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# Eurozone: Central Bank Swap to Sweden, 2007<sup>1</sup>

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## **Abstract**

During the early days of the Global Financial Crisis in 2007, the European Central Bank (ECB) set up a swap agreement with Sveriges Riksbank to provide euro liquidity in the case of adverse developments and to support market functioning. Sweden's central bank could borrow a maximum of EUR 10 billion (USD 14.3 billion) from the ECB under this agreement. The Riksbank activated the swap line in June 2009 to borrow EUR 3 billion from the ECB and repaid it in September 2009. The ECB swap line helped Sweden to lower euro funding costs, avoid market pressure on its currency, and avoid exhausting its foreign currency reserves. Such swap lines to euro area member states helped establish the ECB as the regional lender of last resort.

**Keywords:** ECB, euro, liquidity, Riksbank, swaps

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<sup>1</sup> 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/>.

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## Overview

Beginning in December 2007, the European Central Bank (ECB) provided a standing euro currency swap line to enable Sveriges Riksbank to access euros in exchange for its local currency, the Swedish krona (SEK), in case of “adverse developments” in the financial markets for maximum of EUR 10 billion (USD 14.3 billion<sup>3</sup>)(ECB 2007a). The Riksbank, Sweden’s central bank, activated this swap line with the ECB in June 2009 (ECB 2009a). The Riksbank borrowed EUR 3 billion from the ECB in June 2009 to “continue safeguarding financial stability” (Riksbank 2009a).

In November 2007, Riksbank raised rates for the 10th time since 2006 to a five-year high of 4% to tackle domestic inflation. Riksbank Governor Stefan Ingves noted in an address to Parliament the “considerable uncertainty” in the Swedish economy due to “financial unrest and the US housing market” (Bergman 2007a). Later that month, Riksbank Deputy Governor Lars Nyberg said in a speech that he expected “more bad news from United States and Europe” as there was considerable sensitivity to new negative information in the markets (Bergman 2007b). In December 2007, the Riksbank warned that the resilience of local banks was “somewhat lower” than six months earlier due to “increased credit risk” and “decreased lending margins” (Bergman 2007c).

The ECB and Riksbank did not want to publicly disclose the signing or text of the swap agreement at the time (ECB 2007b). The Riksbank annual report from 2008 describes the agreement but also specifically states that “no amount is included in the agreement” (Riksbank 2009b, 76). The ECB-Riksbank swap agreement, disclosed later by

## Key Terms

Purpose: To “facilitate the functioning of financial markets and provide liquidity in EUR in case of adverse developments” (ECB 2007a)	
Participating Parties	ECB, Riksbank
Type of Swap	Bilateral, unidirectional as per the 2007 agreement; standing, unidirectional as of December 2022
Currencies Involved	Euro, Swedish krona
Launch Date	Signed: Dec. 20, 2007; Activated: June 10, 2009
End Date	Unspecified; standing agreement as of Dec. 2022
Date of First Usage	June 10, 2009
Interest Rate and Fees	Exchange rate: EUR-SEK spot rate; Riksbank to pay EUR interest based on 360-day basis from value date to maturity date
Amount Authorized	EUR 10 billion
Peak Usage Amount and Date	EUR 3 billion (June 2009)
Downstream Use/ Application of Swap Funds	Provide euro liquidity assistance to Swedish banks and rebuild foreign reserves
Outcomes	Helped alleviate depreciation pressure on the krona
Notable Features	Sweden requested its ECB swap line be signed in advance, as the ECB had done with Swiss and Japanese central banks and not with the Bank of England; ECB’s balance sheet protection terms

<sup>3</sup> Per Yahoo Finance, 1 EUR = 1.43 USD as of December 20, 2007.

the ECB, mentions a maximum size of EUR 10 billion for the swap agreement (ECB 2007a). The Riksbank had also indicated that it would consider using its euro-denominated assets before activating the swap line (ECB 2007b).

In June 2009, the Riksbank borrowed EUR 3 billion under the swap agreement and repaid it in September 2009 (Riksbank 2010). The Riksbank in May 2009 had decided to bolster its foreign currency reserves by SEK 100 billion, financed by government borrowing through the Swedish National Debt Office (Riksbank 2010). The Riksbank used the EUR 3 billion from the ECB swap line to temporarily support its foreign exchange reserves while the government's borrowing was in progress (Riksbank 2009a). The Riksbank needed to maintain high reserves due to Swedish banks' reliance on funding in foreign currency (Riksbank 2009a).

### Summary Evaluation

According to an ECB report, “these agreements played a very useful role in limiting tensions in the euro area markets” and were an example of “coordinated central bank response” during the Global Financial Crisis (ECB 2014, 75). The International Monetary Fund (IMF) says that such foreign currency swap lines were “liquidity easing measures” that were in line with the “standard central bank lender-of-last-resort function” (IMF 2009, 45).

Academic research indicates that the ECB swap lines reduced euro funding costs by approximately 80 basis points in the foreign exchange markets of targeted economies such as Sweden. Swap lines helped borrowing central banks like the Riksbank to inject euro liquidity into their domestic markets, thereby “preventing market pressure on its own currency . . . or to avoid exhausting its own reserves” (Schaefer et al. 2021, 2).

The krona appreciated by 2% against the euro in the two months following the signing of the swap agreement between the ECB and Riksbank in late December 2007 (see Figure 1). The Riksbank's reserves increased by SEK 3.5 billion between the end of 2006 and 2007 to SEK 57.2 billion (Riksbank 2008). By year-end 2008, the Riksbank's reserves were SEK 57.7 billion (Riksbank 2009b).

**Figure 1: Value of SEK per EUR, Jan. 1, 2007–March 1, 2008 (Range of 9.0–9.5 per EUR)**

Date	SEK per EUR	% change
Jan. 1, 2007	9.0	—
Dec. 25, 2007	9.5	-5%
Feb. 15, 2008	9.3	+2%

Source: Bloomberg.

<b>Context: Sweden 2007–2008</b>		
<b>GDP (SAAR, nominal GDP in LCU converted to USD)</b>		\$491.3 billion in 2007
		\$517.7 billion in 2008
<b>GDP per capita (SAAR, nominal GDP in LCU converted to USD)</b>		\$53,700 in 2007
		\$56,153 in 2008
<b>Sovereign credit rating (five-year senior debt)</b>	2007	Moody's: Aaa
		S&P: AAA
		Fitch: AAAu
	2008	Moody's: Aaa
		S&P: AAA
		Fitch: AAAu
<b>Size of banking system</b>		\$601.7 billion in 2007
		\$658.5 billion in 2008
<b>Size of banking system as a % of GDP</b>		122.5% in 2007
		127.2% in 2008
<b>Size of banking system as a % of financial system</b>		Data not available in 2007
		Data not available in 2008
<b>Five-bank concentration of banking system</b>		98.5% in 2007
		98.5% in 2008
<b>Foreign involvement in banking system</b>		0% in 2007
		0% in 2008
<b>Existence of deposit insurance</b>		Yes in 2007
		Yes in 2008
<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, unidirectional swap agreement with the Riksbank to improve market functioning and provide euro liquidity in adverse market conditions.**

The purpose of these facilities was to contain “global contagion and reduc[e] systemic risk and spillover effects on euro area markets” (ECB 2014, 75). The ECB was also looking to “support various measures taken by these central banks” to be able to improve euro liquidity conditions in their domestic markets (ECB 2009b, 103).

The ECB and Riksbank created a swap line in December 2007 to “facilitate the functioning of markets and provide liquidity in [euros] in case of adverse developments”(ECB 2007b). A memo to the Executive Board of the ECB discussing the ECB-Riksbank swap agreement states that its “draft swap agreement has been closely modelled on the text of the existing swap agreement with the Swiss National Bank and is also similar to the one with the Bank of Japan” (ECB 2007b, 1).

Under the agreement, the ECB could lend up to EUR 10 billion to the Riksbank in exchange for krona (ECB 2007b).

### **2. Part of a Package: The ECB had been carrying out liquidity operations since July 2007, and the Swedish economy was bracing for worsening economic conditions.**

Sweden’s local banks had been experiencing increased credit risk due to a rapid expansion in lending by December 2007 (Bergman 2007c). In a November 2007 speech, Riksbank Deputy Governor Nyberg said to expect “more bad news from United States and Europe” as there was considerable sensitivity to new negative information in the markets (Bergman 2007b).

The ECB carried out a series of liquidity management actions between July 2007 and January 2008 to provide additional support through long-term refinancing operations (LTROs) of EUR 60 billion per month. The ECB also established a swap line with the US Federal Reserve in 2007, which was activated for the first time in December 2007 and renewed in January, 2008 (ECB 2008).

The ECB’s liquidity measures in 2007–2008 included streamlining rates on standing facilities, continuing LTROs, addressing the lack of eligible collateral, and providing dollar and Swiss franc liquidity through swap agreements with the Federal Reserve and the Swiss National Bank (ECB 2008). The ECB also signed euro swap agreements with central banks of other non–euro area member states such as Latvia, Denmark, Hungary, and Poland (ECB 2014).

**3. Legal Authority: The ECB acted under the Treaty Establishing the European System of Central Banks, and the Riksbank acted under the Sveriges Riksbank Act.**

The ECB had the legal power to establish such a facility through Article 105(5) and Article 23 of the Annexure to the Treaty<sup>4</sup> Establishing the European System of Central Banks (ESCB). The Riksbank had the legal authority under Chapter 1, Paragraph 2 of the Sveriges Riksbank Act (ECB 2007b).

**4. Governance: The ECB Governing Council had final approval of the disclosed joint agreement, with the Riksbank tasked with initiating the swap.**

ECB President Jean-Claude Trichet and Riksbank Governor Stefan Ingves signed the ECB-Riksbank swap agreement on December 20, 2007 (ECB 2007b).

A draft swap agreement prepared after discussions between the market operations and legal departments of the two central banks was directed to the ECB Governing Council (ECB 2007a). The Riksbank asked the ECB to sign the swap agreement in advance, similar to the ECB's agreements with the Swiss National Bank and Bank of Japan and in contrast to its agreement with the Bank of England, which the parties prepared to be ready in case of need but did not sign in advance.

**5. Administration: The Riksbank was responsible for initiating draws under the swap, maintaining records of account balances, and reporting accounts to the ECB.**

The Riksbank opened a krona-denominated account for the ECB for the implementation of the swap agreement. The Riksbank was responsible for both initiating the draws under the swap and maintaining records of the ECB's balances in the krona account on a per-use and annual basis (ECB 2007b).

**6. Communication: There were no public disclosures of the swap agreement in 2007, but both banks later disclosed the swap in their 2008 annual reports.**

A memo prepared by the Executive Board of the ECB for the Governing Council regarding the proposed swap agreement states that "it is not intended to make the text of the swap agreement or the fact that the ECB and Sveriges Riksbank have signed such an agreement public" (ECB 2007b, 2). This memo was prepared after discussions between the market operations and legal departments of the two central banks.

The ECB communicated that the goal of the swap line was to "preserve macroeconomic and financial stability" and "improve liquidity in short-term euro markets" (ECB 2009b, 94).

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<sup>4</sup> The Treaty on European Union (TEU, or Maastricht Treaty) was signed on February 7, 1992, and entered into force on November 1, 1993 (EP 1993).

The Riksbank in its 2008 annual report disclosed that it had entered into an agreement with the ECB “with respect to lending in euro in exchange for Swedish kronor” and said that “no amount is included in the agreement” (Riksbank 2009b, 76).

**7. Eligible Institutions: The Riksbank was the only eligible borrower.**

The Riksbank was the only eligible borrower under its swap agreement with the ECB (ECB 2007b).

**8. Size: The maximum size of the swap agreement was EUR 10 billion.**

The swap agreement between the ECB and Riksbank stipulated a maximum size of EUR 10 billion at any given time (ECB 2007b).

**9. Process for Utilizing the Swap Agreement: The agreement clearly provided steps to initiate the swap, along with procedural details to initiate, complete, and set off the transaction.**

Transaction procedures for the swap transaction stated that the Swedish central bank was responsible for initiating a request to draw on the swap, with the ECB responding on the same day as the request (ECB 2007b). The ECB could respond to the swap request at the latest on the business day following the receipt. The Riksbank was expected to agree on terms with the ECB on the day of the swap transaction after “confer[ring] by telephone” and confirming through an “oral agreement by means of a SWIFT message” (ECB 2007a). This agreement was to include details on the amount, value date, exchange rate, maturity date, and relevant interest rates. The ECB credited euros to the Riksbank’s account with the Deutsche Bundesbank in Frankfurt on the agreed date, and kronor were credited to the ECB’s local account in Sweden.

**10. Downstream Use of Borrowed Funds: The ECB could provide euros to the Riksbank to help rebuild foreign currency reserves or to provide liquidity assistance to Swedish banks.**

The Riksbank drew on the swap line only once, to temporarily support its foreign currency reserves. The Riksbank in May 2009 had decided to bolster its foreign reserves by SEK 100 billion, financed by government borrowing through the Swedish National Debt Office (Riksbank 2010). The Riksbank borrowed EUR 3 billion from the ECB under the swap line to temporarily support its foreign exchange reserves while the government’s borrowing was in progress (Riksbank 2009a). The Riksbank needed to maintain high reserves due to Swedish banks’ reliance on funding in foreign currency. The agreement with the ECB would have also allowed the Riksbank to draw on the swap line to provide euro liquidity assistance to Swedish banks.



**11. Duration of Swap Draws: The swap facility was established as a standing facility with a maximum maturity of three months for each draw.**

The 2007 agreement allowed the Riksbank to borrow a maximum of EUR 10 billion for a maturity of up to three months for each swap draw (ECB 2009a). The Riksbank borrowed euros once under the agreement, in June 2009, and repaid that loan in September 2009 (Riksbank 2010).

**12. Rates and Fees: There were clear procedures disclosed in the agreement for the determination of exchange rates, interest rates, and fees.**

The effective exchange rate for the transaction was the market spot rate, with the ECB earning annual interest on the euro provided to the Swedish central bank. The euro interest rate paid by the Riksbank was “calculated on a 360-day basis from the value date to the maturity date” (ECB 2007a). The Riksbank charged no interest or fees to the ECB for maintaining the krona account balance (ECB 2007b).

**13. Balance Sheet Protection: The ECB had separate accounting norms to reflect any changes to its balance sheet before and after activation of the swap line, including a set-off clause in case of default.**

The balance sheet implications for the ECB from the swap lines were similar to those in past agreements. If the swap line was not activated, the ECB did not need to record an “off-balance sheet item” (ECB 2007b). If the swap line was activated, the increase in foreign exchange reserves was reflected on the ECB’s balance sheet and the forward leg of the transaction was reflected off the balance sheet (ECB 2007a).

The agreement provided a set-off clause in the case of default, which allowed the non-defaulted party to “set off any obligation it may owe” against the currency held by the defaulted party (ECB 2007b, 5).

**14. Other Restrictions: The Riksbank committed to use its euro-denominated reserve assets before drawing on the swap line with the ECB.**

The Riksbank in the swap agreement stated that it would use its euro-denominated assets before calling on the swap line with the ECB (ECB 2007a).

**15. Other Options: The Riksbank utilized its swap line with the Federal Reserve.**

The Riksbank used its swap line with the Federal Reserve to borrow USD by providing collateral in SEK (Riksbank 2010). On December 31, 2008, the Riksbank had the ability to borrow an additional USD 5 billion (SEK 39 billion) from the Federal Reserve as part of a swap agreement (Riksbank 2009b). At the end of March 2009, the Riksbank had a total dollar borrowing of SEK 194 billion from the Federal Reserve (Riksbank 2010).

**16. Exit Strategy: The two parties established the agreement as a standing facility and did not identify an end date.**

The swap agreement identified no specific time limit and was established as a standing facility (ECB 2007a).

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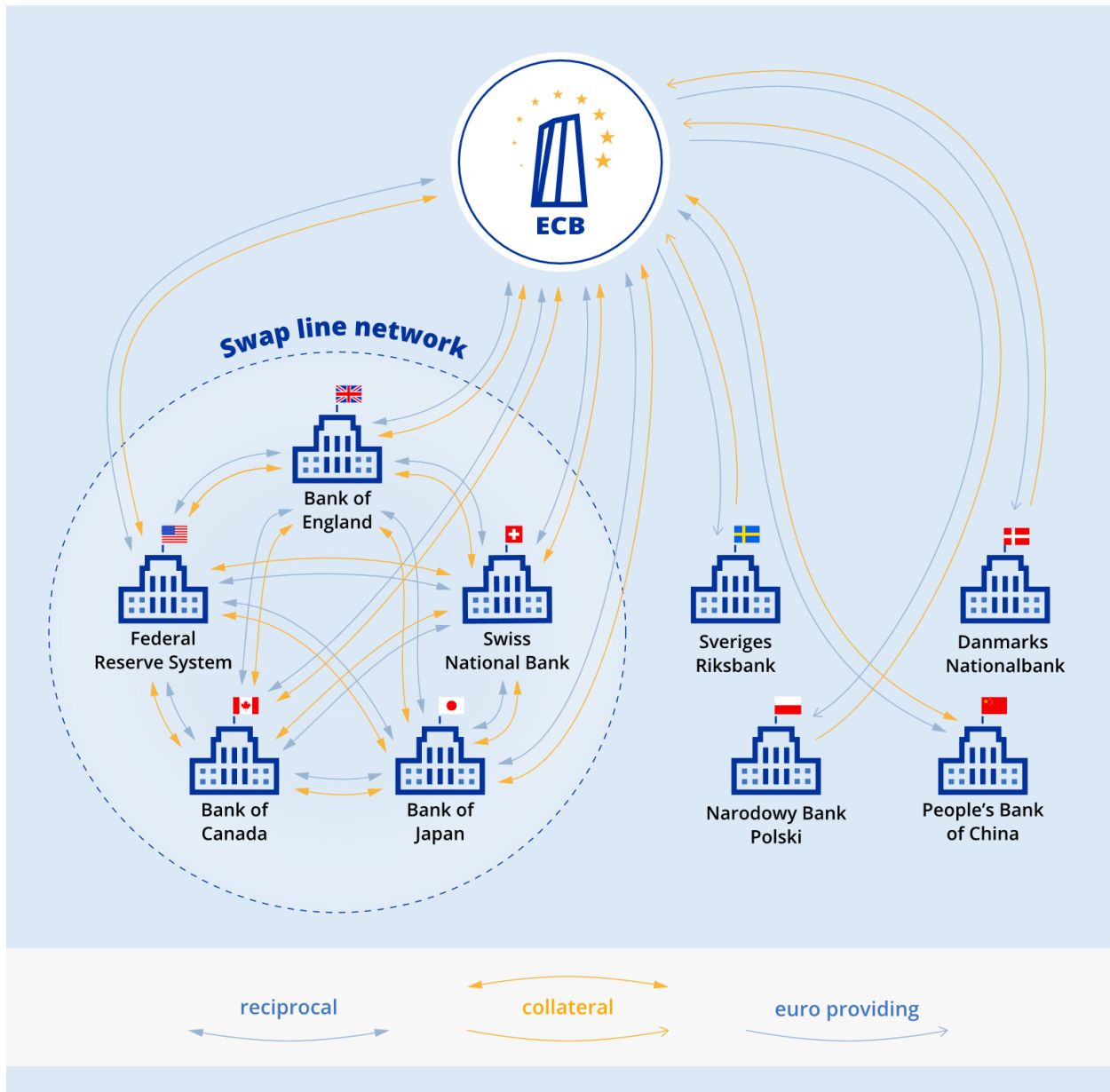
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<https://ypfs.som.yale.edu/node/22377/>

## Appendix

Figure 2: ECB's Network of Swap Lines (as of December 2022) (ECB 2022)



Source: ECB 2022.

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