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Policy Issues

Monetary Policy in the Euro Area's Neighbouring Countries

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The euro is the dominant currency in Europe today and its development naturally affects countries neighbouring the euro area. Since the onset of the financial crisis, monetary policy in these countries has become more challenging. In this paper, I discuss the monetary policy situation in the euro area's neighbouring countries since 2008, with a focus on Switzerland, but also on the Czech Republic, Sweden and Denmark. All four are small open economies with strong trade links to the euro area; and, with the exception of Denmark, all of them chose to continue pursuing an independent monetary policy – even after the introduction of the euro.

A country that has committed itself to free movement of capital has two means of achieving monetary policy goals such as price stability. First, Country A can peg the exchange rate of its currency to a foreign currency (Country B), thereby adopting Country B's monetary policy; this is what Denmark has done. If the economies of countries A and B move in parallel and Country B is successful in its efforts to control inflation, Country A can import price stability. Or, second, the central bank in Country A can actively pursue an independent monetary policy that is tailored to its specific needs; this is the case in the Czech Republic, Sweden and Switzerland.

I analyse the experience of the euro area's neighbouring countries between 2008 and early 2016. While there have been some overlaps, the financial crisis has affected these four countries in different ways; equally, there are some commonalities, but also some differences, in the policy responses of the nations concerned.

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My analysis proceeds in chronological order. Section 2 reviews the phase from 2008 to 2011, which was dominated by a global slump in demand and during which primarily conventional monetary policy measures were deployed. Switzerland and Sweden lowered their policy rates to almost zero.

Section 3 covers the years 2011 to 2014, a time shaped by mounting fears about the future of the euro area and the potential consequences of its collapse for neighbouring countries. This period saw the introduction of unconventional measures. The Swiss National Bank (SNB) capped the appreciation of the Swiss franc by announcing a minimum exchange rate of CHF 1.20 per euro, and the Czech National Bank (CNB), too, used the exchange rate to ease monetary conditions. Danmarks Nationalbank introduced negative interest rates.

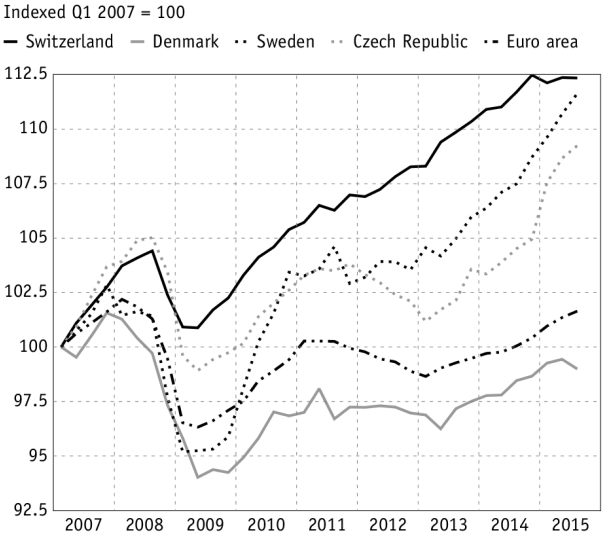
Section 4 reviews experiences between mid-2014 and early 2016 – a phase that was marked by quantitative easing in the euro area. In the neighbouring countries, unconventional measures were adjusted and their deployment was stepped up during this period. The SNB introduced negative interest rates, and the Swedish Riksbank began a quantitative easing programme. In all four of the countries analysed, central banks signalled their willingness to intervene in the foreign exchange market, as necessary.

Section 5 concludes that while monetary policy has reduced the impact of the financial crisis, it cannot fix structural economic problems. Moreover, it notes that unconventional policies entail costs as well as benefits, and that this trade-off must be continuously scrutinised and weighed up. Finally, I point out that the magnitude of some external shocks will be so great that it cannot be fully absorbed by monetary policy in small open economies.

I. Demand Slump Following the Onset of the Financial Crisis (2008–2011)

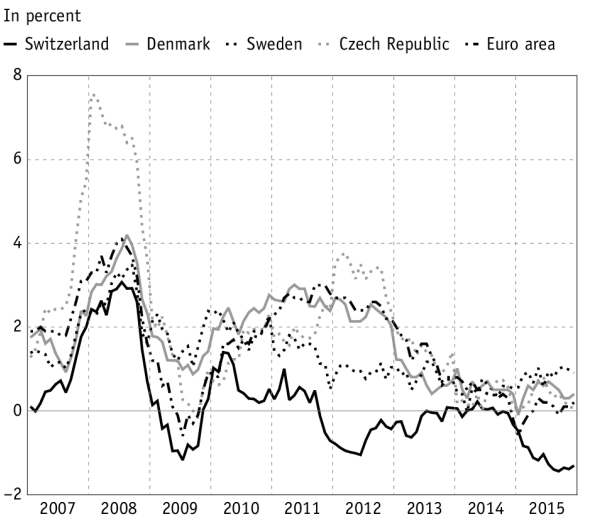
The key event following the onset of the financial crisis was the collapse of the Lehman Brothers investment bank in September 2008. The subsequent weeks and months saw a sudden, substantial slump in demand for goods and services. Between 2008 and 2009, global imports and exports fell by some 25 % in nominal terms, the sharpest decline since records began in 1948.

The euro area, and the neighbouring countries examined here, slipped into recession (cf. figure 1). GDP in the euro area plunged by around 5 %



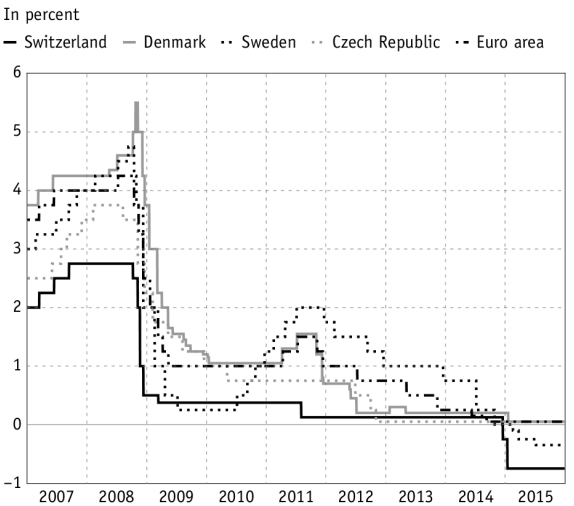
Sources: Datastream, SNB.

Figure 1: Real GDP



Sources: OECD, Riksbank, SNB, Statistics Denmark, Statistics Sweden.

Figure 2: Inflation



Sources: CNB, Danmarks Nationalbank, ECB, Riksbank, SNB.

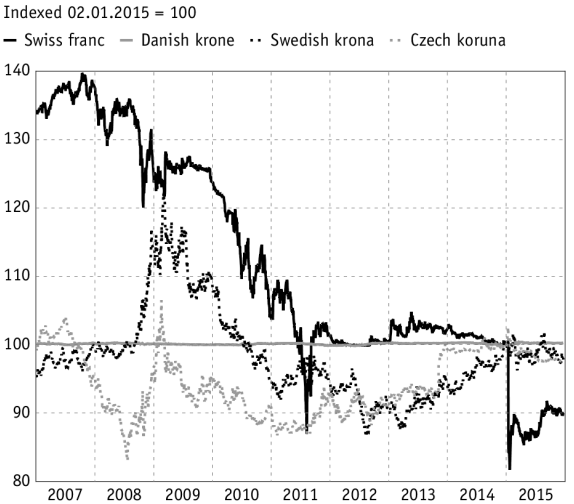
Figure 3: Reference Interest Rates

in 2008 and 2009, at the height of the crisis. The drop in the neighbouring countries ranged from 3.4 % in Switzerland to 7.2 % in Denmark, whose economy had experienced a phase of overheating in the pre-crisis years. Inflation rates fell sharply due to lower demand and falling oil prices (cf. figure 2).[1] Inflation in the euro area declined to –0.6 % in the course of 2009. The lowest inflation recorded during this period was –1 % in Switzerland. In the Czech Republic, too, inflation was negative for a short period in 2009. In Denmark and Sweden, it remained in positive territory.

Central banks reacted to the global slump in demand with drastic interest rate cuts – the conventional monetary policy instrument (cf. figure 3).[2] In addition, markets were supplied with large amounts of liquidity. In the Czech Republic, Denmark and the euro area, there was still

[1] Figure 2 shows consumer price indices in the Czech Republic, Denmark, the euro area and Switzerland. For Sweden, the CPIF, of relevance for the Riksbank, is shown; this is a consumer price index that assumes fixed mortgage rates and thereby excludes the effects that interest rate changes have on households servicing mortgage debts. In this figure and those that follow, data is shown only until the end of 2015.

[2] Figure 3 shows the following reference interest rates: for Switzerland, the middle of the target range for the three-month Libor; for Denmark, the central bank's lending rate; and for the Czech Republic, the euro area and Sweden, the repo rate for monetary policy operations.



Sources: Eurostat, SNB.

Figure 4: Nominal Exchange Rate Against the Euro

leeway for further steps even after these interest rate cuts. Sweden's Riksbank and the SNB, however, lowered their reference interest rates almost to the 0 % bound,[3] thereby *de facto* exhausting their room for manoeuvre using conventional monetary policy measures.

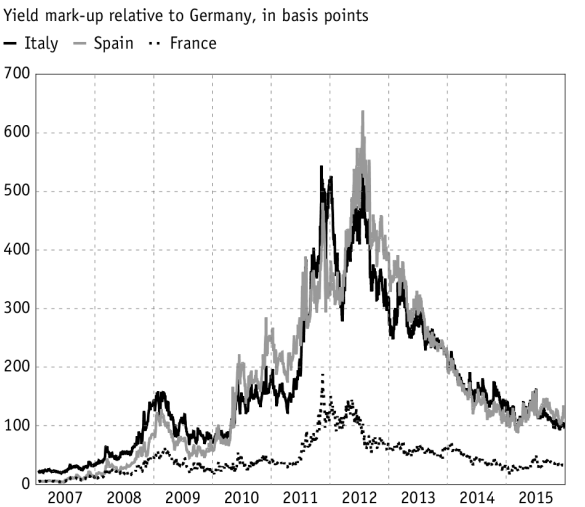
Movements in nominal exchange rates in Europe, which play an important role in the second and third phases, varied from one country to another during this first phase. There was already upward pressure on the Swiss franc (cf. figure 4), due to the currency's traditional role as a safe haven. In times of substantial global uncertainty, investors take refuge in such currencies, which subjects them to upward pressure.

In the course of 2009, the neighbouring countries under review showed signs of emerging from the trough of the global economic crisis. Economies returned to growth, and inflation rates rose once more. Due to favourable economic developments and the expected increase in inflationary pressure, interest rates were raised, first in Sweden and later in the euro area – and thus in Denmark, too.

[3] In Sweden, the overnight deposit rate was lowered into negative territory in 2009. However, this facility is virtually never used. The intraday deposit facility, on the other hand, *is* used – and its rate remained positive in 2009.

II. The Euro Crisis and Fears About the Future of the Euro Area (2011–2014)

In 2011, it became clear that the global economic recovery had lost a great deal of momentum. In this phase, international financial markets were unsettled by the US debt ceiling dispute. At the same time, euro area activity weakened markedly, and high levels of government debt became a source of concern. In the second half of 2011, yields on various government bonds in the euro area began to diverge rapidly (cf. figure 5).



Sources: Bloomberg, SNB.

Figure 5: Yields on Ten-Year Government Bonds

Before the global financial crisis, the euro area was regarded by financial markets as a more or less homogeneous entity. Differences in country risk were perceived as minimal. This was reflected in the fact that yields on most euro area government bonds were practically the same as those of Germany, the country with the lowest yields. During the course of the financial crisis, concerns over the stability of the euro area led to increasingly large divergences between the sovereign yields of the large member countries. Yields rose not just on Italian and Spanish, but also on French government bonds. In this environment, the growth and inflation outlook for the euro area again deteriorated. At the end of 2011, the European Central Bank (ECB) therefore reversed two of its interest rate hikes – those of April and July 2011.

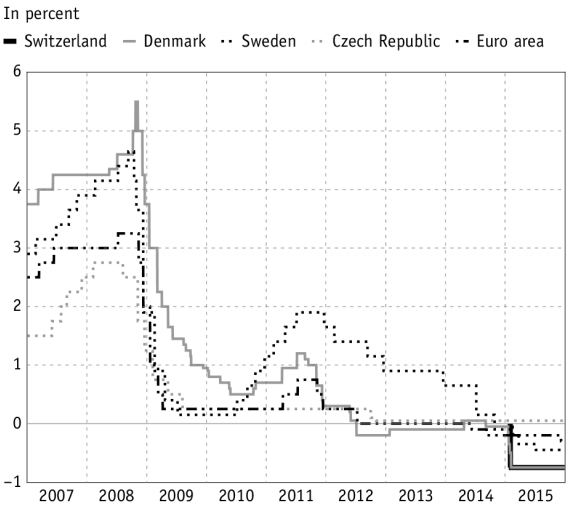
Market uncertainty resulted in renewed inflows to the Swiss franc, causing it to appreciate against a broad range of currencies. In 2007, one euro cost CHF 1.65. By August 2011, the exchange rate was close to parity. The Swiss franc also gained markedly against the US dollar, which at the time was not regarded as a safe haven due to the dispute about the debt ceiling. In 2007, a dollar cost CHF 1.25. In autumn 2011, it temporarily fell to 75 centimes. A rapid and substantial appreciation was also taking place against the other major currencies, with no end in sight. The Swiss franc was overvalued against a broad range of currencies, resulting in a severe deterioration in the economic and inflation outlook for Switzerland and the threat of severe consequences for the real economy.

To turn this dramatic tide of events, the SNB first increased liquidity – in August 2011 alone, liquidity expansion amounted to CHF 170 billion. This measure did not have a sustained effect, however. Finally, in September 2011, the SNB introduced a minimum exchange rate of CHF 1.20 per euro as a temporary and exceptional measure. In doing so, the SNB demonstrated that it was prepared to use its balance sheet to purchase foreign currency in order to stop the spread of panic. While this policy measure corrected the exceptional strength of the Swiss franc, the currency remained significantly overvalued. Nevertheless, the stabilisation of the EUR/CHF exchange rate allowed the Swiss economy to adjust to the new currency reality. In addition, the inflation outlook, which had worsened due to the strong Swiss franc, brightened again.

The euro crisis impacted not just the economy in Switzerland, but also the economies and exchange rates of the other neighbouring countries under review. They, too, eased their monetary policies. In Sweden, from the end of 2011 to the end of 2013, interest rates were lowered in successive steps to 1 %; between 2010 and 2011, they had been raised to 2 % on the back of robust economic growth. This action allowed the Riksbank to slow the economic downturn and simultaneously prevent a further appreciation of the krona and a decline in inflation expectations.

Interest rates in the Czech Republic touched 0 % at the end of 2012, and the CNB announced its intention to intervene on the foreign exchange market if necessary. At the end of 2013, the CNB intervened to weaken the Czech koruna and ease monetary conditions.[4] Like the SNB, the CNB also decided to use the exchange rate as an instrument for easing monetary conditions.

[4] *Alichi* et al. (2015) discuss the CNB's monetary policy in more detail.



Sources: CNB, Danmarks Nationalbank, ECB, Riksbank, SNB.

Figure 6: Deposit Rates

The Danish krone, explicitly pegged to the euro since the inception of the currency union, also suddenly found itself having to contend with upward pressure. This reflected concerns about the future of the euro, and market assumptions that Denmark could become a member of a Nordic euro if the euro area were to split. At the end of 2011, Danmarks Nationalbank reacted by cutting its reference rate to below that of the ECB, and continued to lower it in a series of increments thereafter. At the same time, it intervened on the foreign exchange market. In mid-2012, when the ECB once again lowered its rates, Danmarks Nationalbank lowered its deposit rate into negative territory in order to keep pace with the ECB's monetary policy easing (cf. figure 6).[5] The negative interest rate affected the entire banking system, and Danmarks Nationalbank found itself in uncharted monetary policy terrain.[6]

[5] Figure 6 shows the deposit rates of Switzerland, Denmark and the euro area. For the Czech Republic, the discount rate is used, and for Sweden, the repo rate minus 10 basis points. In Sweden, this interest rate is available to the banking system within the context of fine-tuning operations by the *Riksbank*, cf. *Otz* (2005). Details on the implementation of Danish monetary policy can be found in *Andersen* et al. (2015).

[6] The World Bank Group (2015), cf. Box 1.1, and *Jackson* (2015) summarise the recent experience with negative policy rates in Europe. Switzerland already has some experience in this area, its Federal Council having introduced nega-

The introduction of negative interest in Denmark showed that moderately negative deposit rates are a viable monetary policy instrument. Concerns that lowering interest rates into negative territory could potentially precipitate a flight to cash had previously dissuaded central banks from using this measure; when interest must be paid on bank deposits or money market instruments, it can seem more advantageous to hold cash in a vault. However, this approach entails high risk and, in the case of large sums, significant logistics, storage and insurance costs. Such costs may outweigh those of moderately negative interest rates. In Denmark, a flight to cash did not take place.

III. Further Monetary Policy Expansion in the Euro Area (Mid-2014–Early 2016)

Economic recovery in the euro area was slow, although the ECB's promise in July 2012 to do everything necessary to preserve the euro greatly reduced market uncertainty. While the economy was tentatively getting back on its feet, inflation in the euro area dipped below 2 % at the end of 2013 and continued to fall from there. At the beginning of 2015, it slid into negative territory, giving rise to concerns about whether inflation expectations were well anchored.

In June 2014, the ECB lowered its main refinancing rate to 0.15 % and its deposit rate to below zero. At the beginning of 2016, they were at 0.05 % and –0.3 % respectively. In taking the interest rate into negative territory, the ECB followed the example of Danmarks Nationalbank, which had already introduced negative deposit rates for banks in 2012. However, Denmark and the ECB were pursuing different objectives: while Danmarks Nationalbank wished to reduce capital inflows, the ECB's goal was to increase inflation by stimulating lending.[7]

From mid-2014 onwards, the ECB sent ever clearer signals that it would be substantially easing its monetary policy. At the same time, there were growing signs that the US Federal Reserve would be exiting its zero interest rate policy. Against this backdrop, the euro began to depreciate

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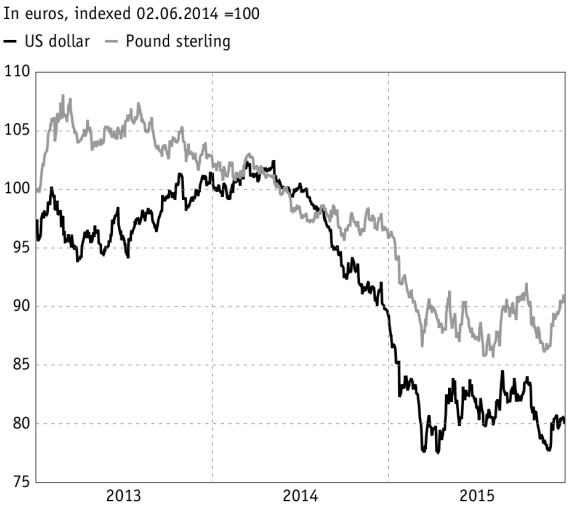
tive interest for foreign account holders in the 1970s. For details, cf. *Bernholz* (2007).

[7] To attain this goal, the ECB introduced a number of additional measures, including targeted longer-term refinancing operations. Cf. *Micossi* (2015) for an analysis of the ECB's monetary policy.



Sources: BIS, SNB.

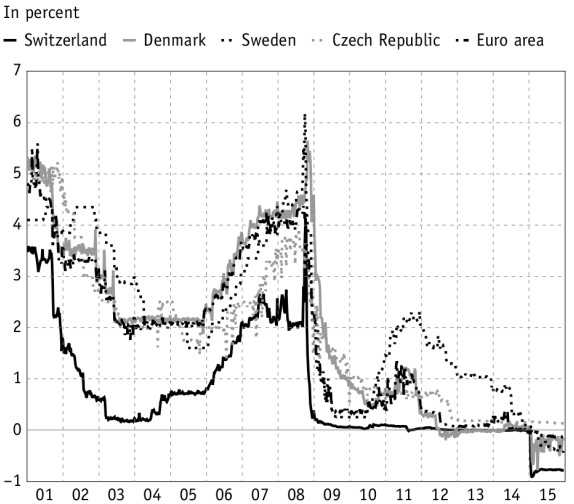
Figure 7: Nominal Exchange Rate

considerably not only against the US dollar, but also against the pound sterling. Between mid-2014 and the beginning of 2015, the euro lost almost 15 % against the pound and more than 20 % against the US dollar (cf. figure 7). A phase of general euro weakness set in.

Finally, on 22 January 2015, the ECB announced a quantitative easing programme that went well beyond market expectations in terms of length, target volume and the range of securities eligible for purchase. The euro lost even more ground against the US dollar and the pound sterling.

For its neighbours, the ECB's monetary policy easing had both positive and negative effects. On the one hand, the measures promised to support economic recovery in the euro area – and, due to their real economic linkages, neighbouring states stood to benefit from this; on the other hand, as with the US dollar and the pound, it led to increased upward pressure on the currencies of the euro area's neighbouring countries.

The monetary policy landscape was shifting fundamentally for Switzerland. This situation is illustrated graphically by interest rate differentials on call money – the best way to gauge the relative restrictiveness of



Sources: Bloomberg, Danmarks Nationalbank, Riksbank, SNB.

Figure 8: Interest Rates for Unsecured Call Money

monetary policies (cf. figure 8).[8] In a positive interest rate environment, these differentials reflect movements in the main refinancing rate, and in a negative interest rate environment, they follow central bank deposit rates. In the phase leading up to the crisis, the interest rate differentials between the euro area and the Czech Republic, Denmark and Sweden were close to 0 %.

By contrast, Swiss interest rates have historically been below those of the euro area. This interest rate differential reflects Switzerland's status as a safe haven. In exchange for the greater security of Swiss investments, investors accept lower interest rates than they would receive abroad. During the course of the crisis, this interest rate differential was continually eroded as the SNB quickly reached the zero lower bound and the ECB continued to ease its monetary policy. When the SNB introduced its minimum exchange rate in September 2011, the interest rate differential between Switzerland and the euro area was already smaller than it had been before the crisis. It was nonetheless still significant.

[8] Figure 8 shows interbank offered rates for Switzerland, the Czech Republic and Sweden, and transaction-based interbank rates for Denmark and the euro area.

The ECB's monetary policy easing from mid-2014 had a much greater impact on Switzerland than on the other neighbouring countries, as it eliminated the interest rate differential. This had dropped to almost zero by the end of 2014 (cf. table 1).[9] For the other neighbouring countries, the interest rate differential to the euro area was within its normal range at the end of 2014. The reason for this, of course, was that these countries had similarly high interest rates as the euro area at the beginning of the crisis, and that their central banks were therefore able to lower rates to the same extent as the ECB. As the interest rate differential had hardly changed, and these countries' currencies were less sought after as safe havens than the Swiss franc, they experienced considerably less upward pressure against the euro than the Swiss currency.

Table 1

Interest Rate Differential to the Euro Area

Unsecured call money, difference in percentage points				
	∅ 2001–2007	∅ Sept. 2011	∅ Nov. 2014	∅ Jan. 2016
Denmark	0.16	0.05	0.06	0.00
Sweden	0.10	1.20	0.10	–0.14
Czech Republic	–0.14	–0.29	0.16	0.36
Switzerland	–1.68	–1.03	0.00	–0.53

Sources: Bloomberg, Danmarks Nationalbank, Riksbank, SNB.

The situation in Switzerland was compounded by the fact that, as a result of the minimum exchange rate, both the Swiss franc and the euro lost value against the US dollar and the pound sterling. This put the broad overvaluation of the Swiss franc that had triggered the introduction of the minimum exchange rate into perspective. Both of these factors – the elimination of the interest rate differential and the reduction of the overvaluation – ultimately led to rapidly increasing pressure on the minimum exchange rate.

At the beginning of 2015, it became clear that the minimum exchange rate of CHF 1.20 per euro was no longer sustainable from a monetary policy perspective, and that enforcing it would require ever-larger for-

[9] Table 1 shows values for November 2014, since the SNB's announcement in December of a rate of –0.25 % on sight deposits with effect from January 2015 immediately impacted market interest rates.

eign currency purchases. If the SNB had ignored this changed reality and attempted to maintain the minimum exchange rate, extensive interventions would have resulted in the bank losing control over its balance sheet and thus over longer-term monetary conditions in Switzerland. Putting this decision off would not have helped the economy either. The minimum exchange rate was an instrument introduced in 2011 to counter widespread and extremely pronounced Swiss franc strength. In the new phase of general euro weakness, it was no longer the right tool.

On 15 January 2015, the SNB therefore decided to discontinue the minimum exchange rate and to impose an interest rate of –0.75 % on sight deposits held by banks at the SNB. With this negative interest rate, the interest rate differential to the euro area was at least partially restored. At the same time, the SNB announced that it would continue to intervene on the foreign exchange market if necessary. The SNB's aim in implementing these measures was to reduce upward pressure on the Swiss franc. Immediately after the minimum exchange rate was discontinued, the Swiss franc appreciated sharply against the euro before weakening again somewhat. The Swiss franc saw the same appreciation that the US dollar and the pound sterling had already experienced. Due to Switzerland's close trade links with the euro area, this appreciation presented the Swiss economy with major challenges.

The euro area's neighbours reacted to the ECB's monetary policy measures in various ways: Denmark lowered its deposit rate to –0.75 % in January 2015 and intervened in the foreign exchange market;[10] Sweden introduced a negative interest rate in February 2015, although the relevant deposit rate stands at –0.60 % at the time of writing; the Riksbank also initiated its own quantitative easing programme and announced that it would intervene on the foreign exchange market if necessary;[11] and the CNB reacted with more foreign exchange market interventions, but decided not to implement negative interest.

By discontinuing the minimum exchange rate, the SNB regained some room for manoeuvre. Since the discontinuation, we have witnessed periods of great uncertainty on the financial markets in connection with Greece, but also with China and other emerging economies. This would

[10] By January 2016, the situation had eased sufficiently for Danmarks Nationalbank to raise the interest rate to –0.65 %.

[11] *Sveriges Riksbank* (2016) explains the Riksbank's monetary policy decisions in 2015.

normally have caused the Swiss franc to appreciate, however the franc has actually weakened slightly. Notwithstanding this, the Swiss franc remains significantly overvalued against the euro in real terms.

In this third phase, unconventional monetary policy measures have thus been used widely in Europe and they have given central banks some additional latitude: the Riksbank and the ECB are operating quantitative easing programmes; the central banks of the Czech Republic, Denmark, Sweden and Switzerland have signalled their willingness to intervene in the foreign exchange market, as necessary; and Danmarks Nationalbank, the ECB, the Riksbank and the SNB have all introduced negative interest rates.[12]

What impact have negative rates had from a monetary policy perspective? As hoped, they have helped to reduce capital inflows and upward pressure on the currencies in the neighbouring countries of the euro area. However, corporate financing conditions have not improved significantly, as they typically would after a conventional reduction in interest rates, and mortgage rates have even risen in some cases.

The cost/benefit ratio of unconventional monetary policy instruments must be continually reassessed. If an instrument is no longer having the desired effect after a change in prevailing conditions, monetary policy should be adjusted accordingly. In this regard, it is crucial that not only the short-term costs and benefits are analysed, but also the long-term consequences.

Overall, those euro area neighbours with an independent monetary policy have thus far emerged from the crisis in reasonably good shape. At the end of 2015, GDP in Switzerland and Sweden was about 12 % higher than its pre-crisis level at the beginning of 2007, while in the Czech Republic it is more than 9 % higher. Retaining the ability to respond to domestic developments with an independent monetary policy appears to have paid off, despite all the challenges.[13]

Inflation in the euro area's neighbouring countries is, however, lower than targeted – as, indeed, it is in the euro area member states themselves. In Switzerland, where inflation has historically been lower than in

[12] The first central bank outside Europe to introduce negative interest rates was the Bank of Japan, at the end of January 2016.

[13] The factors supporting Swiss economic performance specifically are outlined in *Jordan* (2015).

these countries, inflation has even been negative. This is part of a short-term adjustment process, since negative inflation helps to reduce the real appreciation of the Swiss franc.

IV. Conclusions

The experience of the euro area's neighbouring countries since 2008 has confirmed that it is possible for small open economies bordering a large currency area to pursue an independent monetary policy, even in difficult times. The central banks of the Czech Republic, Denmark, Sweden and Switzerland have used both conventional and unconventional monetary policy measures to mitigate the impact of the euro crisis and the ECB's substantial monetary policy easing from March 2014.

However, the number of options central bankers have at their disposal is not infinite. First, the effects of unconventional monetary policy measures can wane with duration and dosage. This is particularly the case if the solution to structural problems requires adjustments to economic policy. Monetary policy is no replacement for such adjustments.

Second, the benefits of unconventional monetary policy measures always come at a potential cost. Interest rates, for example, cannot continue to be lowered into negative territory without at some point precipitating a flight to cash. Foreign exchange market interventions and quantitative easing programmes carry with them the risk that a central bank's ability to conduct monetary policy may be compromised in the long term. These risks must be continually evaluated, and monetary policy must be adjusted if the long-term costs begin to outweigh the short-term benefits.

Third and finally, for small open economies in particular, monetary policy cannot cushion the impact of every negative development in the global economy or the international financial markets. Favourable conditions for the economy and a high degree of adaptability among companies play a key role in shaping a country's ability to overcome crises and disruptions.

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