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Salil Gupta

YPFS, Yale School of Management

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Eurozone: Central Bank Repo to Hungary, 2008¹

*Salil Gupta*²

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Abstract

The collapse of Lehman Brothers in September 2008 led to a severe liquidity crisis in Hungary, which is part of the European Union but does not use the euro. Hungary's banking system was vulnerable to short-term liquidity withdrawals by foreign banks. In October 2008, the Hungarian central bank, Magyar Nemzeti Bank (MNB), created a temporary bilateral repo facility with the European Central Bank (ECB) to access euro liquidity for a maximum of EUR 5 billion in exchange for euro-denominated government securities held by the MNB. The ECB-MNB agreement was designed to increase the MNB's ability to lend euros to Hungarian markets. The MNB drew on its ECB repo facility for this purpose increasingly from 2008 to 2010; repo usage peaked at EUR 1.8 billion, and the MNB's downstream facilities provided EUR 4 billion of euro and Swiss franc liquidity in December 2010. The ECB converted half of the MNB's repo facility into a swap facility in January 2010. A Bank for International Settlements paper said that the announcement of the ECB-MNB repo facility in October 2008 had a calming effect on currency markets. The end date of the original facilities for Hungary was not disclosed. In July 2020, the MNB created a EUR 4 billion repo facility with the ECB as a response to the Covid-19 pandemic. In December 2022, the ECB's euro-providing facilities with Hungary were extended to January 15, 2024, because of the uncertainties arising from Russia's invasion of Ukraine.

Keywords: ECB, euro, foreign exchange, forint, Global Financial Crisis, liquidity, MNB, repo

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

² Research Associate, YPFS, Yale School of Management.

Overview

This case covers the ECB's provision of euro liquidity to Hungary during the Global Financial Crisis of 2007–09. By then, Hungary was part of the European Union, but it did not use the euro as its currency or participate in the Exchange Rate Mechanism (ERM), which the European Union uses to manage stability in exchange rates between the euro and non-euro currencies.

In September 2008, after the collapse of Lehman Brothers, Hungary was affected by a severe liquidity crisis (Banai, Király, and Nagy 2011).

Prior to the crisis, Hungary's economy had high levels of foreign ownership of its government securities (approximately 13% of GDP in 2008) and a high proportion of foreign currency lending to unhedged retail borrowers, mainly in euros and Swiss francs (IMF 2011). By mid-2008, half of Hungary's company loans and nearly two-thirds of consumer loans were in foreign currencies (US dollars, euros, Swiss francs). Hungary's banking assets were 80% owned by foreigners, making the economy susceptible to investor flight in the short term (Perry 2008).

Since the spread of the subprime mortgage crisis globally in 2007, foreign exchange swaps demand had increased significantly as foreign investors and Hungarian banks sought to hedge their Hungarian forint (HUF) exposure. Hungary's banks had exposed themselves to exchange rate and maturity risk by using foreign exchange swaps to hedge their off-balance-sheet exposure. Hungarian banks had long foreign exchange positions on balance sheet, which were hedged through short FX positions or other structured products that were recorded off balance sheet (IMF 2011).

Key Terms

Purpose: To provide euro liquidity assistance to the domestic financial sector	
Participating Parties	European Central Bank, Magyar Nemzeti Bank
Type of Swap	Bilateral, temporary, and unidirectional repo facility (euros for euro-denominated collateral); the ECB converted half of Hungary's repo facility into a swap facility in January 2010
Currencies Involved	Hungarian forint, Swiss franc, euro
Launch Date	October 16, 2008
End Date	Not disclosed; new repo expires January 15, 2024
Date of First Usage	October 21, 2008
Interest Rate and Fees	Exchange rate: 110% of market rate; initial margin: 1% (for intraday) and 2% (for longer); additional initial margin: 2%; late payment interest: not disclosed
Amount Authorized	EUR 5 billion (USD 7 billion)
Peak Usage Amount and Date	EUR 1.8 billion in December 2010
Downstream Use/Application of Swap Funds	Help MNB launch a special swap to provide euros to the domestic banks; peak provision of EUR 4 billion in December 2010
Outcomes	Positive outcome in reducing cross currency spreads
Notable Features	MNB negotiated with the ECB for wider collateral eligibility; ECB lowered the repo limit for the MNB to EUR 4 bn in 2022

The negative investor sentiment following the collapse of Lehman Brothers in October 2008 led to a sell-off in Hungary's government securities and a sudden currency devaluation. The sharp depreciation of the forint in October 2008³ lowered the value of underlying collateral in the FX swap contracts, leading to margin calls and liquidity pressures for Hungarian banks as short-term contracts were no longer rolled over (IMF 2011).

On October 9, 2008, the governor of the Hungarian central bank, Magyar Nemzeti Bank (MNB), and the Minister of Finance contacted the International Monetary Fund (IMF) to request a stand-by agreement for SDR 10.5 billion (1,015% of the quota⁴) to address the liquidity pressures in Hungarian banks resulting from the sharp forint depreciation (IMF 2011).

The next day, Friday, October 10, the MNB asked for ECB support to help ease tension in forint money markets and foreign exchange swap markets. In a letter, the MNB said that it would announce, on the same day, a downstream, "two-way" liquidity facility through which it would act as a central counterparty in the Hungarian FX swap market, intermediating between market participants in need of forints and those in need of euros (ECB 2008a). This facility would address market participants' concerns about their counterparties amidst the market turmoil.

On October 16, the ECB and MNB announced a repo facility through which the MNB could borrow up to EUR 5 billion (USD 6.75 billion) against high-quality, euro-denominated collateral. However, the announcement didn't mention the previously announced two-way facility. Rather, the stated purpose of the ECB facility was now to provide euros to Hungary's commercial banks (Perry 2008). The MNB used the ECB repo facility to back a new overnight swap standing facility to provide euros in return for forints to domestic credit institutions at a higher rate than the market rate (MNB 2009).

The response to the announcement of the agreement with the ECB was initially positive, with the forint rising 1% against the euro but the broader Hungarian equity index continuing to fall by 9%. Hungary's foreign exchange reserves had fallen to EUR 17.5 billion, or three months of imports, in the second quarter of 2008, and the repo with the ECB was intended to help the MNB defend the forint. The market was uncertain about the willingness of the ECB to lend liquidity support to Hungary (Lesova 2008). The deal represented the first time the ECB had provided liquidity support to a non-euro central bank. There was also contagion risk to other central and eastern European economies for the ECB to consider at the time (Houston-Waesch and Feher 2008).

³ The forint depreciated 17.9% from 230 per euro in August 2008 to 280 per euro in October 2008 (Bloomberg).

⁴ Hungary had an annual access limit of 100% and a cumulative access limit of 300% of the IMF's general resources fund and had applied for an exceptional access of 1,015% because of its capital account crisis (IMF 2011).

On October 22, 2008, the ECB and MNB signed the master agreement for the repo facility (ECB and MNB 2008).⁵ In addition to overnight repo loans, the MNB started offering euro-forint swap tenders for three-month and sixth-month maturities in March 2009. Meanwhile, the MNB discontinued the two-way facility in May 2009, as counterparty risks in the market had eased (MNB 2010).

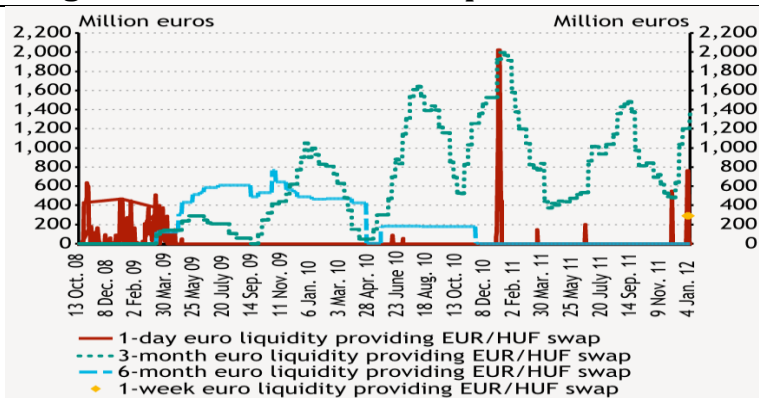
The MNB reported HUF 174 billion (EUR 654 million⁶) outstanding on the repo facility at the end of 2008 (MNB 2009). In April 2009, the MNB lowered the margin requirement from 10% to 5% for its euro-providing foreign exchange swaps. In January 2010, the MNB was authorized by the ECB to draw down half of its available repo facility (EUR 2.5 billion) in the form of a euro-forint swap transaction (MNB 2010).

The MNB's usage of the ECB repo facility increased every year and peaked at the end of 2010 at EUR 1.8 billion. At the time, the MNB's swap standing facility had EUR 1.9 billion outstanding in three-month swaps and EUR 2.0 billion outstanding in overnight swaps (see Figure 1). Usage of the MNB's overnight facility spiked in the last two days of 2010 because of a temporary increase in the liquidity needs of the Hungarian banking system (see Figure 1) (MNB 2011). The usage of the ECB facility by the MNB declined to EUR 1.5 billion by the end of 2011. The MNB's total central bank swap holdings were EUR 3.9 billion at the end of 2010 and EUR 2.3 billion at the end of 2011 (MNB 2012).

On July 23, 2020, the ECB and MNB agreed to set up a repo line till June 2021 to provide foreign exchange liquidity to Hungarian financial institutions for a maximum of EUR 4 billion (ECB 2020e). In 2021, the MNB announced an agreement to extend its repo line with the ECB by nine months to set to expire in March 2022 (ECB 2021). On December 15, 2022, the ECB extended its repo lines to all non-euro area central banks, including Hungary, to January 15, 2024, because of uncertainties arising from Russia's invasion of Ukraine (ECB 2022a). As seen in Appendix B, Hungary still has a repo line with the ECB in 2022 but with a lower maximum amount of EUR 4 billion versus EUR 5 billion in 2008. (See Appendix C for a summary of the repo lines provided by the ECB to other non-euro countries—Romania, Albania, Serbia, San Marino, and North Macedonia—during the Covid-19 crisis.)

⁵ The agreement used is a master agreement prepared by the Banking Federation of the European Union, in cooperation with the European Savings Banks Group and the European Association of Cooperative Banks (ECB and MNB 2008).

⁶ Per Yahoo Finance, 1 EUR = 266 HUF as of December 31, 2008.

Figure 1: Outstanding Amounts of MNB's FX Swap Instruments

Source: MNB 2012.

Summary Evaluation

Prior to the collapse of Lehman, commercial banks in Hungary had provided sizable domestic mortgage loans in foreign currencies and financed themselves by wholesale markets, both of which later dried up as the crisis intensified (BIS 2010). After the GFC, the ECB avoided the risk of providing liquidity directly to commercial banks by lending to the central banks in which the commercial banks were located (BIS 2010). The ECB was essentially taking on a sovereign risk in lending to the central banks of nations not using the euro (BIS 2010).

Analysts were concerned that the ECB did not have a large enough balance sheet to provide foreign exchange lending to all the non-euro member countries of the Eurozone. ECB's emergency loans to Hungary through this repo facility highlighted the ECB's "widening role as a financial firefighter across the continent." The MNB was then able to host daily auctions of euro funding for Hungarian banks to swap forints and conduct efforts to unfreeze the domestic debt markets. There were broader concerns at the time that the overall Eurozone would suffer from a further worsening of economic conditions in Hungary (Perry 2008).

The ECB's repo facilities with Hungary allowed the MNB to exchange high-quality euro-denominated assets for euro cash that it could then make available to commercial banks domestically (BIS 2010). The ECB, in January 2010, converted half of its repo facility with Hungary into a swap line (MNB 2010). The MNB also provided Swiss francs to euro area commercial banks through the coinciding swap lines with the SNB (BIS 2010).

The announcement of the MNB's repo facility with the ECB and the extension of its swap line with the SNB did have an immediate positive effect on cross-currency basis swap spreads against the euro. The borrowing of foreign currency helped reduce depreciation pressure on the forint during periods of market distress (BIS 2010). The repo deal with the MNB represented the first time the ECB had provided liquidity support to a non-euro central bank (Houston-Waesch and Feher 2008).

The MNB's foreign reserves were not affected by the ECB's repo facility and stayed stable at EUR 24 billion between November 2008 and February 2009. This indicated that although

the MNB's reserves were adequate to provide foreign currency liquidity to commercial banks, the external borrowing helped augment Hungary's rescue packages (BIS 2010). Allen and Moessner conclude that Hungary drew only relatively small amounts on the liquidity lines, which provided euros against high-quality euro collateral, and hence they did not have a large impact (BIS 2010, 77).

Swap spreads and interest rate differentials remained "unusually wide" for Hungary as visible in Figure 2 (BIS 2010). There was uncertainty in the market on the limits of the ECB's willingness to provide liquidity support to Hungary (Lesova 2008).

In 2020, two members of the ECB Executive Board stated that repo and swap lines do not aim to compete or replace private funding markets. Their note elaborated that limited use of the ECB's liquidity lines does not indicate that the facilities are not required but that the ECB facilities have a signaling effect that helps calm tensions in euro markets (ECB 2020h).

Figure 2: Hungary: Cross Currency Swap Spreads Against the Euro

Event	Date	5 days*		change
		before	after	
before Crisis	01-Jan-07	-	-8	
ECB Swap Line	16-Oct-08	-108	-95	13
SNB Swap Line	28-Jan-08	-227	-232	-5
SNB Swap Line	25-Jun-09	-118	-89	29
Latest	01-Jan-09	-95	-	

*In basis points, averages over period, at the one-year maturity

Source: BIS 2010.

Context: Hungary 2008–2009		
GDP (SAAR, nominal GDP in LCU converted to USD)	\$158.4 billion in 2008	
	\$131.1 billion in 2009	
GDP per capita (SAAR, nominal GDP in LCU converted to USD)	\$15,777 in 2008	
	\$13,082 in 2009	
Sovereign credit rating (five-year senior debt)	2008	Moody's: A3
		S&P: BBB
		Fitch: BBB+
	2009	Moody's: Baa1
		S&P: BBB-
		Fitch: BBB+
Size of banking system	\$132.8 billion in 2008	
	\$99.6 billion in 2009	
Size of banking system as a % of GDP	83.8% in 2008	
	76% in 2009	
Size of banking system as a % of financial system	Data not available in 2008	
	Data not available in 2009	
Five-bank concentration of banking system	89.3% in 2008	
	93.4% in 2009	
Foreign involvement in banking system	67% in 2008	
	64% in 2009	
Existence of deposit insurance	Yes in 2008	
	Yes in 2009	
<i>Sources: Bloomberg; World Bank Global Financial Development Database; World Bank Deposit Insurance Dataset.</i>		

Key Design Decisions

1. Purpose and Type: The ECB entered into a bilateral repurchase agreement with the MNB to provide euros to address foreign currency liquidity concerns in Hungary's market.

The ECB and MNB established a repo agreement that allowed the MNB “to borrow euro in order to support a foreign exchange swap facility” (ECB 2008c). The ECB’s Executive Board preferred to offer Hungary a repo facility, which the Governing Council approved over a swap facility (ECB 2008a). The MNB believed that such an agreement with the ECB would help provide a positive signal to the market and potentially “ease tensions” (MNB 2008b). The ECB stated in its annual report that it required adequate collateral to minimize the risk of counterparty default while carrying out credit operations in the Eurosystem. The ECB also recognized currency risk in carrying out liquidity-providing operations in foreign currencies against euro-denominated collateral (ECB 2009).

In the case of the repo agreement, the MNB could request euros in exchange for high-quality euro-denominated securities, thus exchanging euro securities for euro cash. As can be seen in Appendix B, the ECB’s liquidity-providing agreements with the MNB were not reciprocal (ECB 2022c).

2. Part of a Package: The ECB had initiated liquidity operations by October 2008 for euro area countries. The MNB carried out various other liquidity and policy easing measures in its domestic market.

Between October 2008 and December 2008, the ECB carried out a series of liquidity management actions for euro area countries, including streamlining rates on standing facilities,⁷ conducting long-term refinancing operations (LTROs), reducing the credit threshold for eligible collateral, and providing US dollar and Swiss franc liquidity through swap agreements with the Federal Reserve and the Swiss National Bank, respectively (ECB 2009). Hungary was initially excluded from the ECB’s liquidity facilities and later was provided access to a repo line to help its commercial banks.

The MNB carried out various measures to improve the functioning of the forint markets and provide forint and euro liquidity to Hungarian and foreign market participants (MNB 2008b). The MNB introduced short-term collateralized loan tenders to provide liquidity to the banking sector. The MNB also broadened the range of eligible collateral by including covered bank bonds and lowering the credit rating threshold for forint liquidity operations from A to BBB-. The MNB also lowered the reserve requirement from 5% to 2%, starting December 1, 2008, and purchased HUF 243 billion of government securities in the secondary market to provide additional liquidity to the banking sector (MNB 2009).

⁷ ECB’s Governing Council in 2007 launched two three-month operations to support the normalization of the money markets (ECB 2009).

The MNB approached the IMF for a Stand-by Agreement for SDR 10.5 billion, which the IMF approved in early November 2008. Article 143 of the EU treaty required Hungary to seek the approval of the EU's Economic and Financial Committee on its balance of payments before seeking external assistance from the IMF. The EU agreed to join the accelerated procedures for consultations between the MNB and IMF because of the "urgency of developments in Hungary" (IMF 2011).

In October 2008, Hungarian Finance Minister János Veres also committed to reducing the budget deficit to 2.9% of GDP, from the previous target of 3.2%, to help shore up investor confidence (Houston-Waesch and Feher 2008). On November 12, 2008, the MNB drew SDR 4.2 billion (EUR 4.9 billion) from the IMF (MNB 2009). In November 2008, Hungary also received a EUR 20 billion stand-by credit facility from the IMF and European Commission, and it drew EUR 6.9 billion in the fourth quarter of 2008 (BIS 2010).

In January 2010, the ECB, SNB, MNB, and National Bank of Poland (NBP) discontinued their euro/Swiss franc swaps, which were providing Swiss franc liquidity to the market against euro collateral (MNB 2011).

3. Legal Authority: The ECB was acting under the Protocol on the Statute of the ESCB and the ECB; these agreements were governed by principles adopted by the ECB's Governing Council and the local laws of Hungary.

The ECB was able to provide the repo facility as per power established in an annexure to the Treaty establishing the European Community, called the Protocol on the Statute of the European System of Central Banks (ESCB) and the European Central Bank. The ECB may conduct foreign exchange operations in accordance with Article 111 of this treaty. Article 23 of this treaty also allows the ECB to buy or sell any spot or forward of a foreign exchange asset, which is defined as the assets, currency, or securities, in the other country's currency for external operations (EC 2002).

The Banking Federation of the European Union (FBE) published a Master Agreement for Financial Transactions in 2004 to list out the General Provisions to govern financial transactions. Section 11.1 of the General Provisions document specifies the Governing Law for each agreement to be specified in the Special Provisions document or to follow the law of the country in which both central bank offices are located (EMA 2004).

The ECB's Governing Council had determined principles for liquidity assistance to non-euro-area EU countries on October 20, 2008 (ECB 2008b). These principles are summarized in the Agreement on Emergency Liquidity Assistance (ELA), published on November 9, 2020. This emergency assistance document will be reviewed in 2023 (ECB 2020a).

The ECB's guiding principles, rules, and procedures have been provided in an Emergency Liquidity Assistance (ELA) agreement, which also provides for the role of the Governing Council as per Article 14.4 of the Statute of the ESCB (ECB 2020a). The agreement assigns the main responsibility of the costs and risks from the ELA to the central bank of the country concerned or by a third-party guarantor (ECB 2020a). The borrowing central bank has mandatory reporting requirements to the ECB, such as providing all details of an ELA

operation within two business days of the operation taking place, sharing a funding plan within two months of receiving assistance, and sending monthly updates on regulatory capital ratios (ECB 2020a). The Executive Board has the ability to extend a liquidity agreement with a central bank if the borrowing threshold exceeds EUR 500 million. If the borrowing threshold exceeds EUR 2 billion, the Executive Board can refer the matter to the Governing Council and ask for a response at short notice. The duration of an ELA may only exceed 12 months following a non-objection from the ECB Governing Council. In terms of the pricing, the ELA agreement specifies a penalty interest rate for the borrowing central bank, a minimum rate that equals the Eurosystem's marginal lending rate plus 100 basis points, and a minimum 1% rate per year on intraday transactions. The Governing Council also reserves the right to object to a central bank's communication plan in order to maintain broader financial stability within the eurozone (ECB 2020a).

Article 143 of the EU treaty required Hungary to seek the approval of the EU's Economic and Financial Committee on its balance of payments before seeking external assistance from the IMF (IMF 2011).

The repo agreement was to be governed by German law (ECB and MNB 2008). The broader guidelines for monetary policy instruments and procedures of the Eurosystem have been presented by the ECB in August 2000 (ECB 2000).

The MNB was conducting its operations under powers provided by the Act LVIII of 2001 on the Magyar Nemzeti Bank Act (MNB Act). The MNB Act is in line with Article 105 of the treaty establishing the European Community and states price stability as the primary objective of the MNB. The MNB is a member of the European System of Central Banks (ESCB⁸) (MNB 2009).

4. Governance: The ECB Governing Council had the final decision to approve the repo agreement with the MNB.

The ECB Governing Council made the final decision regarding the repo agreement with the MNB, while the signature and implementation of the agreements were delegated to the ECB Executive Board (ECB 2008a).

On October 16, 2008, the MNB requested that the ECB widen its collateral eligibility criteria with respect to the repo line, with the ECB's Executive Board considering the proposals and providing its recommendations by October 19, 2008 (ECB 2008c). The market operations and legal departments of the ECB and MNB deliberated on the possible repo agreement with the ECB's Executive Board, which drafted the memo to the ECB's Governing Council (ECB 2008a). During the negotiation phase, the MNB had requested a wider range of collateral from the ECB for the new repo facility. The ECB Executive Board's memo to the Governing Council accepted some collateral that the MNB proposed, such as debt issued by EU member states that use the euro, the European Investment Bank, and Kreditanstalt für Wiederaufbau;

⁸ The ESCB comprises the ECB and the central banks of member states, with the goal of maintaining price stability and conducting tasks involving monetary policy, foreign exchange operations and reserve management (EC 2002).

however, it excluded covered bonds of entities based out of Germany, France, Sweden, and Norway. The ECB MNB master agreement reflected these rules for eligible collateral, indicating that primary approval powers were with the ECB (ECB and MNB 2008).

The ECB's Executive Board prepared a memo to the Governing Council on October 14, 2008, recommending a repo line to the MNB, as a response to both a detailed request and crisis background information from the MNB dated October 10, 2008 (ECB 2008a; MNB 2008b; MNB 2008c). The ECB also approved the MNB's request to make public the existence of the agreement between the parties (ECB 2008a).

The master repo agreement between the ECB and MNB was dated October 22, 2008 (ECB and MNB 2008). The MNB lowered minimum classification criteria of credit ratings from A to BBB- on October 28, 2008, and expanded its range of eligible collateral to covered bank bonds on November 18, 2008 (MNB 2009).

5. Administration: The ECB repo agreement with the MNB had specific terms for margin criteria, transfers, and reporting.

The ECB MNB repo agreement was signed by ECB President Jean-Claude Trichet and MNB Governor András Simor. The ECB MNB master agreement stated that the booking office of each transacting party would determine and exchange the margin requirements. The ECB maintained the ability to update the margin eligibility criteria, including requiring consent for any margin substitution. An agent from each transacting party could determine net exposures and provide a statement with detailed disclosures. Margin transfers had to be made by the next business day of the receipt of the margin call. An additional initial margin ratio of 2% was introduced in the ECB MNB agreement to limit the number of margin calls required (ECB and MNB 2008).

6. Communication: The ECB and MNB disclosed their repo agreement via press releases on their respective websites and in their annual reports.

The ECB issued a press release stating that it was launching a joint facility with the MNB to support the MNB's euro-providing instruments. The ECB would allow the MNB to borrow EUR 5 billion via a repurchase agreement to provide additional support to its operations (ECB 2008d).

The ECB reported its support to Hungary in its 2008 annual report as "medium term financial assistance" in the form of a loan from the European Community of EUR 2 billion as of December 31, 2008 (ECB 2009, 235). The market was uncertain about the willingness of the ECB to lend liquidity support to Hungary (Lesova 2008). The deal represented the first time the ECB had provided liquidity support to a non-euro central bank. There was also contagion risk to other central and eastern European economies for the ECB to consider at the time (Houston-Waesch and Feher 2008). Analysts were concerned that ECB's balance sheet was not big enough to support large foreign currency lending to countries not using the euro or those outside the euro area (Perry 2008).

The use of the repo lines was described and reported by the MNB in its annual report in 2008 (MNB 2009). The MNB requested that the ECB disclose the agreement once signed in order to add credibility to its domestic FX swap facilities; the ECB agreed to such an announcement (ECB 2008a). The MNB disclosed the overnight standing facility with the ECB on October 16, 2008 (MNB 2008d).

One of the criticisms of the ECB's actions of providing repo lines was the creation of a "two-tier system" in central bank liquidity provisions at the time. It was not clear as to why the ECB could not offer a swap facility to Hungary that was similar to that of Sweden or Denmark. The ECB has been reported to state in private conversations that potential operations risks (or the foreign exchange risk) from holding forint made it uncomfortable with offering a swap facility to Hungary (Vallee 2010).

7. Eligible Institutions: The ECB established a repo line with the MNB following requests made by the central bank.

The MNB reached out to the ECB seeking assistance with its foreign currency liquidity problems (MNB 2008b).

It appears that the MNB requested a swap line from the ECB, but the ECB offered and established a repo line with the central bank instead (MNB 2008b; MNB 2008d). The ECB's memo from October 14, 2008, confirms the "ECB's preference for a repo facility over a swap facility" for Hungary (ECB 2008a, 1). The ECB did not disclose what criteria it considered before determining to offer the MNB a repo line in lieu of a swap line.

The ECB also did not disclose any specific criteria that it considered before agreeing to a repo line but referred to Guiding Principles regarding liquidity assistance to non-euro EU countries that had been adopted by the Governing Council (ECB and MNB 2008). The Governing Council reserved the right to approve and impose additional restrictions on any borrowing central bank seeking a liquidity limit above EUR 2 billion or an agreement longer than 12 months (ECB 2020a).

8. Size: The ECB established a EUR 5 billion repo line with the MNB.

On October 22, 2008, the ECB and MNB signed a master agreement allowing the MNB to enter into repurchase transactions (repos) for a maximum amount of EUR 5 billion (ECB and MNB 2008). The MNB's requested size and form of the agreement has been redacted, but the ECB responded by providing a EUR 5 billion repo agreement to MNB (ECB 2008a; MNB 2008b).

9. Process for Utilizing the Agreement: The ECB's master agreement with the MNB provided steps to utilize the repo agreement.

The ECB's master agreement with the MNB comprised a Special Provisions document providing the details of the repo agreement, along with a General Provisions 2004 document that provides the statutes of the ESCB and of the ECB (ECB and MNB 2008).

The ECB agreement provides guidance for confirming a repo draw, payment determination and netting, booking office designations, margin requirements, dispute resolution, pricing, and maturity. ECB also declared that Deutsche Bundesbank, the German central bank, would be responsible for securities settlement and collateral management for the ECB in the repo agreement (ECB and MNB 2008).

The disclosed Special Provisions documents only provided amendment details for managing default, automatic termination, restructuring event, or other insolvency events. (ECB and MNB 2008). The Banking Federation of the European Union (FBE) published a Master Agreement for Financial Transactions in 2004 to list out the General Provisions to govern financial transactions (EMA 2004). The decision to authorize draws under the repo facility (up to the authorized limits) would be delegated to the ECB's Directorate General, Market Operations as per the preliminary discussions between the ECB and the MNB (ECB 2008a).

10. Downstream Use of Borrowed Funds: The ECB provided euros to address the foreign currency exposure of the Hungarian banking system.

In a letter dated Friday, October 10, 2008, the MNB first asked for ECB support to help ease tension in forint money markets and foreign exchange swap markets. In the letter, the MNB said it would announce, on the same day, a downstream, "two-way" liquidity facility through which it would act as a central counterparty in the Hungarian FX swap market, intermediating between market participants in need of forints and those in need of euros (ECB 2008a). An internal MNB memo said that the two-way facility would reassure market participants who were worried about counterparty risk; it suggested that there was limited unmet demand for euros, since the net FX needs of Hungarian banks is equal in size to the forint liquidity needs of foreign participants (MNB 2008c). On Tuesday, October 14, 2008, ECB staff confidentially submitted to their Executive Board the MNB's request for the repo facility. In that request, the ECB said that the purpose of the facility would be to provide euros to support the MNB's two-way facility.

However, when the ECB and MNB announced their euro repo facility on Thursday, October 16, they said that, rather than support the two-way facility, the MNB would use the ECB's repo facility to back a new swap standing facility to provide euros in return for forints to domestic credit institutions at a higher rate than the market rate (MNB 2009). Like the two-way facility, the swaps were offered as an overnight facility, with the effective exchange rate set at 110% of the prevailing market exchange rate (MNB 2008a; MNB 2008d). The MNB, in its term sheet for the swap standing facility, said it would be available to all resident credit institutions that were subject to the MNB's reserve requirements (MNB 2008d).

Beginning in March 2009, the MNB started offering euro-forint swap tenders for three-month and six-month maturities as well. Seven Hungarian banks were allowed to participate in the six-month tenders, with a maximum borrowing limit of EUR 2.81 billion for the program. Other banks that met the technical bidding criteria were allowed to participate in the three-month tender for the balance of the EUR 5 billion borrowing limit. The MNB committed to offering the six-month variable-rate collateralized loan tenders till June 30, 2010 (MNB 2010).

On November 18, 2008, the MNB altered its minimum collateral eligibility criteria for its FX facilities from A to BBB- to bring its policies in line with the rules set by the ECB (MNB 2009). The MNB also started accepting mortgage bonds as eligible collateral to further match the collateral standards of the ECB. In April 2009, the MNB made changes to the terms of these FX facilities, including lowering the forint margin required for euro FX swap transactions from 10% to 5% to provide further support (MNB 2010).

The MNB discontinued the two-way facility in May 2009, as counterparty risks in the market had eased (MNB 2010). The MNB, in its 2008 annual report, noted that the two-way facility actually didn't provide euros. It observed that the source of the crisis had been excess demand for euros, not counterparty risk. "Although the two-way FX swap quick tender offers a solution to market participants' counterparty problems vis-à-vis one another, it does not solve the situation when the euro liquidity demand of the domestic banking sector exceeds supply" (MNB 2009). (See Appendix D for details of the MNB's downstream swap facility to Hungarian financial institutions.)

11. Duration of Swap Draws: The maximum maturity of all repo transactions under the swap line was one month.

The ECB repo agreements with the MNB stated that the maximum maturity for all repo transactions would be one month. Both repo agreements were for a fixed term and could not be terminated on demand (ECB and MNB 2008).

12. Rates and Fees: The ECB repo agreement included the effective exchange rate, additional initial margin ratio, and interest charge for late payment.

The repos were offered as overnight facilities, with the effective exchange rate set at 110% of the prevailing market exchange rate (MNB 2008a).

Information about the interest charge for late payments was not included in the agreement. The default clause in the agreement was expanded to include the failure to make a margin delivery in addition to failure to make a payment (ECB and MNB 2008).

The initial margin requirement was stipulated by Section 6.4 of Annex I to the Guideline ECB/2000/7, which required a 1% margin for intraday and overnight transactions and 2% margin for maturities longer than one business day (ECB 2000). The agreement also stipulated an additional 2% initial margin if margin calls are required and a maximum maturity of one month for all repo transactions (ECB and MNB 2008).

13. Balance Sheet Protection: The ECB offered a repo facility with widened collateral eligibility rather than a swap facility to the MNB.

The ECB's memo from October 14, 2008, confirms the "ECB's preference for a repo facility over a swap facility" for Hungary (ECB 2008a, 1). A blog post by members of the ECB's Executive Council indicates a preference for using swap lines for central banks using major currencies, where reciprocal access to either currency is considered a low-risk transaction. Repo lines allow the ECB to provide euros by receiving euro-denominated collateral to

secure repayment by the borrowing central banks—in this case, the MNB. Repos are typically more expensive than swaps for the borrowing central bank but help limit the foreign exchange risk and counterparty default risk for the ECB as the lending central bank (ECB 2020h).

The MNB intended to use the repo line as a “first recourse facility,” whereby it would draw on the facility for euros before draining Hungary’s foreign exchange reserves (ECB 2008a). If the repo line was activated and euros were drawn by the MNB, the amounts would be considered in the ECB’s liquidity management (ECB and MNB 2008).

As part of the repo agreement, the MNB was to provide euro-denominated collateral to the ECB in exchange for euro currency. The initial discussions led to the ECB Executive Board proposing to the Governing Council that German, French, and Italian government securities be provided by the MNB as collateral, which the council approved on October 15, 2008. On October 16, 2008, the MNB requested that the collateral allowable under the repo line be widened to “debt obligations issued by the central governments of the Member States which have adopted the euro, the European Investment Bank and Kreditanstalt für Wiederaufbau (KfW) and covered bonds issued by entities established in Germany, France, Sweden and Norway,” which are eligible securities for Eurosystem operations in liquidity categories I and II (ECB 2008c). In addition, the draft agreement mentions that the securities must have a minimum issue rating of A- (by Fitch or Standard & Poor’s) or A3 by Moody’s or AL by DBRS (ECB and MNB 2008).

The ECB Executive Board’s memo to the Governing Council recommended that the widening of collateral could be accepted only as to: “debt obligations issued by the central governments of the Member States which have adopted the euro, the European Investment Bank and Kreditanstalt für Wiederaufbau (KfW), while excluding the covered bonds issued by entities established in Germany, France, Sweden and Norway.” Covered bonds of entities based out of Germany, France, Sweden, and Norway are eligible securities in liquidity categories I and II of Eurosystem operations but were excluded by the ECB as eligible collateral for the MNB to utilize the repo agreement (ECB 2008c).

14. Other Restrictions: The repo agreement did not impose any downstream restrictions on the use of euros borrowed by the MNB.

The repo agreement did not impose any downstream restrictions on the use of euros borrowed by the MNB.

15. Other Options: The ECB’s other options could not be identified because of redaction.

The ECB’s Executive Board in a memo to the Governing Council on October 14, 2008, likely considered other options to provide euro liquidity assistance to the MNB; however, these could not be identified due to heavy redaction (ECB 2008a).

16. Exit Strategy: There was no disclosed end date for the repo agreement with the MNB.

The ECB MNB agreement was to remain in place “until countermanded” (MNB 2008d). We could not find any disclosures to mark the end of the ECB MNB repo agreement. The MNB suspended its euro downstream lending facility after November 2016, since there were no draws made in either the three-month or overnight euro-providing facilities (MNB 2017). The reduction in dependence of the Hungarian banking sector on the swap market further led to the MNB suspending the overnight facility after July 2017 (MNB 2018). The MNB did not have any FX liquidity instruments active in 2018 (MNB 2019). There were no additional disclosures of a clear end date to the ECB’s repo agreement with the MNB in 2008.

The ECB decided to extend the “temporary bilateral repo lines” with Hungary on March 28, 2022, to January 2023 because of the potential spillover effects from the Russian invasion of Ukraine (ECB 2022a). On December 15, 2022, the ECB extended its swap lines with the MNB to January 15, 2024 (ECB 2022d).

As seen in Appendix B, Hungary still had a repo line with the ECB as of 2022, but with a lower maximum amount of EUR 4 billion versus EUR 5 billion in 2008. The ECB’s repo line to the MNB is set to expire on January 15, 2024 (ECB 2022d).

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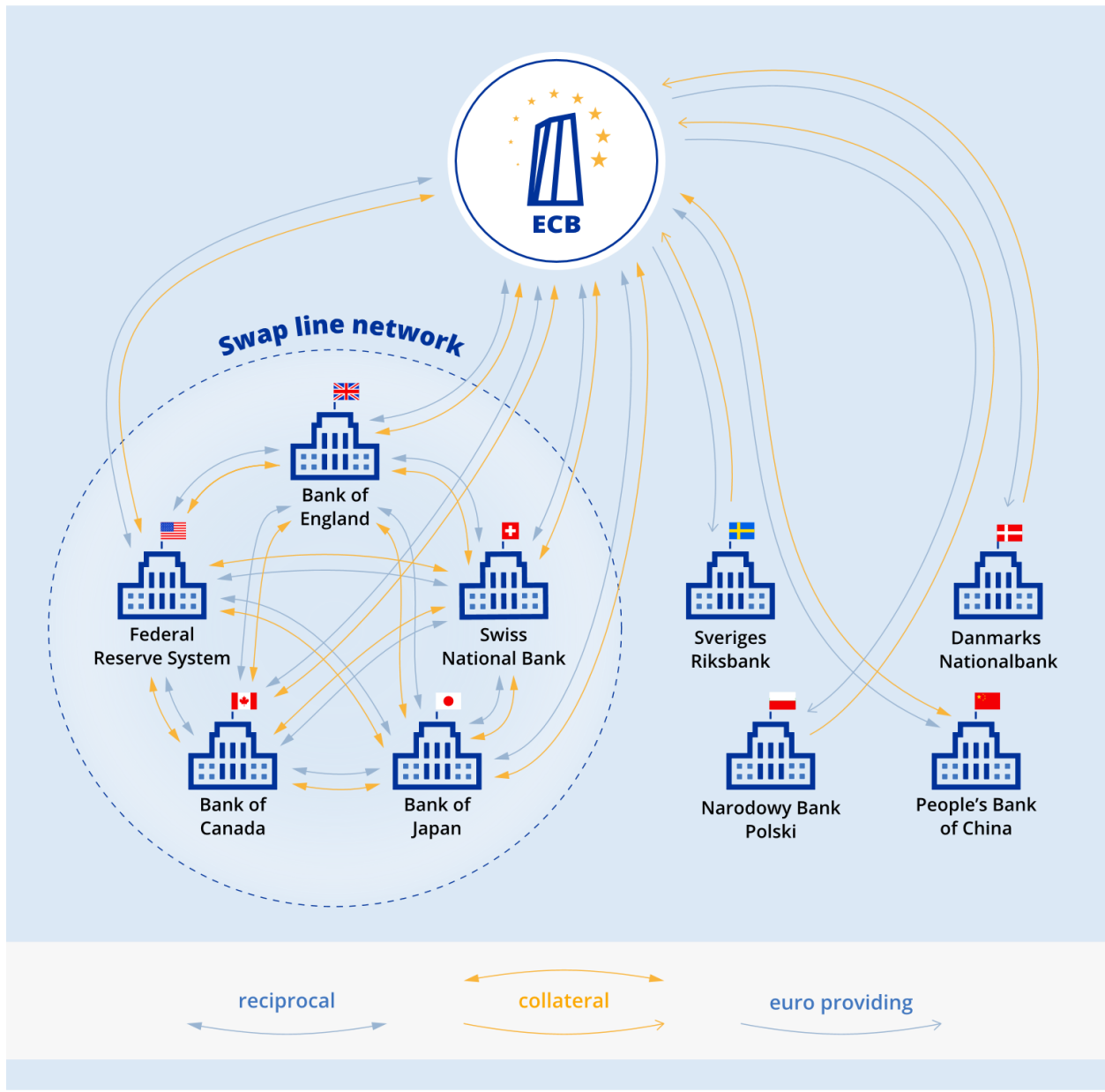
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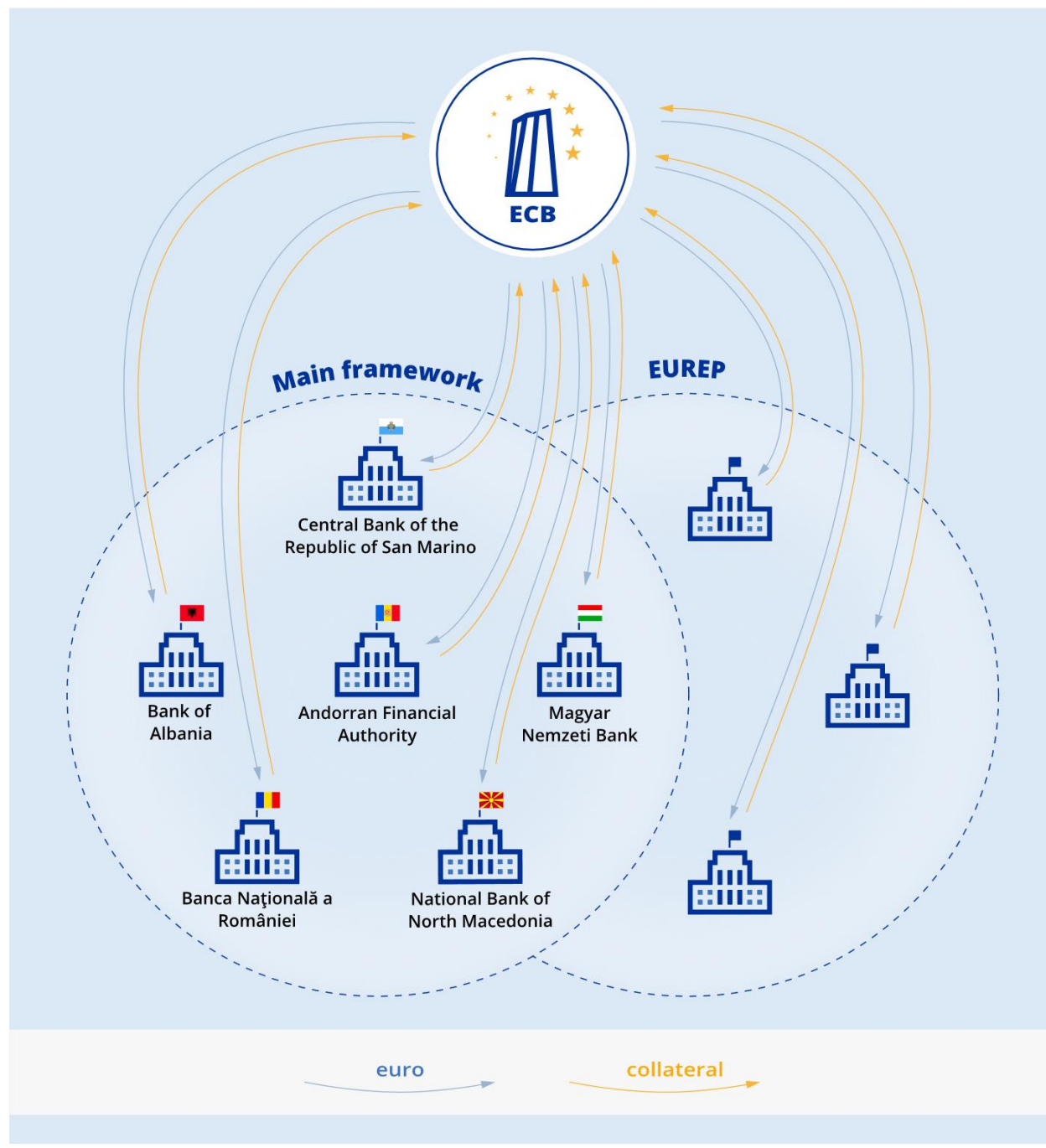
Appendixes

Appendix A: ECB's Network of Swap Lines (as of October 2022)



Source: ECB 2022c.

Appendix B: ECB's Network of Repo Lines (as of October 2022)



Source: ECB 2022c.

Appendix C: ECB's Repo Lines to Other Non-Euro Countries During the Covid-19 Crisis

As a response to the Covid-19 shock, the ECB provided temporary and bilateral repo lines to several other European countries that do not use the euro currency (ECB 2022a). These repo lines were offering to provide euro liquidity in exchange for high-denominate euro collateral, with maximum maturity of each draw of three months (ECB 2022a).

Romania. On June 5, 2020, the ECB offered the National Bank of Romania (BNR) a repo line for a maximum size of EUR 4.5 billion to provide euro liquidity in exchange for high-denominated euro collateral (ECB 2020b). The agreement was to remain in place till December 31, 2020 (ECB 2020b). On April 27, 2022, the ECB extended the BNR's repo facility to January 15, 2023, from March 31, 2022 (ECB 2022b).

Albania. On July 17, 2020, the ECB offered the Bank of Albania a repo line for a maximum size of EUR 400 million (ECB 2020c). The agreement was to remain in place till June 2021 (ECB 2020c).

Serbia. On July 17, 2020, the ECB offered the Bank of Serbia a repo line for a maximum size of EUR 1 billion (ECB 2020d). The agreement was to remain in place till June 2021 (ECB 2020d).

San Marino. On August 18, 2020, the ECB offered the Republic of San Marino a repo line for a maximum size of EUR 100 million (ECB 2020f). The agreement was to remain in place till June 2021 (ECB 2020f).

North Macedonia. On August 18, 2020, the ECB offered the National Bank of the Republic of North Macedonia a repo line with a maximum size of EUR 400 million (ECB 2020g). The agreement was to remain in place till June 2021 (ECB 2020g).

On March 28, 2022, the ECB extended its existing repo lines with Albania, North Macedonia, and Serbia to January 15, 2023, following requests from the respective central banks (ECB 2022a). The agreements would be of the same size and were established to provide euro liquidity to the financial institutions in these countries (ECB 2022a). On December 15, 2022, the ECB extended its liquidity lines with Albania, North Macedonia, Romania, and San Marino to January 15, 2024 (ECB 2022d).

Appendix D: Details for Activating MNB's Downstream Swap Facility to Hungarian Financial Institutions

Type of transaction	Euro liquidity providing O/N FX swap facility
Time, place and contents of announcement/invitation	Daily standing facility from 16 October 2008 until cancellation. The MNB announces the exact time of the facility and the price of euro liquidity, expressed in swap points, until 11 am at the latest on business days on Reuters' NBHM and Bloomberg's NBH10 wire service pages
Eligible counterparties	Resident credit institutions who fall under the MNB's reserve requirement with the MNB, with direct membership in VIBER or BKR
Initiator	Counterparty
Business hours/time of acceptance of bids	The date specified in the announcement
Formal properties and contents of bids	Bids can be submitted through the Reuters Dealing platform
Number of bids that an individual bidder can submit	No limit
Minimum bid limit	At least EUR 5 million per bid; as a whole-number multiple of EUR 1 million
Modification of bids permitted	No
Day of financial settlement of starting leg	T
Day of financial settlement of maturing leg	T+1
Technical starting exchange rate	110 per cent of the prevailing exchange rate
Meeting euro settlement obligations vis-à-vis the MNB	To the euro account designated in the standing correspondent accounts of the Magyar Nemzeti Bank used in money market operations

Source: MNB 2008

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