>
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<tr>
<td><strong>Sovereign credit rating (5-year senior debt)</strong></td>
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<tr>
<td>As of Q4, 2007:</td>
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<tr>
<td>Fitch: AA</td>
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<tr>
<td>Moody’s: A1</td>
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<tr>
<td>S&amp;P: AA</td>
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<tr>
<td>As of Q4, 2008:</td>
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<tr>
<td>Fitch: AA</td>
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<tr>
<td>Moody’s: Aa3</td>
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<tr>
<td>S&amp;P: AA</td>
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<tr>
<td><em>Source: Bloomberg</em></td>
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<tr>
<td><strong>Size of banking system</strong></td>
</tr>
<tr>
<td>$6,980.8 in total assets in 2007</td>
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<td>$8,301.60 in total assets in 2008</td>
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<td><em>Source: Bloomberg</em></td>
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<td><strong>Size of banking system as a percentage of GDP</strong></td>
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<tr>
<td>149.2% in 2007</td>
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<tr>
<td>156.0% in 2008</td>
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<tr>
<td><em>Source: Bloomberg</em></td>
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<td><strong>Size of banking system as a percentage of financial system</strong></td>
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<td>Banking system assets equal to 50.2% of financial system in 2007</td>
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<tr>
<td>Banking system assets equal to 52.1% of financial system in 2008</td>
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<tr>
<td><em>Source: World Bank Global Financial Development Database</em></td>
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<tr>
<td><strong>5-bank concentration of banking system</strong></td>
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<tr>
<td>50.2% of total banking assets in 2007</td>
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<td>58.6% of total banking assets in [year of announcement]</td>
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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 commercial paper (CP) 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 (BOJ Market Report 2008, p. 24). First, the BOJ enhanced its repo operations, extending eligible collateral to include CP. Next, it introduced a special funds-supplying operation to provide financial institutions unlimited liquidity against corporate debt collateral (BOJ Market Report 2008, p. 24). 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.

In December 2008, the BOJ introduced an operation to conduct outright purchases of CP to back the deteriorating CP market (Outright Purchases Terms and Conditions 2009). The Policy Board passed the measure on January 22, 2009, and conducted its first purchases on January 30 (BOJ Press Release, 01/22/2009).

Program Description

The objective of the measure was to “ensure stability in financial markets as well as facilitate corporate financing by conducting appropriate money market operations” (Outright Purchases Terms and Conditions 2009). The measure allowed the BOJ to purchase most

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<tr>
<td><strong>Foreign involvement in banking system</strong></td>
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<tr>
<td>1% of total banking assets in 2007</td>
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<tr>
<td>1% of total banking assets in 2008</td>
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<tr>
<td><strong>Government ownership of banking system</strong></td>
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<tr>
<td>Data not available for 2007/2008</td>
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<tr>
<td><strong>Existence of deposit insurance</strong></td>
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<td>Data not available for 2007/2008</td>
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types of CP (Outright Purchases Terms and Conditions 2009). The BOJ required eligible CP to have a maturity date of three months or less and to have been issued on or before the day of auction. Eligible CP had to have an a-1 rating, or it had to be guaranteed by a company with an a-1 rating (Outright Purchases Terms and Conditions 2009).

The BOJ allotted ¥3 trillion to purchase CP and planned to conduct 10 purchases of ¥300 billion each, with no more than ¥100 billion purchased from a single CP issuer. Initially, the BOJ would have conducted outright purchases until March 31, 2009 (Outright Purchases Terms and Conditions 2009).

Any purchase of CP would be conducted as a “multiple-price competitive auction” (Outright Purchases Terms and Conditions 2009). The counterparty would formulate a yield spread by taking the yield it wished to sell the CP minus the BOJ established minimum yield. The BOJ would then purchase CP at a price based on the yield spread it had accepted plus the minimum yield for the corresponding CP (Outright Purchases Terms and Conditions 2009).

Outcomes

The BOJ Policy Board amended the measure twice after its inception to extend the expiration date. On February 19, 2009, the BOJ extended the measure until September 30, 2009 (BOJ Meeting, February 2009). It extended the measure once more until December 31, 2009 (BOJ Meeting, July 2009). Over the summer of 2009, the Japanese CP market was seeing improvement, and financial institutions lessened their dependence on the measure. The BOJ conducted its final purchase of CP on September 11.

Overall, the BOJ purchased approximately ¥2.68 trillion in CP at an average yield spread of 0.0988 (BOJ Market Operations 2009). Figure 1 shows the amount of CP put up for auction against the amount of CP purchased by the BOJ on each purchase date. Figure 2 shows the changing yield spread of the purchases. Both figures show that bids and successful bids decreased between January and September 2009, while the average yield spread also decreased as prices became more compatible between the BOJ and financial institutions.

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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).

4 Japan utilizes credit ratings from five major rating agencies: Ratings and Investment Information, Inc. (R&I), Japan Credit Rating Agency (JCRA), Standard & Poor’s Rating Services (S&P), Moody’s Investors Service (Moody’s), and Fitch Ratings (Fitch). R&I is Japan’s largest domestic ratings agency. R&I rates short-term obligations, such as commercial paper programs, with a high rating of “a-1” and a low rating of “c.” The R&I “a-1” rating used here is equivalent to JCRA’s “J-1,” S&P’s “A-1,” Moody’s “P-1,” and Fitch’s “F-1.”
II. Key Design Decisions

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

According to the BOJ Policy Board, the intent of the measure was to “ease capital constraints” on financial institutions, with the idea that institutional lending would increase across the
financial system (BOJ Meeting, December 2008). During the BOJ's Monetary Policy Meeting in December 2008, members of the Policy Board stated that tight credit markets contributed to a "limited availability of funds," and thus a decrease in the issuance of CP, corporate bonds, and other corporate debt instruments. Financial institutions of all sizes found conditions to be "severe" and that there was little positive effect of maintaining low interest rates (BOJ Meeting, December 2008). A large part of the discussion surrounded how to introduce policy measures aimed at lowering interest rates on short-term paper. The consensus view was that such measures would likely be effective and improve access to funding for nonfinancial corporations while "boosting business and consumer sentiment" (BOJ Meeting, December 2008).

The BOJ hoped the purchases would "enhance the price-discovery function in the CP market" (BOJ Meeting, December 2008). The BOJ also hoped that if financial institutions could sell CP to the BOJ, those financial institutions could then go on to fund CP for other issuers or extend funding directly to cash-strapped businesses, particularly small firms (Nishimura 2009, p. 10). One Policy Board member stated that the outright purchase measure was "designed to provide a backstop and was not intended to be used actively on a regular basis" (Mizuno 2009).

2. The BOJ could purchase up to ¥3 trillion in CP.

No additional material found on the motivation behind this design.

3. Initially, the measure was limited to 10 purchases, of ¥300 billion each, before the end of March, but the BOJ increased the amount and extended the expiration date.

Initially, the BOJ said it would conduct 10 purchases between January 30 and March 31, 2009. The short time frame was to "ensure that the purchases are a bridging measure until the market function recovers" (Shirakawa 2009).

The BOJ twice increased the amount of purchases and extended the expiration date of the facility. According to one Policy Board member, the BOJ decided to extend the temporary measure because nonfinancial companies continued to struggle with financing. Moreover, financial institutions expected that lending rates would continue to increase if credit rating agencies downgraded their CP and other debt securities because of poor conditions in the overall credit market (Mizuno 2009). The Policy Board member stressed still that the BOJ's goal was to shrink the measure as overall market conditions improved and the need for the outright purchases would decline (Mizuno 2009).

4. The program could purchase CP from financial institutions that were counterparties of the Bank of Japan under the Bank of Japan Act.

Eligible counterparties were already counterparties in the BOJ's CP repo operations or were already eligible to borrow funds in the Bank's Funds-Supplying Operations against Pooled Collateral. These counterparties included banks and other financial institutions, financial instrument firms, securities finance companies, and tanshi (broker) companies.5

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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
5. Most types of domestic and foreign CP were eligible for purchase, but CP issued by REITs was excluded before the program launch.

The measure allowed the BOJ to purchase most types of CP, including corporate CP and asset-backed CP (ABCP) issued by domestic corporations, or by foreign corporations with a guarantee from an a-1 rated company. The BOJ Policy Board excluded commercial paper issued by real estate investment trusts (REIT's) on January 22, before the first auction, at the same time announcing that it would begin to accept REIT securities as collateral in the CP repo program (BOJ Amendment, January 2009).

6. The BOJ conducted purchases of CP as “multi-price competitive auctions.”

The BOJ chose to implement a competitive auction format to prevent financial institutions from just selling risky CP under their own terms to the BOJ (BOJ Market Report 2008). Any purchase of CP would be conducted as “multi-price competitive auctions” (BOJ Market Report 2008). This type of auction requires a market participant, or counterparty, to bid a yield spread on CP it wishes to sell to the BOJ. The counterparty would formulate a yield spread by taking the yield at which it wished to sell the CP minus the BOJ-established minimum yield.

The BOJ set a minimum yield for purchases to incentivize financial institutions to gradually reduce their usage of the BOJ's measure as market conditions improved (BOJ Market Report 2008). Moreover, the counterparties could offer multiple-priced bids, often at lower and lower prices, to outbid their competitors and make the spread more attractive for the BOJ to purchase.

The BOJ would first purchase CP from the bidder that submitted the lowest yield spread, since it was the least costly for the BOJ. The BOJ continued to purchase CP from other bidders in ascending order until it utilized up to, or around, the maximum amount the BOJ planned to purchase, in this case ¥300 billion per purchase date (Outright Purchases Terms and Conditions 2009).

7. The BOJ charged a minimum yield that was intended to be more favorable than rates during the crisis but less favorable than in normal times.

For the first five months of the program, the Bank of Japan set the minimum yield at 0.300% for CP with a residual maturity of up to one month and 0.400% for CP with a residual maturity of more than one month and up to three months. In June, the BOJ raised those minimums to 0.500% and 0.700%, respectively, and lowered them back to 0.300% and 0.400% in November, after bidding had ceased.

Then–BOJ Governor Masaaki Shirakawa said that the bid rates were intended to be “more favorable than the market interest rates when the market is malfunctioning, but not more favorable than the market interest rates of normal times”; since losses on any purchased CP

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6 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).
would come at a cost to taxpayers, a penalty rate on the interest would ensure that taxpayers were compensated for taking on the credit risk (Shirakawa 2009).

8. To limit credit risk, the BOJ set limits on the total outstanding amount of a single issuer’s CP that it would purchase.

The BOJ set two limits on the total outstanding amount of a single issuer’s CP that it could accumulate. First, it would never hold more than ¥100 billion of a single issuer’s CP. Second, the total outstanding CP purchased of a single issuer could not exceed 25% of the peak amount of CP that the issuer had outstanding at the end of any month in the second half of 2008. “Since the losses of the purchases impose costs on taxpayers, it is important to avoid the concentration of credit risks in a specific firm,” the BOJ governor said in a 2009 speech (Shirakawa 2009).

9. CP had to have a rating of a-1, or it had to have a guarantee from a company with an a-1 rating.

The BOJ set minimum credit rating standards to protect itself against loss. “Given the higher risk of incurring losses compared to other monetary policy measures, the Bank will properly manage credit risks arising from outright purchases” (BOJ Press Release, 01/22/2009).

10. After purchase, the BOJ would hold the CP to maturity.

No additional material found on the motivation behind this design.

III. Evaluation

While the three CP operations may have had a collective effect on the overall market, an analysis by Hirose and Ohyama show that the outright purchase measure may have lowered the CP rate by 25 basis points in January and 11 bps in February (Hirose and Ohyama 2010). Nevertheless, they found that the participation of banks in the measure was unrelated to the interest rate levels. Instead, banks found that the transfer of credit risk from their balance sheets to the BOJ allowed them to issue new, less-risky CP (Hirose and Ohyama 2010). Following the improvement of the CP market in March 2009 and afterwards, the incentive to utilize the measure declined as banks could rely on the other CP operations, which they saw as less expensive options (Hirose and Ohyama 2010).

The BOJ conducted an analysis of all its money market operations aimed at the CP market and found that operations contributed to lower rates for CP rated a-1 than CP rated a-1+. Issuance rates for lower-rated CP, which was not eligible for purchase, only felt limited effects from the monetary policies (BOJ Markets Report, August 2009).

IV. References


Bank of Japan. “Principal Terms and Conditions of the Special Funds-Supplying Operations to Facilitate Corporate Financing.” Bank of Japan. December 19, 2008. (Special Operation Terms and Conditions). https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/Principal%20Terms%20and%20Conditions%20of%20the%20Special%20Funds-Supplying%20Operations%20to%20Facilitate%20Corporate%20Financing%20(Invalid)%20%E6%97%A5%E6%9C%AC%E9%8A%80%E8%A1%8C%20Bank%20of%20Japan.pdf.


V. Key Program Documents

Summary of Program

Principal Terms and Conditions for Outright Purchases of CP (Bank of Japan – 01/22/2009)
– Principal terms of the measure to outright purchase CP includes purchasing up to ¥3 trillion worth of commercial paper and asset-backed commercial paper, under 10 purchases of ¥300 billion each. The CP must be rated a-1 and have a residual maturity of three months from purchase. The BOJ could not purchase more than ¥100 billion from an issuer during a single purchase date. https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/Principal%20Terms%20and%20Conditions%20for%20Outright%20Purchases%20of%20CP%20(Invalid)%20%E6%97%A5%E6%9C%AC%E9%8A%80%E8%A1%8C%20Bank%20of%20Japan.pdf.

Implementation Documents

Principal Terms and Conditions for Outright Purchases of CP (Bank of Japan – 01/22/2009)
– Principal terms of the measure to outright purchase CP includes purchasing up to ¥3 trillion worth of commercial paper and asset-backed commercial paper, under ten purchases of ¥300 billion each. The CP must be rated a-1 and have a residual maturity of three months from purchase. The BOJ could not purchase more than ¥100 billion from an issuer during a single purchase date. https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/Principal%20Terms%20and%20Conditions%20for%20Outright%20Purchases%20of%20CP%20(Invalid)%20%E6%97%A5%E6%9C%AC%E9%8A%80%E8%A1%8C%20Bank%20of%20Japan.pdf.

Guidelines on Eligible Collateral (Bank of Japan) – 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 accepted only if creditworthy and marketable. https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/Guidelines%20on%20Eligible%20Collateral%20%E6%97%A5%E6%9C%AC%E9%8A%80%E8%A1%8C%20Bank%20of%20Japan.pdf.


Legal/Regulatory Guidance

Article 37 of the Bank of Japan Act 1997 – Article 37 of the Bank of Japan Act 1997 states that the Bank may provide financial institutions uncollateralized loans when the institutions “unexpectedly experience a temporary shortage of funds necessary for payment due to accidental causes.” https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/Functions%20and%20Operations%20of%20the%20Bank%20of%20Japan.pdf.

Press Releases/Announcements


Media Stories

BOJ to spend ¥3 trillion on CP, mull buying bonds (The Japan Times – 01/23/2009) – News story that covers the Bank of Japan’s implementation of outright purchases of commercial paper, where it will buy up to ¥3 trillion worth of CP. https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/BOJ%20to%20spend%20%C2%A53%20trillion%20on%20CP,%20mull%20buying%20bonds%20%20The%20Japan%20Times.pdf.


Key Academic Papers

Government, Business and Markets after the Lehman Shock: A Review of Aid to the Business Sector in Japan (Komine 2009) – 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 that using state intervention has on the market.

Reports/Assessments

The Conduct of Monetary Policy in Japan and Abroad: Excerpts of a Speech at a Meeting with Business Leaders in Okayama (Bank of Japan – 08/2009) – 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.

Financial Markets Report – Developments in the First Half of 2009 (Bank of Japan – 08/31/2009) – 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.

Financial Markets Report – Developments in the Second Half of 2008 (Bank of Japan – 03/31/2009) – The Bank of Japan stated that using competitive auctions as the method to conduct outright purchases of commercial paper was to ensure that financial institutions didn’t utilize the purchases as “arbitrary funds allocation among individual firms.” The temporary nature and minimum yields placed on purchases also were set in order to discourage firms from selling commercial paper to the Bank as the market recovered.

Identifying the Effect of the Bank of Japan’s Liquidity Facilities: The Case of Commercial Paper Operations during the Financial Turmoil (Bank of Japan – 10/2010) – 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.

VI. Appendix

Because of the strains throughout global financial markets and the subsequent credit crunch, Japan’s commercial paper (CP) market was shaken in late September 2008, following Lehman Brothers’ bankruptcy. In response to weakened money market operations and short-term financing on Japan’s financial institutions, the Bank of Japan’s Policy Board issued a number of operations to alleviate liquidity anxieties in the CP market.
First, the BOJ expanded the conditions for the pre-existing repo operations for CP to facilitate short-term money market financing for financial institutions as a response to the credit crunch. (CP Repo Operation Terms and Conditions). The BOJ increased the frequency of the auction 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 a special funds-supplying operation that would provide unlimited liquidity in exchange for an equal amount of commercial paper collateral from financial institutions (Special Operation Terms and Conditions 2009). The special operation would provide a loan, at a low fixed loan rate of 0.1%, up to the equal value of collateral posted by the counterparty. Loan collateral could be posted in the form of 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 (Special Operation Terms and Conditions 2009).

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 Terms and Conditions 2009). 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 could purchase was limited to ¥3 trillion overall, limited to ¥300 billion per auction date, and limited to ¥100 billion per issuer per auction (Outright Purchases Terms and Conditions 2009). 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 (Outright Purchases Terms and Conditions 2009).