Reflections on the financial crisis and its aftermath

Stefan Ingves*

The author is the Governor and Chair of the Executive Board of Sveriges Riksbank

In this article, Governor Stefan Ingves reflects on the financial crisis and the experiences over the decade that has passed since then. Against a personal recollection of different episodes, Governor Ingves describes the origin of the crisis, how insight into the seriousness of the situation gradually dawned and how the situation became acute in autumn 2008 when the Swedish economy was affected in earnest and the Riksbank's crisis management work began. One aim of the account is to provide an insight into the difficulties of decision-making in the midst of a crisis and to stress the importance of being prepared.

1 A look back at the crisis

The 15 September this year marked exactly ten years since the Lehman Brothers investment bank filed for bankruptcy and confidence in the financial system evaporated. It is natural to commemorate such an anniversary and it is easy to get the impression that this was the starting-point for the financial crisis that hit the global economy at the end of the 2000s. But the problems in the financial sector had been building up over a long period of time and just like a volcanic eruption, there were signs that something serious was about to happen long before Lehman went bankrupt, even though it was difficult to say when, where and how the eruption would occur.

Neither was it the end of the matter when the most acute crisis management had been completed and confidence in the financial markets had begun to be restored. In many ways, central banks are still struggling with the after-shocks of the crisis, with regard to both financial stability and monetary policy, and it is important to point out that the crisis was in practice a process with a build-up and climax, subsequently followed by a long aftermath. This anniversary issue of Sveriges Riksbank Economic Review contains four articles that, from different perspectives, provide a good description of this process.

An introductory article by Claes Berg, Pernilla Meyersson and Johan Molin, all with considerable experience of policy work, looks at economic developments during the financial crisis, the deep recession that followed and the economic upturn with low inflation that we have experienced in recent years, see Berg et al. (2018). The Riksbank's current and former communication directors, Ann-Leena Mikiver and Pernilla Meyersson, then describe the challenges involved in communicating the Riksbank's stability work and monetary policy during and after the crisis, see Meyersson and Mikiver (2018). Martin W Johansson, Johan Molin, Jonas Niemeyer and Christina Nordh Berntsson have been heavily involved in the Riksbank's work on financial stability before, during and after the financial crisis and their article describes how the work has changed over these periods, see Johansson et al. (2018). Finally, the current and two previous heads of the Riksbank's Monetary Policy Department, Jesper Hansson, Marianne Nessén and Anders Vredin,

* This article is based on a presentation made at a seminar where the other articles in this issue of Sveriges Riksbank Economic Review were presented to the Riksbank staff. Thank you to Björn Andersson for his help in adapting the presentation. Thank you also to Frida Fallan, Jesper Lindé, Pernilla Meyersson, Marianne Nessén, Anders Vredin and Dilan Ölcer for useful comments and help with the work on this article. The opinions expressed in this article are those of the author and are not necessarily to be seen as the views of other members of the Executive Board of the Riksbank.

summarise the monetary policy experiences during and after the financial crisis and highlight critical areas that need to be in focus in monetary policy analysis going forward, see Hansson et al. (2018).

It is of course difficult in articles like these to capture not only the mood and general economic disorder that prevail in times of crisis, but also the anguish of decision-making under such circumstances. Ten years on, as you try to draw conclusions and explain how you actually managed to land on your feet, there is a risk of the story taking on a large dose of reconstructed logic, in which the correlations look clearer and the decisions seem more sensible than they were perceived to be at the time. It is therefore up to those who were involved to provide as clear a picture as possible of the reasoning, premonitions and occasionally instant assessments that lay behind the decisions made, so that there is also a story that provides an insight into the logic that was actually in use. If one has experienced such troubling sequences of events before, as I have, one begins to suspect that things might go off the rails and this gives a gradually rising preparedness to take action.

As Meyersson and Mikiver note in their article, one of the most important events during the financial crisis, from the Riksbank's perspective, was the publication of the press release in October 2008, in which we basically guaranteed to supply the banking system with all the liquidity required to ensure its continued function. Such a press release obviously does not come out of nowhere, but is the result of a process in which the realisation gradually emerges that, yes, this is perhaps something we have to do. I shall not give an account of all the events that led up to the press release and all the decisions we took in view of it – a good summary can be found in the article by Berg, Meyersson and Molin – but I would nevertheless like to give some examples of things that shaped my picture of how the situation gradually deteriorated at the end of the 2000s. [1] I will also comment briefly on developments after 2010 and reflect on the experiences of the last decade and on crisis management in general.

2 The road to a press release

2.1 Here we are again

Financial crises, both their emergency remedy and prevention, have in one way or another been a large part of my professional life ever since I came walking down the corridor at the Ministry of Finance and was given the responsibility for what was colloquially referred to as the 'banking ER' during the Swedish financial crisis in the early 1990s. The Swedish Bank Support Authority, its official name, was responsible for the support measures implemented by the state for Swedish banks, a responsibility that included taking over and selling the assets of failed banks. Financial market issues and financial stability later continued to be one of my focus areas, firstly as Deputy Governor of the Riksbank and then as head of the Department for Monetary and Financial Systems at the International Monetary Fund (IMF). You may therefore think that it is one of life's ironies that it was I who came walking down the corridor as Governor of the Riksbank when a new financial crisis broke out, less than two decades after being involved in dealing with the previous one.

At the same time, we should not read too much into such coincidences. Sweden is a small country and the number of people with knowledge of the technicalities of the financial system and banking operations is limited for obvious reasons. It is not so strange, therefore, that many of those holding key position in both authorities and banks during the most recent financial crisis also had experience of the Swedish 1990s crisis and knew each other from that period. The fact is that, in many cases, this made dealing with the most recent financial

1 See also Molin (2010) and Elmér et al. (2012) for more details on the stability-enhancing and monetary policy measures taken by the Riksbank during the crisis.

crisis significantly easier as there was somewhat of a collective memory of how things panned out last time. Consequently, there was often a fairly rapidly-emerging consensus on the decisions that needed to be taken and on who should take them. This helped Sweden to successfully cope with the financial crisis, despite less than optimum conditions for doing so bearing in mind the prevailing institutional structure and legal frameworks at that time.[2]

2.2 Sweden okay to start with, but with worrying regulatory shortcomings

Even if there are some similarities – not just with regard to the cast of characters – between the Swedish 1990s crisis and the financial crisis of the 2000s, an important difference is that the starting position was entirely different.[3] A somewhat simplistic way of expressing this is that Sweden was not okay during the 1990s crisis, while the rest of the world was. This, together with the reforms of the economic policy framework, was one of the fundamental explanations for why the Swedish economy was able to get back on its feet. During the 2000s crisis, on the other hand, Sweden was okay, while the rest of the world was not. The starting position in the 2000s was therefore significantly better from a Swedish perspective, even though the problems abroad naturally had a major effect on us. While the 1990s crisis was about insolvency in the banking system here at home, the 2000s crisis was about insolvency in the banking systems in the Baltics, on Ireland, in Spain, the United States and many other places outside Sweden. As far as we were concerned, the crisis essentially became a question of inadequate liquidity in the financial system.

Broadly speaking, therefore, Sweden's initial position was relatively healthy when the financial crisis began. But an obvious problem was our lack of an adequate financial regulatory framework, for example when it came to handling financial institutions in distress. During the 1990s crisis, a regulatory framework was created with lightning speed that included a general bank guarantee to protect bank creditors and rules to make it possible to handle and reconstruct banks in distress. This regulatory framework had sunset clauses making the rules only temporary, and they disappeared in the mid-1990s. When problems started to arise in banks towards the late 2000s, there was consequently very little left to lean on in order to deal with the problems. Basically, what remained was the general bankruptcy legislation, which is not suited to handling banks, and a deposit guarantee system from 1996, that essentially was not in working order.[4]

This had been made perfectly clear in the handling of Custodia, a credit market company that had its license to conduct financing business revoked by Finansinspektionen (the Swedish financial supervisory authority) in January 2006.[5] By requesting suspension – which involved temporary cancellation of the revocation – and twice appealing the decision in court, Custodia was able to continue conducting business for a number of months before the company was finally declared bankrupt in August of the same year. In conjunction with the Finansinspektionen decision, the company had frozen its payments as it was unable to cope with the run on it from savers and other creditors. Instead, many focused on obtaining compensation via the state deposit guarantee, but the regulatory framework for this dictated that the processing of applications could not start until the company had been declared bankrupt. This meant that the first disbursements of compensation from the guarantee were delayed until October, a full nine months after Finansinspektionen has decided to revoke the company's license.

2 See Goodhart and Rochet (2011). These shortcomings were one of the reasons for the Riksbank's submission to the Swedish Riksdag for a review of the financial regulatory framework, see Sveriges Riksbank (2010).

3 Molin and Ingves (2008) go into more detail about the similarities between the 1990s crisis in Sweden and the financial crisis of the 2000s.

4 Draft legislation on a new procedure for handling banks in distress had been tabled in 2000 by the Banking Law Committee, although its proposals had not resulted in new legislation.

5 Details of the Custodia case can be found in Sveriges Riksbank (2006).

For my part, this provided an important background against which later events during the financial crisis unfurled. The Custodia episode, which took place in 2006, obviously received considerable attention as it progressed. But I suspect that we were no more than a handful of people in September 2007 who reflected upon the episode and what it said about Sweden's preparedness, while the television news showed pictures of long queues of savers wanting to withdraw their money from the British bank Northern Rock. This was obviously not the time for a large-scale test of the Swedish deposit guarantee, given the prevailing regulatory framework. We should remember that Custodia was a relatively small credit company with about 1,300 depositors. It was bad enough that so many people's private finances were adversely affected for nine months. If problems had occurred in a larger institution with several hundred thousand savers, a delay in compensating people from the deposit guarantee of several months – or perhaps of just a few weeks – would probably have created major uncertainty and tightened liquidity in a way that would have been felt by the entire economy.

2.3 Starting to realise the seriousness of the situation

From 2006 onwards, the seriousness of the situation began to emerge with increasingly worrying signals coming from abroad. As Berg, Meyersson and Molin describe in their article, the unease on the financial markets in the United States spread to Europe, where bank's funding problems started to become apparent. During the summer of 2007, several European banks chose to refrain from lending their liquidity surpluses on the interbank market and instead deposited them at central banks, causing the shortest interbank rates to skyrocket. At the beginning of August, the French bank BNP Paribas suddenly closed three of its funds due to, as the bank put it, a complete evaporation of liquidity. The following day, several central banks made coordinated efforts to increase liquidity in different ways.

The Riksbank did not participate in these efforts as the situation at the time was not as troublesome for Swedish banks. But we obviously followed carefully what was happening via our participation in committees at the Bank for International Settlements (BIS), our other international work and our network of international contacts. Even though it was not possible just then to say whether, and how, Sweden might be affected, you started to sense that something was fundamentally wrong and that the problems on the financial markets were indeed more serious than many had perhaps hoped they were. It was actually this feeling, rather than any concrete problem that needed to be rectified, that prompted me to raise the question of setting up a so-called swap agreement in euro with the European Central Bank (ECB).[6] The agreement subsequently entered into by the Riksbank and the ECB was one of only a few struck by the ECB with other central banks and initially it was kept secret on both sides. This agreement enabled the Riksbank to borrow up to EUR 10 billion in exchange for Swedish krona. It was good to have this option as a safety back-up when we subsequently lent euro to the Icelandic and Latvian central banks at the height of the crisis in 2008.

But, as I said, in the autumn of 2007, there were no acute problems facing Swedish banks. Increasingly worrying, however, were developments in the Baltics, where Swedish banks dominated the credit markets, and the total lending and the results of a couple of banks were increasingly dependent on their Baltic operations. Strong economic growth, underpinned by rapid credit expansion, had contributed to an overheating of the Baltic economies and a build-up of major imbalances. The risks increased of an imminent, sharp economic downturn that might also have a noticeable effect on Swedish banks. In hindsight, we know that the global financial crisis was the triggering factor and that the downturn in

6 A foreign exchange swap agreement is an agreement to buy or sell a currency at today's rate and then sell or buy back the same currency on a later date at a pre-determined rate.

the Baltic economies was rapid and substantial. The austerity subsequently experienced by the residents of those countries in order to reverse the trend was considerable.[7]

If I may be frank, I do not think we can close the books completely as regards the financial crisis until we have seriously considered the responsibility borne by Sweden and Swedish banks for the disarray in the Baltic economies during the 2000s. Naturally, the heaviest responsibility falls on the countries themselves and the economic policy that, among other things, actively encouraged banks to sustain rapid credit growth. But clearly the banks' interest in restraint was also minimal. And when it eventually became obvious to everyone that the trend was unsustainable, and signals were sent to Sweden that help was needed to come to grips with the situation, not much happened anyway. So Sweden bears some responsibility for the disarray and many have avoided criticism. The willingness and courage to make difficult decisions was lacking – the stance 'this far and no further' was conspicuous by its absence.

The Riksbank issued warning signals relatively early about developments in the Baltics and the risks associated with the strong credit growth. Even though the wording was probably too cautious to start with, the article by Johansson, Molin, Niemeyer and Nordh Berntsson describes how the tone was gradually sharpened in our financial stability reports, particularly from 2006 onwards, when the risks posed to Swedish banks by the developments became increasingly clear. The fact that the Riksbank began publishing special stability reports was due to the experiences from the Swedish 1990s crisis. Our idea was that if the Riksbank openly talked about its view on the stability situation, not an entirely uncontroversial idea when we started it, it would hopefully help to highlight the problems in time so that we wouldn't end up in the same situation again. The concept undeniably fulfilled a necessary function, proven not least by the fact that similar reports are now published by a large number of countries and organisations. But, as it turned out during the 2000s, highlighting risks is not enough to avoid crises – more practical means are also needed.

While developments in the Baltics became increasingly worrying, the Icelandic problems also started to manifest themselves. In the spring of 2008, it was clear that the Icelandic economy was basically falling apart under the weight of problems facing Icelandic banks, whose balance sheets had grown to a size several times larger than Iceland's gross domestic product (GDP). The country needed support to safeguard both its macroeconomic and its financial stability. We sent our own observers to Iceland, and they returned with reports that the situation was not under control. This led to frenetic activity at Swedish authorities and I recall the traditional spring meeting at the IMF being entirely different to the normal gathering for me personally. Instead of attending formal meetings as planned, myself and the other Swedish representatives from the Ministry of Finance and the Riksbank sat in the Nordic-Baltic Office at the IMF drilling down into the details regarding the Icelandic financial sector. As far as the Riksbank was concerned, this later led to us and our central bank colleagues in Norway and Denmark entering into a swap agreement in euro with the Icelandic central bank in mid-May. In effect, the transaction including the commitments by Iceland was an IMF programme without the IMF.

But, as we know, the situation for Iceland worsened, and another clear memory I have is from a breakfast meeting concerning Iceland in conjunction with the annual meeting at BIS during the summer of 2008, at which a large number of the world's central bank governors gathered. At the breakfast, attended by a small group of people, in the cellar of the Hilton Hotel, the atmosphere was so bad that no one had any appetite. The feeling that the Icelandic economy was on the brink of a precipice was firmly rooted.

7 More about the details of developments in the Baltics, Swedish banks' operations and the Riksbank's measures can also be found in Ingves (2010).

2.4 Emergency stations

Then the autumn came, Lehman Brothers went bankrupt in September and the crisis entered an acute stage, the serious effects of which were also felt here at home. Swedish banks started to find it increasingly difficult to secure long-term funding. The uncertainty created by the Lehman Brothers bankruptcy caused investors and banks to keep hold of their money. The demand for secure investments increased sharply, while riskier securities were sold off. Many wanted to hold government securities, few wanted to sell and in Sweden supply was already limited to start with, as the state had no particular need to borrow. However, the Swedish National Debt Office had a commitment to lend fixed-rate treasury bills on demand from banks that acted as government security dealers. A few days after the Lehman Brothers crash, the market became entirely dependent on this option and the demand for treasury bills was then so high that the National Debt Office chose to discontinue the arrangement, which basically led to closure of the government security market. This was of course not a solution to the problem and it was very important for the market to reopen for business as soon as possible.

I happened to be on a visit to the ECB when the telephone started to ring and I then had to spend a few intensive hours behind a pillar at the entrance to the kitchen, where there was an electric socket so that I was able to keep my phone alive while talks continued. In the end, the solution was for the National Debt Office to increase the supply of treasury bills on the market by holding extra auctions. The money it generated was then lent to banks in so-called reverse repo transactions with housing bonds as collateral, which simultaneously helped to improve the situation on the bond market.[8]

It was excellent that the National Debt Office was able to solve the problem this way. But roles were undeniably reversed as the National Debt Office basically took over the Riksbank's role as the institution that is quickly able to supply money to the financial system, in other words it took on the role of lender of last resort. However, the Riksbank did not have everything in place to be able to supply liquidity to banks at such short notice. The preparations for such operations had been going on for some time and they were ready in principle – just a few weeks later the Riksbank began lending dollars and krona to the banks. But on that day, right then, we were not able to do it and that was naturally a very important lesson for the Riksbank to learn.

At the end of September, the Riksbank obtained a swap agreement in dollars with the US Federal Reserve, and we then, as I said, started to lend dollars to facilitate bank funding. In early October, we also established an initial loan facility for SEK 60 billion to increase access to longer-term credit.

Literally on the same day as the Riksbank announced the loan facility, we received another sign that the problems on the financial markets were having a serious impact on Sweden. For me personally, this sign came in the form of a piece of paper that suddenly arrived on my desk informing me that the Riksbank's RIX system was at a standstill. RIX is the hub of the Swedish financial infrastructure, through which large inter-bank payments are settled. Normally, this is a process that is completed by 17.00 each day, but mistrust among banks had led to a process failure that day. The core of the problem was the shortage of liquidity with which all the banks were having to struggle to an increasing extent. For RIX to be able to close for the day, the banking system as a whole had to be balanced. A step in this process is for banks with liquidity surpluses to lend to those with deficits at the end of the day. But with the situation as it was, some of the banks with liquidity surpluses felt that others were taking advantage of the system to obtain funding. And on 2 October, one of the banks felt the need to set an example and simply refused to lend.

8 A repo (short for repurchase agreement or transaction) is a repurchasing agreement similar to a short-term loan, in which one party undertakes to sell a security to a counterparty today and simultaneously undertakes to buy it back at a pre-determined price at a certain point in the future. The party that lends the security pays an interest rate comprising the difference between the purchase and sale price. For the party borrowing the security, the transaction is described as 'reverse'.

Perhaps this would not have been such a big deal if it had not been for the fact that the entire financial system was already in disarray. At that point, notifying the rest of the world that the Swedish payment system was at a standstill because Swedish banks were not lending to each other would have been devastating for confidence in the Swedish financial market and Swedish banks – *all* Swedish banks. It was therefore of the utmost importance for this problem to be solved, and solved in a way that did *not* involve extraordinary lending by the Riksbank. Now it just so happened that most bank CEOs were at the Riksbank regarding another matter when this happened and we were able to discuss the problem directly with them. I can say that the tone of that discussion and the subsequent deliberations that evening reflected the seriousness of the situation, to put it diplomatically. But after a few hours, the problem was solved. The late closure of RIX set off a rumour that the payment system had collapsed and the following day, the Riksbank was forced to publicly declare that this was not the case, but that it was a matter of 'confusions and misunderstandings' among the banks that was now resolved.

This episode was a forewarning of what was to come. The crisis on the international financial markets was affecting the Swedish banks and other financial agents to an increasing extent and the long-term credit markets were working less and less efficiently. On 6 October, we therefore decided to increase the amount in the initial loan facility to SEK 100 billion and to carry out another auction of SEK 100 billion a week later. In conjunction with this, we also published the press release I mentioned above, in which the Riksbank pledged that we stood ready to provide the liquidity necessary in the Swedish financial system to safeguard financial stability and ensure the smooth functioning of the financial markets (see Sveriges Riksbank 2008). Leading the work on this type of commitment and being responsible for it takes a toll on you both mentally and physically.

As I have described, it was a long road to that press release. It was not a question of suddenly realising we needed one and of composing it in five minutes, but rather the realisation that the Riksbank needed to publicly guarantee liquidity in this way emerged gradually. But when we published the press release, it was still with a slight feeling of dread, as we would have to stand by our pledge. And it was obvious that the Riksbank was about to embark on a balancing act. Because even if we were naturally able to create unlimited amounts of krona, the foreign exchange reserves were actually too small – and if there had been a skyrocketing demand for dollar and other currencies, the funds would have been inadequate. That was the truth, plain and simple. But it was a risk we had to take. And then it was merely a question of relying on our ability to communicate and on the measures implemented by ourselves, the National Debt Office, the Government and Finansinspektionen being enough to turn the whole thing around.

In late 2008, new measures came along almost every day. Other articles in this issue describe the Riksbank's efforts more in detail, so I won't dwell on them here. But it can be worth saying a few words about the special liquidity support given by the Riksbank to Kaupthing Bank Sweden and the Carnegie Investment Bank.

In the background loomed the Custodia experience, which I outlined earlier, and given the situation in October 2008, the suspension of payments by one bank risked affecting public confidence in the entire Swedish financial system. At the same time, it is important to point out that it is never easy to take this type of decision – it is a question of deciding, often under considerable time pressure, to lend huge amounts of money and it is not possible to say what is right or wrong in advance. In addition, details about the assets used as collateral for the loans can be difficult to come by. As regards Kaupthing Bank Sweden, for example, we managed to obtain their last good collateral just before the Icelandic parent company went bankrupt. Ultimately, we did not lose any money on either Kaupthing or Carnegie. All in all, the support measures during the crisis, in the form of loan facilities and liquidity support actually entailed a profit for the Riksbank of around a couple of billion. But the point is that it is impossible to know for certain that this will be the case when the decision on support is taken.

One last thing about crisis management that links back to what I mentioned earlier about the Baltics. In late 2008, Latvia encountered major difficulties when capital started to flow out of the country at a rapid rate. The situation was uncertain and on the financial markets, there were growing concerns that Swedish banks could be adversely affected by developments in the Baltics. The year before, the Riksbank had no options available other than to communicate the risks we saw. There was now a risk that a crisis in Latvia could have consequences for the Swedish banking system and something needed to be done to stabilise the situation. The Riksbank's assessment was that it was more justified to strengthen Latvia and the other Baltic countries, and hence Swedish banks' subsidiaries and branches there, than to wait until the parent company in Sweden ran into problems. So at short notice, the Riksbank and Danmarks Nationalbank entered into a swap agreement with the Latvian central bank allowing it to borrow up to EUR 500 million. A few months later, the Riksbank also pledged a loan commitment to the Estonian central bank regarding currency support.

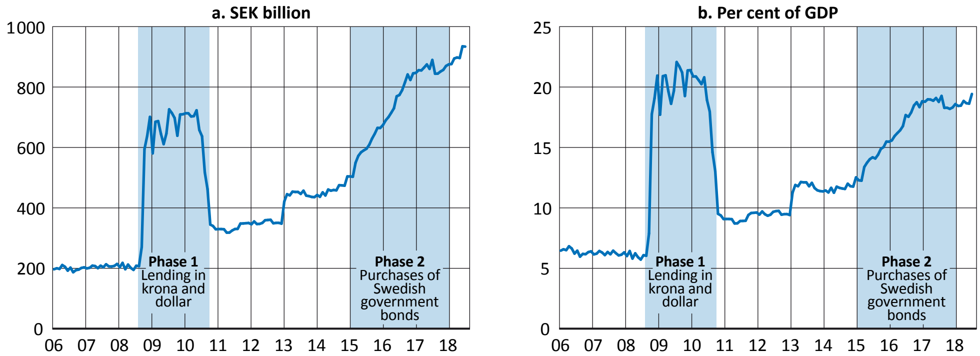
The primary purpose of the agreement with Latvia was to support the country's foreign exchange reserves until there was an IMF programme in place – something which the Swedish Ministry of Finance worked hard to bring about – and payments from the IMF and the EU could reach Latvia. The agreement with Latvia and the later agreement with Estonia, which was, however, never utilised, obviously supported the Baltics through the difficult situation in which they found themselves. Without going into any details, I can verify that the discussions with our counterparts were forthright and hard-handed. But we should not prevaricate about the fact that it was ultimately a question of maintaining financial stability at home.

3 From SEK 700 billion back to SEK 700 billion – and beyond

One way of illustrating the crisis management and the activity that prevailed in 2008/09 is by looking at the volume of press releases published by the Riksbank at the time. Between September and December 2008, the Riksbank issued an average of almost three press releases a week, compared to one a week in the years leading up to the crisis. And in 2009, we published a total of 108 press releases – more than were published in 2006 and 2007 put together. As Meyersson and Mikiver describe in their article, the trouble we took to tell people what was going on was an important part of our crisis management.

Another way of illustrating the crisis management and the measures actually taken by the Riksbank is to look at what happened to the size of our balance sheet (see Figure 1). Our balance sheet increased dramatically to around SEK 700 billion, equivalent to 20 per cent of GDP, as a result of our lending to the banks. Once the crisis was over and the Riksbank's large-scale programme of fixed-rate loans was terminated in late 2010, the balance sheet decreased as quickly as it had increased, although it was slightly larger than prior to 2008 due to the Riksbank having bolstered the foreign exchange reserves during the crisis.

Figure 1. The Riksbank's total balance sheet



Sources: Statistics Sweden and Sveriges Riksbank

During 2010 the feeling was that the economy was getting back to normal. This is how things usually are after this type of crisis. Banks' access to wholesale funding had improved and in our stability report, the Riksbank could ascertain that the resilience of banks to negative events was high. There were some question marks with regard to the recovery in the euro area, but the Swedish economy had begun to recover from the deep recession of 2009 and at a faster pace than expected. Both our own forecasts and those of other analysts indicated an economic upturn according to the usual pattern, albeit from an unusually deep hollow. But as we know, the pattern turned out to be anything but normal.

The recovery in Sweden and the rest of the world was interrupted by fresh unease on the credit markets during 2011, now linked to sovereign debt problems in several European countries. The Swedish economy slowed and GDP fell again in 2012 along with inflation. A decision taken by the Riksbank in 2012, and which later would prove to be significant, was to establish a securities portfolio of SEK 10 billion. In terms of size, it was a modest portfolio, and establishing it was mostly a precautionary measure in light of experiences during the crisis of 2008, and it proved that the Riksbank had learnt its lesson. The idea of the portfolio was to ensure that all systems, agreements, know-how, and so on, were in place if it became necessary either to take measures to maintain financial stability or to ensure that monetary policy had the desired effect.

To provide support to the economy and bring up inflation, the Riksbank cut the repo rate in 2012 and 2013 and in early 2014, there were signs of a brighter economic outlook. But inflation, which was unexpectedly low, fell even further. The long period of below-target inflation also started to leave its mark on long-term inflation expectations. At the same time, the ECB made its monetary policy more expansionary and announced a comprehensive support package with loans to companies and bond purchases. This was much-needed support to the euro area economy, but for the Riksbank, the risk was that it would simultaneously strengthen the krona against the euro. There was therefore a risk that inflation in Sweden would continue to be low or fall even further below our target. The Riksbank therefore needed to focus on returning inflation to 2 per cent and on maintaining confidence in the inflation target. We managed to do that, but it took a long time and required significantly more support from monetary policy than we could have imagined.

One illustration of this is the fact that the repo rate remains in negative territory three years after the Riksbank cut to below zero in early 2015. But even more striking is the development of our balance sheet. At the beginning of 2015, the ECB began its large-scale asset-purchasing programme, and in February 2015, the Riksbank decided not only to cut the repo rate to below zero but also to purchase government bonds to make monetary policy even more expansionary – the technical capacity to do so being, as I said, already in place.

In retrospect, it is remarkable how the balance sheet gradually grew to the same size as during the crisis management in 2008/09 as the government bond purchasing scheme was expanded and, as early as at the start of 2016, the balance sheet was back to a level of around SEK 700 billion (see the left-hand panel in Figure 1). Since then, the balance sheet has increased further to about SEK 900 billion, which means that it is currently approximately the same size as during the crisis when compared to GDP (see the right-hand panel in Figure 1). When the Riksbank took the decision to create a small portfolio of government bonds to provide us with an extra tool in our toolbox, we obviously had no idea that things would turn out the way they did. But, quite simply, we have had to play the hand we were dealt.

This development of the Riksbank's balance sheet also illustrates a point made by Hansson, Nessén and Vredin in their article, namely that we need to reflect more on how monetary policy is actually conducted and how it spreads through the economy via the financial system, i.e. what is normally referred to as the transmission of monetary policy. If we hold on to a framework that equates monetary policy with changes to the policy rate – a reasonable assumption prior to the crisis – it will be difficult to understand what happens in an economy where 'unconventional measures', such as bond purchases, play an important role. And as experience has also shown us, we need a deeper understanding of how different monetary policy measures, via financial markets, affect the interest rates that households and companies actually pay and how and why the effect on market rates varies.

There is really nothing dramatic about this if we look at it all in a longer-term perspective. The Riksbank, just like other central banks of course, constantly struggles to understand the transmission mechanism. We find an intellectual framework that seems to work and we then tend to take it for granted until developments don't turn out as expected and we have to have a rethink. That is how we move forwards. In this respect, there is a clear parallel with how the monetary policy operational framework itself also changes over time.[9]

Another point in the article by Hansson, Nessén and Vredin that is worthy of further consideration, given the monetary policy experiences after the crisis, is the relationship between monetary policy and fiscal policy and how to bring about a suitable combination of the two. During the fixed exchange rate era of the 1970s and 1980s, fiscal policy took care of stabilisation policy, which was funded by extensive borrowing. National debt skyrocketed as a result. After the 1990s crisis and the transition to a flexible exchange rate, the approach has instead been that monetary policy should be responsible for active stabilisation policy. This has been successful in many ways. But as the idea of monetary policy is to cut interest rates when the economy is in need of stimulation, it has also contributed to an accumulation of debt, now in the private sector. So we need to think of ways of striking a good balance, because if indebtedness rises too high – regardless of whether this is in the public or private sector – it risks leading to difficulties later on.

4 Flying through fog with only one eye

Looking at developments during and after the financial crisis, what have we learnt from the last ten years or so? The articles published in this issue of Sveriges Riksbank Economic Review contain many lessons about crisis management and sensible conclusions about what the experiences mean for our work on stability and monetary policy analysis going forward. I have a few reflections to add to these.

Good communication is of course always important, and this is particularly true during crises. It is basically a question of conveying stories about the future that seem reasonable. If the story is fairly convincing, you will manage to keep most people on-board, even though they don't, for obvious reasons, have full insight into all the details and technicalities of the measures implemented. But saying 'there is no reason to worry' never works. People will just head for the lifeboats immediately. If there isn't anything more substantial to communicate,

9 A good description of how the monetary policy operational framework in Sweden has developed over a longer time period can be found in Sellin (2018).

you can always talk about the process – what will happen next, what shall we do next and when? My experience is that this works well and helps to reduce general unease and uncertainty. On the other hand, it won't work at all if you subsequently don't do as you said you would. Actually delivering on your promises is important.

A lesson from the crisis, that I have already discussed, is the importance of being prepared and having the necessary tools in place. If we look back on what has happened, and compare with our expectations about the future in 2006, it is clear that virtually nothing turned out as we expected it to. The Riksbank has done a great deal more than we imagined we would, due to us being forced to play the hand we were dealt, given our remit. An important lesson is therefore to ensure that all the various measures a central bank might conceivably need to take can be implemented technically, legally and in terms of knowledge. Whether or not these measures will actually be implemented is a different thing, and for some generations the preparations will never be put to practical use. But if the infrastructure is not in place, it may be difficult for other generations who need to dig deeper into the toolbox.

It also means that it is important to practice. Crisis exercises are particularly important, as they are a way of recreating at least a hint of the right atmosphere. Exercises can otherwise be too theoretical and even if case studies are useful, it goes without saying that the cases studied are those that have been successful. Few have trained what to do from an initial position of total misery.

As I have tried to show, it is also important to understand that there are no guarantees of taking the right decisions. Navigating through crises such as the one in 2008/09 is like flying through fog with only one eye. If you knew exactly where you were and what was going on around you, it wouldn't be a problem and the crisis would be over. So basically, it is a question of coping with the unknown. And when you do that, things seldom turn out as you imagined. Crisis management therefore becomes a series of events in which you do the best you can. If the world changes, you do something else or adjust until everything seems to sort itself out. But if you don't change things along the way, problems will arise. Neither must the great uncertainty become an excuse for not taking decisions, because decisions must be taken and often at short notice. It also means that protracted group-work, which is often a characteristic of institutions like the Riksbank, needs to be put to one side. The discussion must have a conclusion and someone must take the lead.

Something that is difficult to capture in crisis management exercises is the perseverance needed by leaders in such situations – having the stamina to lead. If you don't have the stamina, you have to step aside. Neither is it possible to have a constant dialogue with oneself on whether you can go on any longer, because then your decision-making will suffer.

Essentially, it's a question of two things. Firstly, you must do your best to prove your worth. If you are high up in the hierarchy, you need to have more stamina so that you can stand there when everyone else is tired. It is therefore important to delegate and ensure that you can rest while others are active – if *no-one* sleeps, the end-result will be guaranteed failure. Secondly, not all people can handle stress. People react very differently and it is impossible to know in advance how someone will cope with stressful situations where, for example, a decision on support needs to be taken immediately and without full information. Standing there in the middle of the confusion, there is unfortunately no time for coaching, and you have to leave the coaching until after it is all over.

Finally, after episodes like the financial crisis and its long aftermath, the attitude can easily be that the event was so improbable that the likelihood of it happening again is so incredibly, ridiculously minuscule that we can almost certainly say that it can't happen again. And we then count on everything returning to how it was, because changing things is heavy going.

But although we can never say *when* the next crisis will come along, we can be certain *that* it will. So what can we do on an overall level to prepare? A lesson that is obvious from both the global financial crisis and our own crisis in the 1990s is to ensure that we do not create unnecessarily large home-made imbalances, given the considerable openness of the Swedish economy and our banks' substantial dependence on foreign funding. This is why it is so important to put the Swedish housing market in order. If we have no control of it and allow both prices and household indebtedness to grow and grow, there is a major risk that things will go in the opposite direction very rapidly sooner or later, with very bad consequences for both the macroeconomy and many individuals. At the same time, we must not allow the nominal anchor in the economy to slip. Because history has also taught us that if we add inflation troubles to other problems, the situation risks becoming much worse.

Let me conclude by noting that I have here in a few brief pages tried to capture a long and at times economically perilous sequence of events. With the benefit of hindsight, we can see that Sweden has coped well. I believe that the Riksbank has contributed to this result. Landing on one's feet under such circumstances is not possible without the knowledge, perseverance, presence of mind and understanding of the seriousness of the situation by many very loyal employees when they were needed the most. The same applies to my colleagues in the Executive Board, who recognised when the time had come to make decisions.

References

Berg, Claes, Pernilla Meyersson and Johan Molin (2018), 'Dramatic years in Sweden and globally: Economic developments 2006–2017', *Sveriges Riksbank Economic Review*, no. 4, pp. 19–34, Sveriges Riksbank.

Elmér, Heidi, Gabriela Guibourg, David Kjellberg and Marianne Nessén (2012), 'The Riksbank's monetary policy measures during the financial crisis – Evaluation and lessons learnt', *Sveriges Riksbank Economic Review* no. 3, pp. 1–23, Sveriges Riksbank.

Goodhart, Charles and Jean-Charles Rochet (2011), 'Assessment of the Riksbank's monetary policy and work with financial stability 2005–2010', Reports from the Riksdag 2010/11:RFR5, Riksdag Committee on Finance.

Hansson, Jesper, Marianne Nessén and Anders Vredin (2018), 'The storm after the calm – lessons for monetary policy analysis', *Sveriges Riksbank Economic Review*, no. 4, pp. 69–88, Sveriges Riksbank.

Ingves, Stefan (2010), 'The crisis in the Baltic – The Riksbank's measures, assessments and lessons learned', Speech at the Riksdag Committee on Finance, 2 February, Sveriges Riksbank.

Johansson, Martin W, Johan Molin, Jonas Niemeyer and Christina Nordh Berntsson (2018), 'The Riksbank's work with financial stability before, during and after the global financial crisis', *Sveriges Riksbank Economic Review*, no. 4, pp. 48–68, Sveriges Riksbank.

Meyersson, Pernilla and Ann-Leena Mikiver (2018), 'The Riksbank's communication before, during and after the financial crisis', *Sveriges Riksbank Economic Review*, no. 4, pp. 35–47, Sveriges Riksbank.

Molin, Johan (2010), 'How has the Riksbank managed the financial crisis?', *Sveriges Riksbank Economic Review*, no. 1, pp. 121–145, Sveriges Riksbank.

Molin, Johan and Stefan Ingves (2008), 'Can the authorities manage crises in the financial system?', *Sveriges Riksbank Economic Review*, no. 2, pp. 5–22, Sveriges Riksbank.

Sellin, Peter (2018), 'The Riksbank's operational framework for implementing monetary policy, 1885–2018', *Sveriges Riksbank Economic Review*, no. 2, pp. 48–79, Sveriges Riksbank.

Sveriges Riksbank (2006), 'Can Swedish authorities manage problem institutions?', article in *Financial Stability Report*, no. 2.

Sveriges Riksbank (2008), 'Increased loans and longer maturity', press release 6 October 2008.

Sveriges Riksbank (2010), 'Submission on certain areas that require investigation as a result of the financial crisis', Submission to the Riksdag 2009/10:RB4.