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Yale Program on Financial Stability

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Russia: Lombard and Overnight Loans, 1998¹

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Yale Program on Financial Stability Case Study

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Abstract

On August 17, 1998, following a wave of speculative attacks on domestic ruble assets, the Russian government announced a default on its ruble debt maturing before the end of 1999, and the Central Bank of Russia (CBR) declared a devaluation of the ruble by widening the fixed exchange rate band. The announcements left Russian banks without their main source of collateral—government treasuries—to obtain funds from the CBR’s liquidity facilities. Russia’s payment system and interbank market froze as banks hoarded liquidity and, in some cases, restricted withdrawals in response to depositor runs. To restore liquidity to commercial banks and unfreeze the payment system, the CBR relied on four major lending programs: (1) its standing lending facility, the Lombard facility; (2) overnight/intraday (O/I) lending, which it had introduced in June 1998; (3) repurchase agreements (repos); and (4) rehabilitation loans, cheap credit to systemically important banks collateralized by bank equity. This case focuses on the Lombard facility and the O/I loans. Following the default and devaluation in August 1998, the CBR lowered interest rates and allowed banks to roll over unredeemed overnight loans, effectively extending the maturity of the liquidity it offered. While the CBR’s liquidity relief and other measures—such as the easing of banks’ reserve requirements—succeeded in unfreezing the payment system, the overall lack of transparency and oversight of banks receiving assistance continued to undermine trust in Russian banks.

Keywords: broad-based, CBR, emergency liquidity, Lombard facility, overnight lending, ruble crisis, Russia

¹ This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering broad-based emergency lending programs. Cases are available from the *Journal of Financial Crises* at <https://elischolar.library.yale.edu/journal-of-financial-crises/>.

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Overview

Russian financial markets deteriorated in October 1997, as spillovers from the East Asian currency crisis undermined confidence in the ruble's peg to the US dollar (Antczak 2001). In a speculative attack on the ruble in November 1997, foreign investors began liquidating positions in the ruble treasury market, forcing the Central Bank of Russia (CBR) to shed roughly USD 6 billion³ (RUR 37.2 billion) of its USD 23 billion foreign reserves to defend the exchange rate peg (Chiodo and Owyang 2002; Johnson 2018, 213).

In June 1998, the government ran out of funds needed to make bond payments, requiring the CBR to finance the federal budget by intervening in the treasury market. June 1998 also saw the beginning of depositor runs at domestic banks. The escalating payment challenges by both the government and Russian banks undermined the CBR's ability to defend the exchange rate (CBR 1999a). The IMF approved a USD 11.2 billion aid package for Russia in July, but the delayed support could not quell investor concerns over the country's financial health (Chiodo and Owyang 2002).

In August 1998, Russian financial markets experienced speculative outflows and the Moscow Stock Exchange briefly halting trading on August 12 (Antczak 2001). The next day, a *Financial Times* editorial argued that the ruble should be devalued 15% to 25% against the USD. The resulting attack on the ruble prompted the Russian government and CBR to announce a package of drastic measures on August 17 (Ippolito 2002). The CBR widened the ruble exchange rate band before completely floating the ruble on by September 2 (CBR 1999a); the government

Key Terms

Purpose: "restoring the payments system" (CBR 1999a)	
Launch Dates	Lombard loan facility: Preexisting standing facility modified June 1, 1998 Overnight/intraday loans: Introduced June 19, 1998
Expiration Dates	Not applicable
Legal Authority	Russian Constitution, Article 75
Peak Outstanding	Lombard: RUR 7.9 billion in June 1998
Participants	170 commercial banks
Rate	Set by CBR
Collateral	Government securities and then CBR-issued bonds
Loan Duration	Lombard facility: less than 30 days Overnight/intraday loans: overnight but frequently rolled over
Notable Features	After default of government bonds, accepted bills (OBRs) issued by CBR as collateral
Outcomes	The CBR scaled down Lombard and O/I facilities in October and through the end of 1998 as liquidity conditions improved and inflation concerns grew

³ The ruble exchange rate corridor, maintained up until August 17, 1998, fixed the exchange at a midpoint of 6.2 rubles (RUR) to the US dollar (USD) and could fluctuate 15% above or below (CBR 1999a).

defaulted its ruble-denominated debt (GKO-OFZ treasuries) that matured before the end of 1999 and declared a 90-day moratorium on payments by commercial banks to foreign creditors (Chiodo and Owyang 2002).

Foreign outflows escalated rapidly after the government's announcement. Many banks lost between 10% to 45% of their retail deposits in real terms, and the largest Russian banks became effectively insolvent (Ippolito 2002, 7). Yet Russian authorities both lacked the necessary institutional frameworks for restructuring and could not effectively utilize public finance given the default on ruble treasuries (Stavrakis et al. 1999; Johnson 2018, 9).

The Lombard facility was the CBR's standing lending facility available to commercial banks, traditionally offering loans of up to 30 days through a biweekly auction (twice per week) and a fixed-rate, standing window. Repo loans were also already part of the CBR's existing monetary policy framework prior to the crisis and underwent several changes throughout 1998. As the crisis unfolded, the CBR added overnight/intraday (O/I) lending in June and rehabilitation loans (equity secured loans to systemically important banks) in August to provide further liquidity relief for commercial banks (CBR 1999a). The CBR also eased reserve requirements, purchased frozen treasury bills from banks, and transferred deposits from troubled private banks to the state-owned Sberbank, whose deposits the government guaranteed.

This case focuses on the Lombard facility and the overnight/intraday lending facility—both before and after the August 1998 default. It does not address the overnight repo loans because they were very short-lived, as they only accepted government securities as collateral; usage of the facility ceased as the securities became illiquid. The CBR later implemented a new repo lending program in November 1998 using its own central bank bills (OBRs) as collateral pledged by banks; this facility will be discussed in a following case study⁴ on OBR instruments (CBR 1999a). This case also does not address the rehabilitation loans because they are more in the nature of restructuring or capital loans than emergency liquidity.

Figure 1 compares the four lending programs, with the two relevant to this case highlighted in green.

⁴ See Hoffner (2022) *Russia: Central Bank Bonds, 1998* for further discussion of OBRs and Repo lending in the 1998 crisis.

Figure 1: Lending Programs for Commercial Banks, 1998 (RUR)

Lending Program	Participants	Maturity	Collateral	Peak Volume
Lombard Facility ⁽¹⁾	170 commercial banks	Up to 30 days at auction and fixed-rate, standing window	Government securities, OBRs (as of September 1998)	7.9 billion
Overnight/Intraday Lending ⁽²⁾	170 commercial banks	Overnight and intraday	Government securities, OBRs (as of September 1998)	Not found
Repo Loans ⁽³⁾	Broad undefined group	Overnight and two-day	Government securities	Not found
Rehabilitation Loans	13 systemically important banks	Up to one year	75% plus one share of the bank's equity	17.3 billion

Notes:

⁽¹⁾ The Lombard facility is the CBR's standing lending facility available to commercial banks, traditionally, offering loans of up to 30 days maturity through a biweekly auction (twice per week) and a fixed-rate, standing window. On June 1, 1998, the CBR reduced loan maturities available through the standing window from 30 to 20 days. From July 8 through the end of 1998, the CBR discontinued the operation of the standing window and limited loan maturities to seven days available at biweekly auctions. Based on month-end outstanding balances at the Lombard facility, usage peaked in June 1998 with RUR 7.9 billion.

⁽²⁾ Lending under this facility began on June 19, 1998—replacing an unsecured overnight lending program for primary dealers of government securities. In the 1998 Annual Report, the CBR aggregated the number of participants and total loan volume for the overnight and Lombard facilities combined. We derive the loan volume from the overnight facility by subtracting a separately published Lombard loan total from the combined volume of the two facilities given in the annual report. Interest rates on overnight loans ranged from 40% to 250%.

⁽³⁾ Overnight repo loans began on May 28, 1998, offered at auction in addition to two-day loans. Overnight loans largely dried up at the end of June because of the illiquidity of the government securities.

Source: CBR 1999a; CBR 1999b; CBR 1998b; IMF 1999.

As noted in Figure 1, in 1998, month-end outstanding liquidity at the Lombard facility peaked in June with RUR 7.9 billion of loans outstanding (CBR 1998b). In its 1998 annual report, the CBR reported that only 93.9% of all loans from these two facilities were promptly repaid. A supplementary report on the Lombard facility indicated that the CBR stopped extending Lombard loans by October 1998 and RUR 600 million Lombard loans remained unpaid as of December of that year (CBR 1999b). Due to aggregate reporting, research could not determine additional details related to the repayment of overnight and intraday (O/I) loans as well as whether the remaining RUR 600 million Lombard loans were repaid.

In addition to lending programs, the CBR offered liquidity relief by dramatically loosening reserve requirements, creating a deposit guarantee scheme using the state savings bank Sberbank and conducting multilateral clearing operations to cancel portions of interbank debt (CBR 1999a; Owen and Robinson 2003, 135).

Summary Evaluation

As the ruble crisis emerged in June 1998, the CBR provided liquidity assistance to the defaulting Russian government and vulnerable banks while attempting to also defend the fixed exchange rate amidst speculative attacks (CBR 1999a). The IMF noted that such expansionary support weakened the market's confidence in the ruble's stability. The CBR ultimately failed to counter speculative attacks and let the ruble float shortly after the government's debt default (IMF 1999; Owen and Robinson 2003, 31–32).

After the default in August, the immediate fate of the illiquid Russian banking system depended almost exclusively on CBR liquidity assistance due to the delay of fiscal stimulus and banking resolution. According to Robinson (2003, 31), the CBR's lending programs and other policies⁵ appeared "extremely successful" to the extent that the payment system unfroze, a general deposit run was avoided, and the economy recovered faster than expected. In 1999, real GDP grew 6.3% (compared to a more than 1% decline projected by CBR), followed by 10% growth in 2000 and several subsequent years of sustained economic growth (Owen and Robinson 2003, 49). Another contemporary scholar, Ippolito (2002), credits the extensive liquidity relief by the CBR for restoring minimum operating conditions for the financial sector.

While recognizing the surprising recovery after the crisis—Steinherr (2004) calls it "exceptional and different from other countries"—many scholars emphasize the lack of transparency, weak supervision, and permissive policies around lending as cause for concern. Robinson (2003, 32) summarizes his skepticism around the CBR's lending operations in 1998, noting that "much of the support was extended through special facilities, at below-market rates, in exchange for collateral of uncertain value and on the basis of unannounced criteria." In particular, the CBR did not disclose how participants were chosen for liquidity relief, leaving many to speculate on potential political dynamics (Schaik 1999). Similarly, Fuchs (2002, 255) emphasizes that the CBR's discretionary provision of liquidity—absent of clear, transparent lending standards—has "set a bad precedent that might encourage banks (especially politically connected ones) to bet on another bailout should the need arise."

Steinherr (2004) also expresses concern over moral hazard arising from the CBR's leniency over prudential rules and loose lending standards. CBR support allowed undercapitalized banks to take excessive risk with available funds and engage in asset stripping to avoid creditors' demands. Therefore, Steinherr (2004) argues that despite the rapid recovery, the approach of the CBR and government to treat the crisis as a liquidity crisis, and their failure to address underlying structural weaknesses and insolvent banks may have contributed to lower growth after the rebound.

⁵ In addition to direct lending to banks, the dramatic lowering of reserve requirements freed substantial liquidity as evidenced by the over RUR 17 billion reduction in these required balances between July and September of 1998 (Owen and Robinson 2003, 133–34).

Context: Russia 1998–1999	
GDP (SAAR, nominal GDP in LCU converted to USD)	\$318.1 billion in 1998 \$193.1 billion in 1999
GDP per capita (SAAR, nominal GDP in LCU converted to USD)	\$1,835 in 1998 \$1,331 in 1999
Sovereign credit rating (five-year senior debt)	Moody's Ca in 1998 Moody's Ca in 1999
Size of banking system	\$67.2 billion in 1998 \$38.4 billion in 1999
Size of banking system as a percentage of GDP	21.3% of 1998 GDP 19.9% of 1999 GDP
Size of banking system as a percentage of financial system	100% of financial system assets in 1998 100% of financial system assets in 1999
Five-bank concentration of banking system	81.6% of assets in 1998 58.4% of assets in 1999
Foreign involvement in banking system	Data not available
Government ownership of banking system	Data not available
Existence of deposit insurance	None in 1998 None in 1999
<i>Sources: Bloomberg; World Bank Global Financial Development Database; World Bank Deposit Insurance Dataset.</i>	

Key Design Decisions

1. Purpose: The CBR's lending programs primarily served to address the breakdown in Russia's payment system.

It is useful to think of the CBR's provision of emergency liquidity during the 1998 ruble crisis as fitting into two periods—pre-default and post-default lending—with August 17, 1998, being the dividing line. The distinction accounts for the way in which the unique monetary developments after August 17 shaped subsequent CBR assistance. Namely, the CBR and government decisions on August 17, 1998, resulted in the unilateral suspension of trading in the secondary market for ruble treasuries and the eventual floating of the ruble's exchange rate. These changes in the monetary system both expanded the CBR's ability to provide broad-based lending absent a fixed currency mandate and restricted the available liquidity tools given the suspension of ruble treasuries as financing instruments (CBR 1999a).

Governed by a fixed ruble exchange rate pre-default, the CBR provided restricted liquidity support, needing to both “protect the domestic financial system and prop up the market for ruble-denominated assets” (CBR 1999a). Post-default, liquidity operations largely focused on reviving a frozen domestic payment system (Owen and Robinson 2003, 7).

As the crisis came to a head in August 1998, much of the banking system was effectively insolvent, the payment system and interbank markets were frozen, and many banks had suspended depositor withdrawals in response to runs. The CBR took several measures to provide liquidity relief while authorities delayed large-scale banking resolution until the adoption of necessary legal provisions in 1999 (Owen and Robinson 2003, 121).

Without a secondary market for ruble treasuries, the post-default CBR support needed to fully restore a frozen domestic payment system rather than simply provide relief to a dysfunctional one. In the 1998 annual report, the CBR highlighted the uniquely different circumstances of the pre- and post-default periods by stating the following:

The August 17 statement by the Russian Government and Central Bank was a kind of watershed which divided the entire year, 1998, into two fundamentally different periods in terms of all indicators and tendencies. (CBR 1999a)

Despite the diverse monetary circumstances in the pre- and post-default periods, this case organizes the lending operations according to facility rather than time period due to the difficulty in isolating lending between periods.

Sharing an overarching goal of restoring the payment system of domestic banks, the two lending facilities, Lombard and overnight/intraday (O/I) loans, differed in the support they provided:

(a) Lombard Facility:

The Lombard facility was established in 1996 with two parts: a standing window and a periodic auction. It served as the primary means by which banks could receive short-term liquidity collateralized by government securities (Baliño 1998). As the crisis unfolded, in July 1998, the CBR discontinued the standing, fixed-rate window but continued to provide liquidity through the periodic Lombard auctions (CBR 1999a).

(b) Overnight/Intraday (O/I) Loan Facility:

The CBR established this new lending program on June 19, 1998, to replace its traditional overnight primary dealer facility that allowed primary dealers to take out unsecured loans for emergency end-of-day settlement purposes (Baliño 1998; CBR 1999a). The new O/I loan program expedited collateral transactions with government securities, eliminating the need for unsecured overnight loans. The CBR's 1998 annual report described overnight and intraday loans together as part of a single new refinancing procedure for banks in the regions of Moscow and St. Petersburg. Although the CBR often detailed the operations of overnight lending separate from intraday loans (with far fewer references to the latter), we classify such lending under the common name "overnight/intraday facility" due to the shortage of separate data regarding each component (CBR 1999a).

The CBR introduced intraday lending during the crisis "to speed up the process of urgent replenishment of correspondent accounts . . . , maintain bank solvency and thus avoid a chain reaction of nonpayments in the bank settlement system" (CBR 1999a). O/I loans were available to an expanded group of eligible participants beyond the narrow set of primary dealers. Combined, the new O/I program and Lombard facility lent to 170 commercial banks compared to the 23 primary dealers that had used the unsecured overnight loans. Like the Lombard facility, the O/I loan facility accepted Bank of Russia bills (OBRs) as collateral following the default on ruble treasuries in August (CBR 1999a).

As the interbank credit market broke down in August, the CBR used unconventional overnight loans as a means of keeping eligible banks from defaulting on their CBR obligations. Ippolito (2002) notes that in the lead-up to the August 1998 default the CBR used the O/I facility to continuously roll over outstanding credits from illiquid banks unable to redeem the loans. A *Moscow Times* article published in October 1998 substantiated Ippolito's description of the new overnight lending arrangement and claimed that the CBR rolled over credits at below market rates to inject liquidity into a group of undisclosed banks (Rao 1998).

2. Legal Authority: The CBR provided liquidity assistance to banks based on its currency stability mandate and using its legal independence granted by the Russian Constitution.

Article 75 of the 1993 Russian Constitution established the CBR's legal responsibilities, including an exclusive monopoly on domestic currency issue. Additionally, Article 75 stated that "protecting and ensuring the stability of the ruble shall be the principal function of the

Central Bank of the Russian Federation, which it shall fulfil independently of other State governmental bodies” (Russian Federation 1993). Often in consultation with the government, the CBR—through de jure independence—dictated monetary operations subject to the currency stability mandate (Johnson 2018, 68).

Article 4 of the Federal Law on the Central Bank established the CBR as organizer of the “refinancing system” (discount of bills for rubles) and “creditor of last resort” for the domestic banks (CBR 1998f). The same law also rendered the CBR responsible for licensing (as well as revoking licenses), supervising, and regulating banks in accordance with other federal laws (CBR 1998f; Johnson 2018, 69).

The 1995 Law on the Central Bank prohibited the CBR from providing direct credits to the government (Owen and Robinson 2003, 128). This prohibition increased the use of ruble treasuries as the financing mechanism for government expenditures (Sutela 1999). The ban of direct lending to the government still allowed the CBR to purchase treasuries and use other methods to indirectly finance the deficit (IMF 1999). For example, in June 1998, when the government failed to raise enough funds needed to pay out its maturing obligations, the CBR “provided overdrafts to the government while redeeming maturing treasury bills from the market” (IMF 1999; CBR 1999a). In another unconventional arrangement, following the default, the CBR injected portions of its foreign currency assets into state-owned commercial banks, such as Vneshekonombank (97% CBR-owned), who then lent these assets to the government to pay its non-defaulted foreign currency liabilities (IMF 1999; CBR 1999a).

In 1998, there was no regulatory agency capable of carrying out restructuring for the widespread insolvency in the post-default banking system. Therefore, the CBR was the body that could best respond to the crisis and did so by providing liquidity using its existing and new policy tools.

3. Part of a Package: The CBR deployed lending programs in conjunction with several other mechanisms to ease payment challenges of banks.

In addition to the lending programs that are the subject of this case, the CBR attempted to directly provide ruble liquidity by decreasing the reserve requirements for banks and through large asset purchases of illiquid ruble treasuries from commercial banks (Owen and Robinson 2003, 133). It additionally sought to stabilize the banking system through four other policies: a 90-day moratorium on foreign obligations, significant regulatory forbearance, a scheme to transfer the deposits of ailing, private banks to Sberbank, and multilateral clearing operations to cancel mutual interbank obligations (Steinherr 2004; Ippolito 2002; CBR 1999a).⁶

⁶ Robinson (2003, 31) also includes foreign exchange (forex) credits as one of the liquidity mechanisms the CBR extended to banks during the crisis. He notes that the CBR provided these forex credits before the default to a limited number of banks whose selection criteria remained undisclosed. Robinson (2003, 134) also presents a table of CBR liquidity injections that includes “forex credits” as one of the largest sources of liquidity in response to the crisis (RUR 13.3 billion outstanding in December 1998); however, these forex credits only appear after the default, starting in December 1998 (See Figure 5 in the Appendix).

Reserve Requirements

At the beginning of 1998, the CBR set a uniform required reserve ratio of 11% for banks with the exception of an 8% ratio for household deposits held at Sberbank (CBR 1999a). With the collapse of the ruble in August, the CBR temporarily stopped enforcing reserve requirements on deposits made in foreign currency. At the same time, the CBR began altering reserve requirements idiosyncratically, per institution, to free up liquidity and return functioning to the interbank system (IMF 1999). Between the end of July and September 1998, required reserves held at the CBR shrank by RUR 17.1 billion (Owen and Robinson 2003, 134). On November 16, the CBR officially set the reserve requirement at 5% for both domestic and foreign currency borrowings to be enforced at year-end (IMF 1999; CBR 1999a). In March 1999, the CBR proceeded to increase reserve requirements in order to absorb excess liquidity (IMF 1999; Owen and Robinson 2003, 31).

Moratorium on Foreign Obligations

The CBR and Russian government on August 17, 1998, the day of default, announced a 90-day suspension of foreign debt payments made by Russian residents. The freezing of foreign payments applied to the “principal on loans with maturity exceeding 180 days, margin payments on [collateralized] loans . . . , and foreign currency forward contracts” (Antczak 2001). Indebted Russian residents eligible for the moratorium included commercial banks; however, the moratorium did not apply to foreign debt owed by Russian governmental bodies, such as the CBR. Total suspended foreign payments amounted to USD 3.1 billion (RUR 19.5 billion in August 17, 1998, terms), of which USD 2.7 billion (RUR 17 billion) were in commercial bank debt (Antczak 2001; CBR 1999a).

Forbearance

The CBR provided significant regulatory forbearance in the wake of the crisis, as evidenced by the many insolvent institutions whose banking licenses were never revoked (Ippolito 2002). When determining banks’ prudential regulatory compliance, the CBR, in October of 1998, allowed the use of pre-crisis capital figures and a pre-devaluation ruble exchange rate (Owen and Robinson 2003, 135).

Deposit Transfer

The deposit transfer program attempted to prevent potential bank runs by guaranteeing household deposits and moving them to the predominantly state-owned Sberbank. The deposits Sberbank received amounted to RUR 7.1 billion by the end of 1998 and RUR 10 billion by the end of the program (Fuchs 2002, 201; Owen and Robinson 2003, 135). This scheme also provided guarantees of foreign currency deposits converted into rubles at Sberbank for an almost 50% below market exchange rate at RUR 9.33 per USD (Owen and Robinson 2003, 135). Foreign currency deposits made up 30% of the total deposits transferred (Fuchs 2002, 201).

Multilateral Clearing Operations

Following the government debt default in August 1998, the CBR conducted three iterations of multilateral interbank clearing (two in September and one in October) in order to mutually cancel overdue payments (CBR 1999a). In total, these mutual debt cancellations cleared RUR 30 billion in otherwise defaulted obligations (Geraschenko 1999).

4. Management: The CBR managed the lending programs and conducted supervision of participants in a limited capacity.

The CBR's Board of Directors dictated the mechanics of liquidity offered through the different lending programs. This body was responsible for both setting rates on CBR loans and the determining eligible collateral for liquidity facilities. The Board of Directors also set the haircuts for collateral on Lombard loans, changing the rate twice over 1998. While lending terms were centrally administered by the Board of Directors, the CBR's 60 regional branches operated the standing facilities where participants requested Lombard and O/I loans under the established terms (CBR 1999a).

5. Administration: The mechanics of lending programs varied across facilities.

(a) Lombard Facility:

The Lombard facility, prior to the crisis, allowed banks to apply for loans of up to a maximum one-month term using government securities as collateral, held in a blocked account with the CBR (CBR 1998a). Loans were available to eligible banks at both the standing, non-penalty, fixed-rate window and at biweekly credit auctions subject to minimum rates. In July 1998, the CBR closed the standing window, leaving short-term Lombard liquidity available only through biweekly auctions occurring on Mondays and Thursdays (IMF 1999; CBR 1999a).

The mechanism of crediting banks through the Lombard facility functioned similarly to the repurchase operation of a discount window. However, no assets were bought or sold; rather, the CBR extended loans to banks, blocking the pledged government securities in deposit accounts with the CBR until repayment (CBR 1998a).

(b) O/I Loans:

Introduced in June 1998, this facility offered 170 banks in the Moscow and St. Petersburg areas secured loans against ruble treasuries. The CBR set interest rates for overnight loans daily and provided intraday loans free of charge. Like the Lombard facility, O/I loans followed the CBR's convention of "blocking" collateral accounts to secure such loans (CBR 1999a).

6. Eligible Participants: The CBR targeted large commercial banks and primary dealers for liquidity support.

At the start of 1998, the Russian banking system was already quite concentrated with the top five banks accounting for 36% of total assets and the top 50 for 71%. The government-

owned Sberbank, the only bank whose deposits the government guaranteed, held three-quarters of all household deposits (IMF 1999).

Before replacing it with the O/I facility in June 1998, the CBR administered an unsecured overnight lending facility for primary dealers. Primary dealers consisted of large Russian banks who made markets in government securities (IMF 1999). In July 1998, there were 23 primary dealers. Other banks could also access short-term borrowing in this new facility, particularly after the CBR eliminated the standing window of the Lombard facility in July 1998 (CBR 1999a).

In the 1998 annual report, the CBR introduced overnight and intraday lending together as a new facility to provide liquidity for bank in Moscow and St. Petersburg. However, in the same report, the CBR reported participants in both the Lombard and O/I lending programs as an aggregate figure across the facilities, stating: "In all, in 1998 the Bank of Russia lent Lombard and overnight loans to 170 banks in 44 regions, to the total amount of 135.7 billion rubles" (CBR 1999a).

Also notable, the CBR made no mention of intraday lending in this statement; most references to liquidity operations in the annual report similarly exclude intraday loans (CBR 1999a). Given the minimal information provided on intraday loans, research could not determine whether any of the details on "overnight loans" also implied intraday lending.

Additionally, the CBR noted that most participants in Lombard loans came from the Moscow, Sverdlovsk, Samara, Kemerovo, and Vologda regions and from the Republic of Bashkortostan (CBR 1999a). While the CBR did not offer additional information on Lombard loan participants in 1998, the 1997 annual report indicated that the CBR extended roughly 80% of the total volume of Lombard loans to banks in Moscow (CBR 1998a).

7. Funding Source: The CBR did not establish a limit for liquidity support.

The CBR funded loans along with the other liquidity injections through money creation and indirectly through taxpayer money (Schaik 1999). In a press release, the CBR disclosed that RUR 61.9 billion in reserve funds were issued during 1998 (CBR 1998e). This figure presumably represents the amount of liquidity the CBR created during the year in the form of bank reserves.

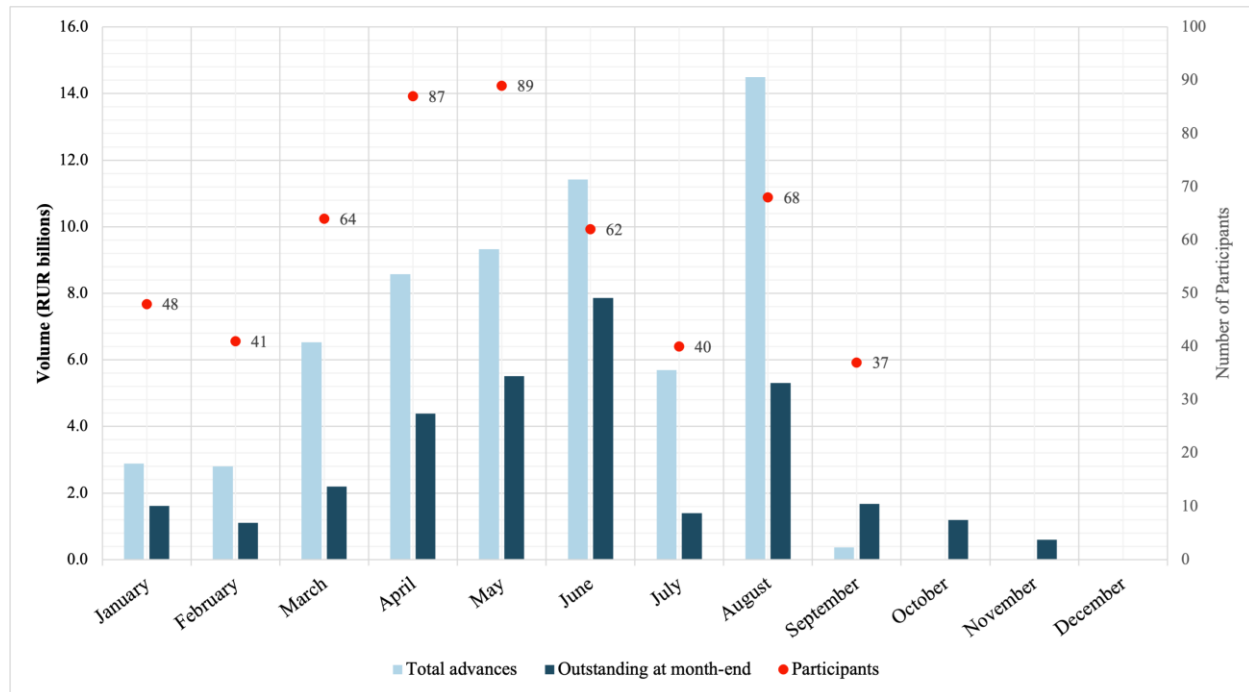
Research has not identified any predetermined allocation amount for the lending programs.

8. Program Size: During 1998, the peak utilization was RUR 7.9 billion through the Lombard facility.

The CBR noted that in 1998 Lombard loans "were the principal mechanism to provide short-term liquidity to banks" (CBR 1999a). The CBR provided month-end outstanding balances at the Lombard facility; in 1998, monthly outstanding liquidity peaked in June at RUR 7.9 billion (CBR 1998b). Aggregate issuance of Lombard loans in 1998 totaled just over RUR 62 billion (CBR 1999b). Figure 2 details the total monthly volume of Lombard loans extended,

outstanding balances of the facility by month-end, and number of borrowing banks over the course of 1998.

Figure 2: Lombard Loans by the CBR, 1998



Source: CBR 1999b.

Research did not reveal an exact volume given for this lending program. However, the CBR, in a 1998 annual report, cited RUR 135.7 billion as the aggregate amount loaned across the overnight and Lombard loans. Subtracting the total 1998 Lombard credits from this amount gives RUR 73.6 billion in loans likely disbursed as overnight loans in 1998 (CBR 1999b). The CBR did not include intraday loans in this aggregate volume. We were not able to determine separately the volume of any intraday loans made under this facility. Since these figures represent aggregate borrowings for credits that were continuously rolled over, the peak outstanding amounts for the Lombard and O/I facilities were much lower.

9. Individual Participation Limits: The CBR did not indicate any participation limits for its liquidity support.

Research did not discover participation limits for Lombard and O/I loans.

10. Rate Charged: The CBR set rates according to the fixed exchange rate; however, it began offering below-market rates following the ruble devaluation in August.

Before the default in August 1998, the CBR's set interest rates on the Lombard and O/I loans under a commitment to maintain the ruble-dollar fixed exchange corridor; therefore, the rates charged on lending pre-default partially reflected a need to defend the exchange rate

amidst speculative bets against the ruble. The promise to maintain a stable ruble compelled the CBR to tighten monetary conditions with interest rate hikes and sales of foreign reserves, evidenced by the 8.2% decrease in the money supply in the first seven months (January–August) of 1998. As a result, when the crisis emerged in June 1998 and banks began to experience deposit withdrawals, it became increasingly costly for the CBR to continue to increase rates on its lending facilities and maintain the exchange rate (CBR 1999a).

(a) Lombard Facility:

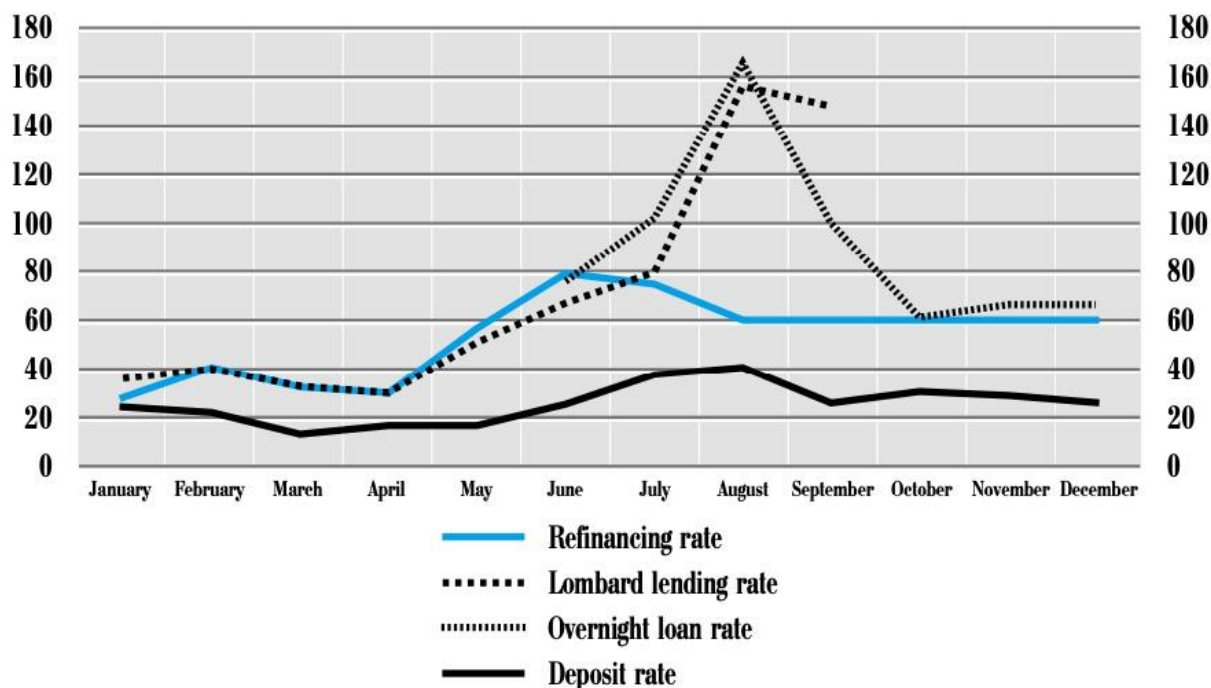
In December 1997, the CBR stopped varying Lombard rates depending on loan duration and subsequently managed one single Lombard loan rate (CBR 1998a). Throughout 1998, monthly average Lombard rates ranged between a low of 30% in April to 156.2% in August (CBR 1999b).

(b) O/I Loans:

The CBR set interest rates for overnight loans daily while choosing to provide intraday loans free of charge (CBR 1999a).

Figure 3 summarizes the main CBR interest rates over 1998, including those relevant to the (a) Lombard and (b) overnight/intrabank lending programs.

Figure 3: Average Weighted Monthly Interest Rates of CBR Instruments, 1998 (%)



Source: CBR 1999a.

The CBR's abandonment of the exchange rate corridor by the beginning of September gave

the CBR more flexibility in providing liquidity through its lending programs, opting for looser monetary policy (CBR 1999a). However, in the absence of the exchange rate anchor and the breakdown in treasury markets, the CBR did not appear to have a system for setting lending rates following the ruble devaluation. A September article in the *Moscow Times* stated that “in the absence of benchmark ruble instruments or an interbank lending market, the rate must be artificial” (Rao 1998).

11. Eligible Collateral: Ruble treasuries were the only acceptable collateral prior to default; after default, the CBR accepted its own issued bills (OBRs) as collateral for loans.

(a) Lombard Facility:

The CBR publicized eligible collateral on a “Lombard list.” Before the default on August 17, 1998, the CBR accepted all government securities as collateral (CBR 1999a). After the government’s default on government bonds that matured before the end of 1999, the CBR completely stopped accepting these securities as collateral by September 14, 1998. It continued to accept longer-term federal loan bonds—OFZs maturing after 1999—as collateral, but it increased the haircut on these bonds from 10% to 50% (CBR 1999a; CBR 1998b). Also in September, the CBR began issuing its own bills (OBRs), which it added to the Lombard list as collateral eligible to secure Lombard loans (CBR 1999a). The CBR did not stipulate haircuts for loans secured by OBRs; presumably, OBRs did not receive haircuts. The CBR issued no new Lombard credits after September 1998 due to lack of demand.

(b) O/I Loans:

The O/I lending program provided collateralized loans to a broader set of commercial banks than the CBR’s unsecured, overnight lending facility for primary dealers, which it replaced. Like the CBR’s other secured lending facilities (Lombard and repo), the O/I loan program accepted government securities as loan collateral prior to the August default. Banks also used OBRs as collateral for overnight loans after September 1998 (CBR 1999a). In the 1998 annual report, the CBR did not include intraday loans in the discussion on OBR liquidity operations; our research could not determine whether any intraday loans were made in the post-default 1998 period.

12. Loan Duration: The CBR’s Lombard facility provided short-term loans of 30 days or less, which it lowered to seven days in July; the bank typically rolled over overnight loans, extending their duration.

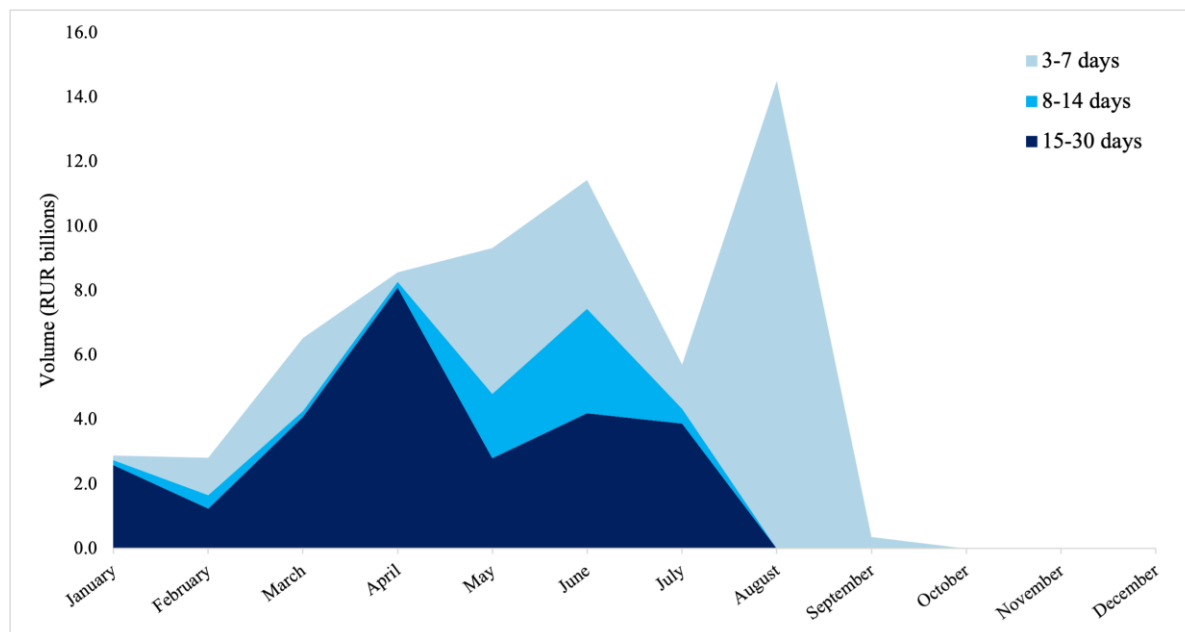
(a) Lombard Facility:

Before the crisis, Lombard loans bore maximum maturities of 30 days through both auction and the standing fixed rate facility. In June 1998, the CBR limited the duration of available loans and reduced the maximum duration of Lombard loans from the standing facility to 20 days, while still issuing 30-day maturities at auction. On July 8, the CBR eliminated the standing window and limited the duration of loans to seven days, offered at biweekly auctions (CBR 1999a). The CBR explained that such decisions to limit the scope of the

Lombard facility would hopefully force banks to “evaluate their liquidity more seriously;” by limiting liquidity access, the CBR likely intended for banks to sell foreign exchange holdings and reduce downward pressure on the ruble (Kulakova 1998).

These Lombard terms remained in place until the CBR stopped lending through the Lombard facility at the end of September (CBR 1999b). Figure 4 presents the monthly aggregate issuance of Lombard loans distributed across credit maturity.

Figure 4: Lombard Loans by Maturity, 1998



Source: CBR 1999b.

(b) O/I Loans:

As implied, these loans provided either intraday or overnight funding to participants (CBR 1999a). However, in August 1998, when the government defaulted on short-term treasuries, freezing the interbank market, most banks could not promptly repay CBR loans within one day’s time. In response to borrowers’ illiquidity, the CBR effectively expanded the term of lending for overnight loans by constantly rolling over banks’ outstanding credits at the facility (Ippolito 2002). Several market participants—interviewed for an October 1998 *Moscow Times* article—criticized the CBR’s unconventional use of the overnight facility in the post-default period; according to those interviewed, the overnight facility had become virtually unrecognizable by continuing to extend ‘overnight’ loans to illiquid banks that were inevitably rolled over (Rao 1998).

13. Other Conditions: In connection with its lending operations, the CBR reviewed banks for compliance with prudential regulations, but limited infrastructure hampered the effectiveness of these inspections.

Over the course of 1998, the CBR launched several reforms of its supervisory framework. This included creating a new executive committee for coordinating all the CBR's supervisory tasks as well as consolidating the disjointed operations of licensing, auditing, banks, and inspecting banks (Owen and Robinson 2003, 141). When conducting liquidity operations through its regional branches, the CBR worked with financial and tax authorities to ensure regulatory compliance of banks (CBR 1998e). The CBR also conducted some 4,415 bank inspections—in both scheduled and unscheduled visits—during 1998 through the inspection departments within the CBR's regional branches. As vulnerabilities in the banking system materialized, the CBR placed inspection and supervision teams in various unnamed Moscow banks for closer monitoring (CBR 1999a).

Despite improvements, as of August 1998, the CBR's supervisory tools required considerable reform, as did the underdeveloped accounting and reporting practices throughout the banking system; moreover, the CBR listed “the lack of a comprehensive system of banking supervision” as among the main contributors to the banking crisis (CBR 1999a). Banks would frequently develop complex schemes with other counterparties to avoid the CBR's limits on loan concentration (Fuchs 2002, 148). With minimal supervision and flexible accounting norms, many Russian commercial banks took on excessive risk. Furthermore, “a willingness of the central bank to provide liquidity to the banking system” compounded such issues of moral hazard and perverse incentives for banks (Bonin and Wachtel 2004). Steinherr (2004) similarly highlights the presence of moral hazard as the crisis materialized in August 1998 when the CBR permitted regulatory forbearance on top of the already weak prudential supervision; the CBR's provision of cheap liquidity without being able to assess the true financial situation of borrowers incentivized banks to take risks and “gamble for resurrection” (Steinherr 2004).

14. Impact on Monetary Policy Transmission: While the CBR's liquidity injections contributed to inflation, deflationary fiscal dynamics helped sterilize the intervention.

As a result of the total liquidity injections, including the rehabilitation lending to large banks and extension of credit to finance the federal deficit, broad money (M2) increased by 30.5% from September to December of 1998 (Goland 2009). The abundant liquidity provided by the CBR immediately after the crisis appeared to exceed what was necessary, and liquidity put downward pressure on the ruble exchange rate. The high exchange rate pass-through Russia experienced when compared to other crises at the time indicated that the CBR's lending efforts significantly contributed to mounting inflation (Owen and Robinson 2003, 33).

Despite the CBR's unsterilized liquidity injections, monthly inflation fell from 11.6% in December 1998 to below 2% by the middle of 1999 (Antczak 2001). The expansive monetary policy was partially offset due to the absence of fiscal spending, which resulted in significant

contractions in domestic demand (Owen and Robinson 2003, 33). Low money multipliers from deposit withdrawals, suspensions of deposit withdrawals, and the freezing of foreign exchange and credit markets also significantly helped tame inflationary pressures (Antczak 2001). The IMF noted that these conditions, as well as a shift to nonmonetary forms of payments in the domestic economy, helped explain why base money in real terms declined over the fourth quarter 1998 amidst liquidity injections (IMF 2002).

15. Other Options: In 1998, the initial rescue of the banking system almost exclusively relied on CBR liquidity assistance given the inadequate legal framework for banking resolution.

At the time of the crisis in 1998, there was no legal regime that enabled the CBR or another agency to take over insolvent institutions; the CBR had limited capabilities available outside of liquidity support (Owen and Robinson 2003, 31). The breakdown of the ruble treasury market from the GKO-OFZ default rendered conventional collateralized lending facilities ineffective, placing further restraints on CBR liquidity tools (CBR 1999a). We have not determined whether other options were considered; however, the rehabilitation loans and other lending programs using OBRs as collateral provided a solution within the CBR's then-current limitations.

16. Similar Programs in Other Countries: The idiosyncrasies of CBR lending programs during the 1998 crisis make it difficult to compare across other interventions.

Especially after the default, the CBR's lending support deviated from conventional liquidity interventions. First, the entire framework for CBR liquidity assistance revolved around ruble treasuries, which became entirely illiquid following the government's default (CBR 1999a). The addition of entirely new financing instruments issued by the central bank, OBRs, constituted an especially unique feature of CBR support. Additionally, the severe illiquidity of Russian banks following the default of ruble treasuries and currency devaluation prompted the CBR to extend loans through unconventional means, such as the rehabilitation loans and the overnight loans that the CBR continuously rolled over (Rao 1998; Ippolito 2002).

17. Communication: The CBR's communication around changes to monetary operations differed considerably before and after the ruble devaluation.

Throughout 1998, the CBR communicated developments in its monetary policies on its website, including changes to interest rates, reserve requirements, and the operations of liquidity facilities (e.g., CBR 1998c). The CBR also provided explanations for such changes that reflected the different constraints of the exchange rate regime in the pre- and post-default periods. Pre-default period, the CBR provided liquidity through Lombard and O/I loans while subject to a commitment to a fixed ruble exchange rate. In this period, the CBR "continued to attach priority to measures to ensure stability of the domestic currency [which was] the objective of its monetary policy" (CBR 1998d).

As the CBR failed to fend off speculative attacks on the ruble in August, the CBR described that it "had to announce its decision to abandon the policy of artificially backing up the

exchange rate of the ruble by foreign exchange interventions and switch to a floating rate” (CBR 1998d). Post-default monetary policy in 1998, therefore, shifted “to improve the situation in the banking sector” by clearing “the log-jam of banks’ nonpayments to clients” (CBR 1998d). By September, the CBR was emphasizing the importance of also limiting inflation in its liquidity operations; the first deputy chairman of the CBR, Andrey Kozlov, noted that the CBR sought to print as little money as possible while supporting domestic banks (Filimonov 1998).

18. Disclosure: The CBR provided little disclosure related to the rehabilitation loans and other interventions in 1998.

In 1998, it appeared that the CBR made greater efforts to disclose its activities and the financial conditions of domestic banks in the period prior to default. For instance, as the crisis unfolded in June, bringing about the first wave of deposit runs, the CBR attempted to give depositors access to more information on commercial banks’ financial health (Rossiiskie Vesti 1998; CBR 1999a). According to an article on July 8, 1998, the Russian state newspaper *Rossiiskie Vesti* noted that the CBR planned to sign agreements with commercial banks to allow the CBR to routinely publish, via its website, banks’ income statements and audit reports (Rossiiskie Vesti 1998).

The CBR also more readily disclosed the activity of traditional monetary instruments in 1998, such as the Lombard facility. For instance, the CBR provided monthly updates for Lombard loans on its website throughout 1998. While the identities of banks were not revealed, the CBR disclosed the number of monthly borrowers, the volume of extended Lombard loans by duration, the facility’s outstanding balance, and the rate charged on operations (CBR 1999b).

The CBR, however, provided less clear information on the other liquidity operations following the default. Steinherr (2004) characterizes the CBR’s liquidity assistance after the default in August as “neither transparent nor following a clearly defined strategy.” An October 1998 *Moscow Times* levied similar criticism targeted specifically at the CBR’s unconventional use of the overnight loan facility. Market participants surveyed in the article expressed confusion as to why the CBR had allowed banks to continuously roll over credits at below market rates; according to the article, the CBR did not disclose when this new use of the overnight facility began or for which banks it applied (Rao 1998).

The absence of clear and transparent conditions for lending made it difficult to “unravel the intricate web of dependencies between commercial banks and the central bank that was woven shortly after the August crisis,” as one Euromoney journalist wrote in 1999 (Schaik 1999). By not providing key details of lending arrangements such as eligibility criteria, the CBR allowed financiers and journalists to speculate over the CBR’s political motives for extending loans to select banks (Rao 1998; Schaik 1999).

19. Stigma Strategy: The CBR anonymized lending under both the Lombard and overnight/intraday facilities to avoid market stigma.

Although the CBR provided more disclosure surrounding operations of the Lombard and overnight/intraday facilities, it did not identify individual participants aside from the number of borrowers and corresponding regions (CBR 1999a). In the post-default period, the CBR provided even fewer details on the lending arrangements of the Lombard and overnight facilities (Rao 1998). When asked by the press why the CBR did not identify the distressed banks receiving liquidity relief, an official pointed to damaging market speculations often associated with the publication of struggling banks (Rossiiskie Vesti 1998).

20. Exit Strategy: The CBR scaled back liquidity programs as banking liquidity improved and inflation materialized.

By the end of 1998, 93.9% of all RUR 135.7 billion loans from the Lombard and overnight facility had been repaid on time. The CBR, however, did not mention how many of these loans remained unpaid by year-end. According to a 1998 CBR report on Lombard operations, the CBR stopped extending Lombard loans after September, and as of December 1998, RUR 600 million in loans were unpaid (CBR 1999b). Research could not discover equivalent data for unpaid overnight loans, since the CBR did not provide a separate document, as was done for Lombard loans.

With no initial predetermined exit strategy, the CBR eventually scaled down liquidity operations for the Lombard and overnight facilities by the end of 1998. Owen and Robinson (2003, 31) noted that the liquidity of the Russian banking system improved quickly after August and that ruble deposits of commercial banks at the CBR saw marked increases beginning in September. As evidenced by the absence of Lombard loans after September, the CBR reduced total liquidity operations beginning in October (CBR 1999b; Owen and Robinson 2003, 31). However, the CBR continued to extend liquidity to select banks through other, less-traditional means such as the equity-secured rehabilitation loan program and foreign exchange credits (Owen and Robinson 2003, 134).

Lastly, the pickup in inflation, surpassing an annual rate of 100% throughout the fourth quarter of 1998, prompted the CBR to reduce liquidity operations. As inflation increased rapidly in November 1999, the CBR attempted to tighten monetary policy in the first several months of 1999 (Owen and Robinson 2003, 32–33). Furthermore, the CBR bore less of a responsibility for banking relief going into 1999 as the government regained fiscal budgetary tools and bank restructuring plans received legal authorization (Owen and Robinson 2003, 140).

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Appendix

Figure 5: CBR Liquidity Injections into the Banking System, 1996–1999

	Net Liquidity Operations	Required Reserve Balances			Deposit Facility	OBRs ¹	Gross Credit to Banks					Correspondent Accounts
		Total	Ruble	Foreign			Total ²	Lombard	Rehab	Forex ²	Other	
Billions of rubles												
1996 Dec	-30.9	25.9	22.3	3.6	11.4	0.0	6.4					17.7
1997 Dec	-26.9	36.4	27.5	8.9	0.4	0.0	9.9	6.5				31.4
1998 June	-26.3	38.1	25.5	12.6	0.2	0.0	12.0	7.9				14.0
July	-36.7	37.3	24.8	12.5	3.4	0.0	4.0	1.4				13.9
Aug	-10.5	32.4	20.9	11.6	0.2	0.0	22.2	5.3				10.0
Sep	-5.7	20.2	13.4	6.8	1.1	1.5	17.2	1.7				20.8
Oct	-19.0	18.0	13.0	5.0	8.0	1.9	8.9	1.2				22.4
Nov	-20.1	19.0	14.1	4.8	10.1	1.9	10.8	0.6				27.7
Dec	1.4	20.8	12.5	8.3	4.7	2.2	29.1	0.0	7.4	13.3	8.4	32.6
1999 Jan	-7.9	23.7	13.9	9.8	11.1	2.6	29.5	0.0	7.4	13.7	8.4	29.1
Feb	-6.2	24.7	14.1	10.7	15.1	0.0	33.7	0.0	7.9	14.7	11.1	32.9
Mar	-16.1	35.1	19.4	15.7	15.4	0.0	34.4	0.0	9.3	12.8	12.3	44.4
Percent of base money												
1996 Dec	-23.6	19.8	17.0	2.7	8.7	0.0	4.9					13.6
1997 Dec	-16.3	22.1	16.7	5.4	0.2	0.0	6.0	3.9				19.1
1998 June	-16.1	23.3	15.6	7.7	0.1	0.0	7.3	4.8				8.6
July	-22.7	23.1	15.4	7.7	2.1	0.0	2.5	0.9				8.6
Aug	-6.5	20.1	12.9	7.2	0.1	0.0	13.7	3.3				6.2
Sept	-3.2	11.5	7.6	3.9	0.6	0.9	9.8	1.0				11.9
Oct	-10.2	9.6	7.0	2.7	4.3	1.0	4.7	0.6				12.0
Nov	-10.5	9.9	7.4	2.5	5.3	1.0	5.7	0.3				14.4
Dec	0.7	9.8	5.9	3.9	2.2	1.0	13.8	0.0	3.5	6.3	4.0	15.4
1999 Jan	-3.9	11.6	6.8	4.8	5.4	1.3	14.5	0.0	3.6	6.7	4.1	14.3
Feb	-3.0	12.0	6.8	5.2	7.3	0.0	16.3	0.0	3.8	7.1	5.4	15.9
Mar	-7.8	16.9	9.4	7.6	7.5	0.0	16.6	0.0	4.5	6.2	5.9	21.4

Sources: Central Bank of Russia; and IMF staff estimates.

¹Central Bank of Russia bills.

²Excludes credits to Vneshtorgbank for government debt service.

Source: Owen and Robinson 2003, 134.

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