Lars Nyberg: Monetary policy and financial crises – some reflections

Speech by Mr Lars Nyberg, Deputy Governor of the Sveriges Riksbank, at Danske Bank, Stockholm, 21 December 2011.

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On the first of January 1999, thirteen years ago, Sweden gained a new central bank act. Six people were given the privilege of independently deciding on something that interests almost everyone in Sweden, namely the interest rate. These six people were forbidden to take instructions from anyone – that is, politicians – and it was also forbidden for outsiders to give them instructions. I had the privilege of being one of the six who started in 1999, and I have thus been here ever since. This means that I have been a member of the Executive Board more than twice as long as any of the other current members and more than four years longer than any other person who has been on the Board. Whether this longer experience is then reflected in a correspondingly greater wisdom on central bank-related matters is of course less certain. In any case, I shall leave this to others to decide.

An eventful period

But there is no doubt that these thirteen years have been eventful. There have been the usual cyclical ups and downs, but also a number of crises in various parts of the world and, of course, the global financial crisis and the ensuring sovereign debt crisis that we are currently in the midst of.

The way we conduct monetary policy has also changed over the past thirteen years. The inflation-targeting policy introduced in 1993 has of course always been the nucleus, but it has developed in various ways. Work in my particular field of interest, financial stability, has also been refined in many ways. For obvious reasons, this is an area that has come under particular focus in recent years. One might say that if the task of maintaining financial stability had previously tended to be overshadowed by the usually more attention-grabbing task of maintaining price stability, the situation has almost been reversed during the crisis. The financial stability work has in any case gained a more prominent position and become more on a par with monetary policy.

Now I do not intend to devote my last speech as member of the Executive Board to outlining my central bank memoirs. I have always been more interested in looking ahead than looking back, and I intend to do so today. More specifically, I intend to take up some areas that I believe will feature in the discussions on central banks and their activities in the coming years. They are all connected with the financial crisis in one way or another; it is difficult to avoid it in this context. In brief, I will talk about two themes: The importance of indebtedness not becoming too high and the importance of having crisis management mechanisms in place before the event.

The most important lesson: Don’t allow too much debt to build up!

Of course, the financial crisis was due to many factors acting together. But one of the most important lessons was that one should beware of allowing debts to grow too much. This applies equally to households, companies and governments. This is neither a particularly surprising nor especially new lesson; over several hundred years, financial crises have often been preceded by periods when the attitude to credit granting and lending has been too carefree. But it seems as though this is a lesson that we must experience again and again – at least once a generation, and perhaps even more often.

A rapid and substantial credit expansion can cause many different problems. If the expansion is characterised by an exaggerated optimism and an underestimation and underpricing of risk, large loan losses may arise in the banks when the sentiment changes. This can lead to banks failing and ultimately to a financial crisis. We experienced this in the 1990s, and Spain and Ireland are experiencing it now.

Once the economy has entered a recession after a period of rapidly-increasing indebtedness and rising asset prices, the recovery from this level may be very slow. The reason is that the economy then often enters what is known as a balance sheet recession.[1] Put briefly, what this means is that the economic agents need time to adjust their balance sheets if, for example, property prices have fallen. Their incomes will for some time to come be used for amortisation rather than consumption and investment. Monetary policy stimulation has less effect than normal and developments in the economy as a whole are weak. Studies show that this type of mechanism largely explains why the recovery in the United States has been, and still is, so slow.[2]

A financial crisis may also have other consequences. For instance, one can claim that the sovereign debt crisis we are currently in the midst of is in many ways a consequence of the financial crisis, and thus of the credit expansion that preceded it. Bank crises and sovereign debt crises are often connected. Public finances in many countries have weakened substantially because demand has fallen and in some cases also because they have needed to support a precarious banking system. Moreover, in many countries the credit expansion concealed the need for structural reforms in the labour market and in public administration, which meant they were ill-equipped when the recession came. So, all in all, there are many good reasons to try to avoid a situation where credit and lending accelerate out of control.

Various perceptions of the link between monetary policy and financial stability policy

So what should we do to prevent, or at least reduce the risk of, this type of development in the future? Opinion is currently divided on this question. The role central banks should play has been debated a lot, and in particular whether rate-setting should be used to subdue credit expansion.

At one end of the spectrum are those who say that the crisis has meant that the dividing line between monetary policy and financial stability policy has in many ways been erased, or at least become less evident. If the central bank does not already have the clear and express task of maintaining financial stability, it should be given this – in addition to the natural task of acting as "lender of last resort" in a crisis. Monetary policy should be regarded as a legitimate tool in the financial stability toolbox.[3]

At the other end of the spectrum we find those who say that monetary policy and financial stability policy are distinct policies that should not be confused with one another. They claim that monetary policy and financial stability policy differ in the same way that monetary policy and fiscal policy differ, and they have different targets and methods. The policy rate should therefore not be regarded as an instrument for financial stability policy. Both types of policy should react to one another, but they should not be coordinated and conducted together as

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1 The concept "balance sheet recession" was introduced a few years ago as an explanation for developments in Japan and its "lost decade"; see Koo, R.C., *Balance Sheet Recession: Japan's Struggle with Unchartered Economics and its Global Implications*, Wiley, 2003.

2 See, for instance, Eggertsson, G. and P. Krugman, "Debt, Deleveraging, and the Liquidity Trap", Federal Reserve Bank of New York Working Paper, February 2011 and Mian, A., K. Rao and A. Sufi, "Household Balance Sheets, Consumption, and the Economic Slump", Chicago Booth Working paper, November 2011.

3 See, for instance, Eichengreen, B., R. Rajan and E. Prasad, "Central banks need a bigger and bolder mandate", Financial Times, 24 October 2011.

there is then a risk that both will become unclear. The outcome may also be poorer and it may be more difficult to hold policymakers accountable.[4]

The problems are exaggerated by those who believe that both types of policy must be coordinated…

I can understand both points of view, but I believe that both have exaggerated their arguments somewhat. Those who say that monetary policy and financial stability policy should be integrated to a greater extent sometimes give the impression that they believe the central bank should at every monetary policy meeting both determine the policy rate and activate a number of macroprudential supervisory levers to find a policy mix that is appropriate for both monetary policy and financial stability.

I do not believe that this is the way things will be done – I believe that this way of thinking is too coloured by recent events. After all, it is not as though problems arise from over-generous credit granting during every economic cycle. Most cycles are "normal", with no financial imbalances or balance-sheet problems. Of course, one must remain vigilant and constantly assess the risks – and try to reduce them when necessary. But it is probably quite rare that one will actually need to use macroprudential tools, or the policy rate, to subdue a credit boom and thus reduce the risk of a crisis. Growth in lending is normally something positive. It is, of course, difficult to say how often problems may arise, but one can conclude, for instance, that we in Sweden have experienced two financial crises with not quite twenty years between them, and this is regarded as unusually often. For the great majority of the time the central bank will thus be able to conduct its monetary policy in a normal way. Monetary policy and financial stability policy have, so to say, slightly different time dimensions.

…and by those who say they should be entirely separate

But I also believe that the problems are exaggerated by those who warn against integrating monetary policy and financial stability policy. For example, I believe that one can decide on both the policy rate and macroprudential supervisory measures at the same time and in a coordinated way, without either monetary policy or financial stability policy being perceived as less clear. I believe, for instance, that it would be fully possible for the Riksbank to explain, together with Finansinspektionen (the Swedish Financial Supervisory Authority), that the mortgage ceiling is being lowered to counteract excessive credit expansion and rising prices in the housing market, at the same time as the Riksbank holds the policy rate unchanged because this is justified by events in the economy as a whole. Of course, this makes considerable demands on the authorities' communication, but I believe that it is fully possible to put this message across and gain understanding.

I can also imagine that under certain circumstances it might be difficult in a purely practical manner to *avoid* some amount of coordination between monetary policy and financial stability policy. Some countries have chosen to place the main responsibility for maintaining financial stability with the central bank. Other countries have created some form of cooperation between the central bank and the supervisory authority and I believe that this would be a good model for Sweden, too. Macroprudential supervision entails to a large extent using traditional supervision instruments with the focus on the entire financial system instead of individual financial institutions.

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4 See, for instance, Svensson, L., "Monetary policy after the crisis", speech at the Federal Reserve Bank of San Francisco, 29 November 2011, Sveriges Riksbank.

In any case, the central bank becomes deeply involved also in macroprudential supervision. I believe that it may be difficult in practice to make the monetary policy decisions on the assumption that the financial stability policy is regarded as given, and vice versa.[5]

Let me also say, in this context, a few words in general about whether monetary policy and financial stability policy should be regarded as different types of policy with different goals and means. When regarded as principles and concepts it is of course the case that financial stability is quite different from stability in the inflation rate and the real economy, that is, what central banks with flexible inflation targeting strive to achieve. Logically, one could thus argue that monetary policy and financial stability policy are two different types of policy that should be conducted quite separately.

But I am not sure how meaningful this distinction is in practice. Personally, I have not regarded financial stability as merely a goal, but just as much a means, or a condition, for attaining a stable real economy and stable inflation. Assessments of developments in the financial sector must, as far as possible, be included in the macroeconomic assessments. Financial unrest and instability often lead to demand in the economy being too low and inflation undershooting the target. If one considers that there are both ”normal” economic cycles and less frequent credit and debt cycles, the upturns in both cycles are not necessarily synchronised. However, it is often the case that a rapid fall in a credit and debt cycle entails a corresponding fall in the normal economic cycle – and not uncommonly a balance-sheet recession.[6] Monitoring the credit and debt cycle thus becomes a way of stabilising the normal economic cycle. With this view, it is less obvious that financial stability policy and monetary policy should be conducted separately. But, once again, it is probably quite rare that there will be *reasons* to coordinate them.

The policy rate will probably need to support financial stability policy

With regard to the question of the role of the policy rate in financial stability policy, it is my personal opinion that one must always be prepared to use it to slow down an excessive expansion in credit, or to “lean against the wind” as it is usually called. Hopefully, it will be possible to find a set of macroprudential tools that are efficient enough so we do not need to use the policy rate for this purpose. Hopefully it will also be possible to find appropriate forms as to when they shall be used and by whom.

But my feeling is that even when we have a proper framework for macroprudential supervision, situations may arise where support is needed from monetary policy “leaning against the wind”. One reason is that experience shows that it is difficult to construct regulations that can never be circumvented. The policy rate is a blunt instrument, as it has a broad impact on the economy. But at the same time, this may be a strength compared with the macroprudential tools, simply because it is difficult to “avoid” a policy rate increase.

I am also convinced that quite regardless of what *formal* responsibility the central bank bears for financial stability, it will always receive a large share of the blame if a financial crisis arises. When all is said and done, the interest rate is the price of credit and as the central bank controls this price, at least regarding shorter maturities, I believe that the general public will hardly absolve the central bank of blame if a financial crisis arises after a period of

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[5] The comparison with fiscal policy, which is regarded as a foregone conclusion in monetary policy discussions, falters somewhat, as I see it. Fiscal policy is formulated by politicians with varying goals and we are probably wise to regard it as a foregone conclusion. However, regarding the relationship between monetary policy and macroprudential supervision in a similar way may function as a conceptual model, but would not work in practice.

[6] For a recently-published study of the importance of credit and debt for the economic cycle, see Jordà, Ò, M. Schularick and A.M. Taylor, “When Credit Bites Back: Leverage, Business Cycles, and Crises”, NBER Working Paper No. 17621.

cheaper credit. It will probably therefore be difficult in practice to conduct a monetary policy that does not take into account financial stability.

We should continue to develop flexible inflation targeting

So, what conclusions should one draw from developments in recent years? How much do we need to reconsider and how much must we modify the monetary policy framework? I would reply: Somewhat, but perhaps less than one sometimes might think. I am fairly convinced that the flexible inflation-targeting policy conducted in many parts of the world has essentially been the right path to take, although it has not solved all of the problems. It appears to solve the problems it is intended to solve, without any serious side effects.

I think that it is difficult, particularly with regard to Sweden, to overestimate the role played by inflation targeting in attaining better macroeconomic stability – together, of course, with far-reaching changes especially in the fiscal policy area. Economic policy is now more disciplined and we were able to benefit from the stability and credibility this has provided in the most recent crisis.

But it is also clear that the financial crisis highlighted some weaknesses and that the work on further developing the inflation-targeting policy must continue, both in the academic field and in central banks. For example, it is evident that there is reason to try to get to grips with and model the interaction between financial markets and the macro economy in a better way than before. Financial factors, and in particular credits and indebtedness, should play a larger role than before in our models and our thinking.

Given the impressive amount of studies produced every month in these areas since the financial crisis broke out, I am fairly hopeful that it will be possible to gradually incorporate these aspects in a fruitful manner into practical inflation-targeting policy.[7] But there clearly remains a lot to do.

But what is important is that this is all about continuing to develop the inflation-targeting policy. The financial crisis should not be regarded, as some would appear to claim, as a sign that the inflation-targeting policy has been an unsuccessful monetary policy “experiment” and a blind alley – this is not the case.

Important to plan crisis management in advance, but this is rarely the case

I have so far mainly talked about *preventing* crises and in particular what role monetary policy should play. Let me now go on to focus on the challenges with regard to managing the situation once a crisis has *occurred*. How one manages cross-border financial crises – or not – is a question that is very topical right now and will probably remain so for a long time to come.

My first thesis here is that when one allows a financial system to grow and the dependence between the financial agents in different countries increases, one should carefully consider what regulations and institutions are needed to manage different crisis situations. As well as making it easier to resolve the crisis itself, clarity in this respect also affects how banks and other financial institutions develop their operations and also how supervision of them can best be shaped. Instead of thinking in terms of the sequence integration – supervision – crisis management, one should see it in the other direction, that is, crisis management – supervision – integration (Figure 1). My second thesis is that it is unfortunately very rare that this is done in practice.

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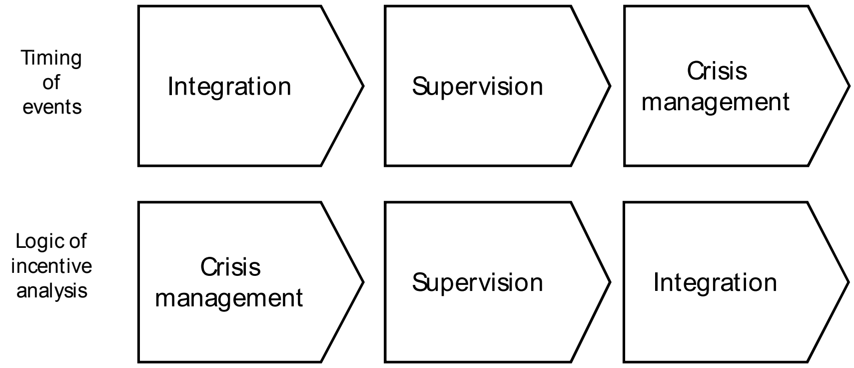
[7] For an example of a theoretical analysis of how consideration for financial stability can be built into a model for inflation targeting, see Woodford, M., “Inflation Targeting and Financial Stability”, forthcoming in Sveriges Riksbank Economic Review.

Figure 1

Bank regulation should be based on reverse induction



Inadequate planning for crisis management in the monetary union

This reasoning can also be applied to nations, not just to their financial systems. During the autumn, we have seen yields on government bonds soar in a number of euro area countries, particularly those with sovereign debt problems. It is quite clear that the euro area lacks the necessary institutions to manage such a crisis situation. In the United Kingdom, on the other hand, yields have not risen in the same way, despite weak public finances there too (Figure 2). There may be several explanations for this, for instance, that investors have confidence that the United Kingdom will manage to consolidate its budget successfully. But I believe that it is mainly because the euro area countries lack the defence mechanism that the United Kingdom has.[8]

The reasoning is as follows: When investors in, for instance, Italian government bonds are concerned over Italy's creditworthiness they sell their bonds and buy something else, such as German government bonds. Then the Italian bond yields rise at the same time as liquidity leaves the country. Other investors become worried that the yields will rise further – which is the same as the value of their bonds falling – and therefore sell their holdings, which means that yields continue to rise. This becomes a spiral of falling liquidity and rising yields, which is difficult to stop. The Italian central bank is unable to do very much, as it cannot create liquidity in euro. Only the European Central Bank, ECB, in Frankfurt can do this. The Italians can ask for help, but they cannot do very much themselves – at least not in the short term. And the investors are aware of this, of course.

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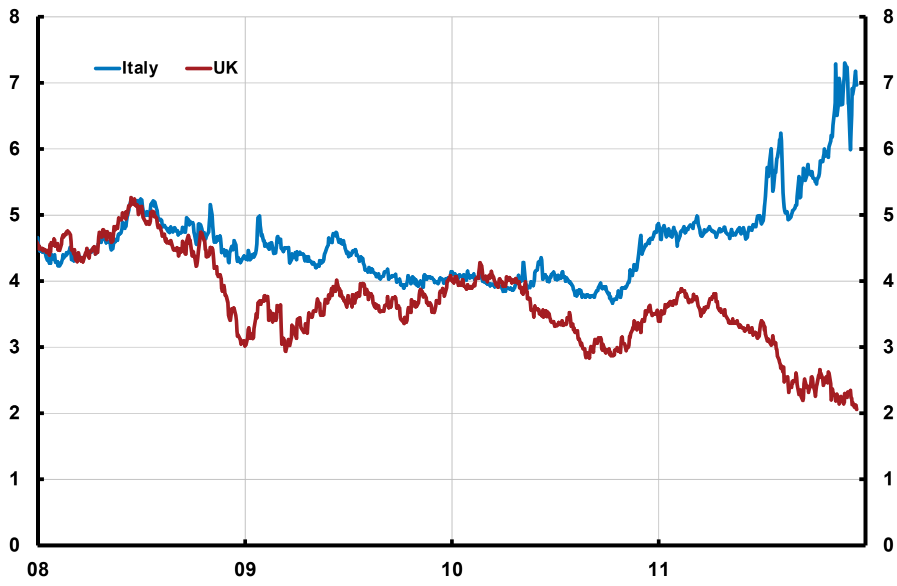
8 See, for instance, De Grauwe, P., "The Governance of a Fragile Eurozone", CEPS Working Document No. 346, May 2011.

Figure 2

Government bond yields, 10-year maturity

Per cent



Source: Reuters EcoWin.

This situation is very similar to the one experienced by Argentina, for instance, when they had a “currency board” that firmly tied their domestic currency to the US dollar. In the event of a crisis there has been no central bank that could create currency – in other countries with similar problems the physical currency has run out and the only solution has been to fly in dollar bills from the Federal Reserve.

Now, of course, the fundamental problem is that Italy, like Argentina, has lost competitiveness, had a deficit on its current account and built up debt until the market has gradually lost confidence and demanded higher and higher interest rates. Competiveness then needs to be restored through some form of internal devaluation. This is unavoidable, but it takes a long time and does not help the acute liquidity crisis.

The situation is different in the United Kingdom. If investors are concerned over the British credit worthiness they will sell their government bonds as in the example above. They will then receive British pounds and they may also sell these too if they wish to get rid of the British credit risk. But liquidity in the UK is not affected in the same way as in Italy – there are just as many pounds in the UK as there were before. What happens is that the pound declines in value in relation to other currencies until the UK government bonds are once again regarded as worth their price. Moreover, the Bank of England can create liquidity by buying UK government bonds if this should prove necessary. There is no risk of a spiral of falling liquidity and rising interest rates in the same way as in the Italian example. In addition, British competitiveness will be helped by the weaker pound. And investors know this too. So UK bond yields will not rise in the same way as the Italian ones.

On the basis of these examples, one might conclude that it is easier to manage a financial crisis if one is not involved in a monetary union. This is true, but fairly trivial and one should beware of making the related conclusion that currency unions are harmful. The euro cooperation has offered major benefits to its members, although these are not mentioned so much now. However, when it comes to crisis management in a currency union there are some important conclusions to draw.

The first is that one must of course have regulations in a monetary union that enable one to avoid a crisis of the proportions we are seeing now. This was what the creators of the union were thinking when they initiated the Stability and Growth Pact. However, the pact did not work very well and intensive discussions are therefore underway as to how it can be supplemented with new regulations that will guarantee that no members have excessive budget deficits or can build up excessive debt burdens. Hopefully these discussions will bear fruit. However, it is far from certain that the developments we are seeing now could have been avoided even if the Stability and Growth Pact had been upheld. Low interest rates have meant that not only governments, but also companies and households have built up their debt. But an efficient regulatory system would probably have made the crisis more manageable.

A second conclusion is that when one refrains from the crisis resolution mechanism inherent in a national currency, one must replace it with something else. Because crises that entail concern over a member state's creditworthiness are always a risk. One must have an institutional framework to manage the investors' concerns regarding rising bond yields in, for instance, Italy now that there is no Italian currency that can depreciate and the Banca d'Italia cannot create the necessary liquidity. If there is an institutional framework that is credible from the start, it will not need to be used in most cases. It is to some extent this type of framework that the European Financial Stability Facility, EFSF, is meant to become. It will be able to buy government securities issued by euro area countries. However, it is difficult to restore market confidence when it is already seriously damaged. The institutional framework must be in place and have credibility before the crisis breaks out. This makes the crisis easier to manage and one might even prevent it arising at all.

It is probably the case here that politicians in the EU have helped increase market distrust because of the way they have handled the crisis. For example, it is understandable from a political point of view that they have wanted to force private lenders to write off their loans to Greece. But from an economic perspective – and in the longer run also political – this is not such a good idea. This has meant that Italy and Spain have had to pay much higher interest rates than before – not primarily because one perceives a risk that Italy and Spain will be unable to service their debts, but because the market has become uncertain as to whether the politicians intend to take similar coercive measures here.

If one suffers an acute crisis, whether one has created it oneself or not, one must consider carefully how it should be managed. If one has not created a credible crisis resolution mechanism in good time and does not manage to do so during the crisis, there is finally only one last resort, and that is the ECB. The ECB is the monetary union's central bank and can do in a crisis what the union's national central banks are unable to do. It can always create liquidity and buy securities as needed and therefore in principle it can also attain the same credibility as the Bank of England has in the United Kingdom. The problem is that the ECB does not have an indisputable mandate to do this, and that the EU member states have differing views as to whether it should be given such a mandate. The ECB should not save countries from making necessary adjustments in legislation and public finances, many quite rightly point out. But this also risks having the consequence that one refrains from the only remaining mechanism that can manage an acute crisis.

Obstacles to setting up crisis management mechanisms

One reason why it appears difficult to set up clear frameworks for managing a crisis in advance is, as I mentioned earlier, that crises occur so rarely. "There will be no more crises during my mandate period," a politician said to me after the Swedish crisis in the early 1990s, when we were to discuss new crisis legislation. And he was right, of course. It took almost 20 years until the next crisis occurred, and by then he had left politics long ago.

There is another important reason, particularly when several countries are involved. If one is to create a framework to manage crises, one will unavoidably face the question of how the costs are to be divided, and it is almost, if not completely, impossible to agree on this in advance. All crises are different. It may be possible to agree on how to act when the problem arises, for instance, who should negotiate and how. One can thus decide on “ex ante preparations for ex post burden-sharing”, but not on “ex ante burden-sharing”.

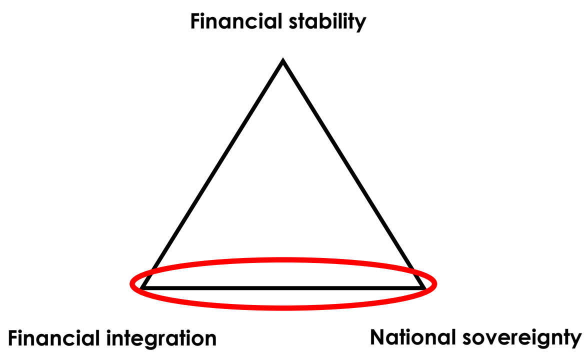
Given this, it is interesting to note that with regard to the ECB there is actually a crisis resolution mechanism in the form of an implied agreement on “ex ante burden-sharing”. It is written into the Treaty on European Union exactly how the national central banks should recapitalise the ECB if this were necessary. If the securities the ECB purchased were to fall in value so that the ECB needed more capital, it is thus clearly stipulated to what extent the different countries shall contribute. It may be because of this that some countries do not want to allow the ECB to buy government bonds, while others think it is an excellent idea. So, paradoxically, it may be the actual crisis resolution mechanism that in this case leads to a deadlock that risks aggravating the crisis.

Crisis management mechanisms equally important in the banking system

Let me now change focus from countries to banking systems. But both of the theses I mentioned earlier are the same: When cross-border integration progresses it is important – and profitable from society’s point of view – to create credible crisis resolution mechanisms in advance. But this is rarely or never done.

One sometimes talks of Europe’s “financial trilemma”.[9] We in Europe want to achieve a continued financial integration and increased financial stability, but at the same time we want to retain each country's national sovereignty. The problem is that it is possible to attain two of the goals, but very difficult to attain all three. If we want to combine financial integration with continued national sovereignty over, for instance, supervision and crisis management, as we have done so far, it will be difficult to achieve meaningful financial stability – the crisis we are currently going through provides a good example of this (Figure 3).

Figure 3



If, on the other hand, we want to prevent cross-border crises and at the same time maintain national sovereignty, we must accept reduced financial integration – for example, stricter regulations as to how banks can move financial assets between countries (Figure 4). One can see clear tendencies in this direction in the current discussions. If one wishes, as a third alternative, to retain integration but at the same time reduce the risk of crises spreading across national borders, one must consider letting go of national sovereignty and allowing

[9] Schoenmaker, D., “The Financial Trilemma”, *Economics Letters* 111, 2011, pp. 57–59.

more supervision and crisis management at European level (Figure 5). However, this is not a path that is considered politically viable at present.

Figure 4

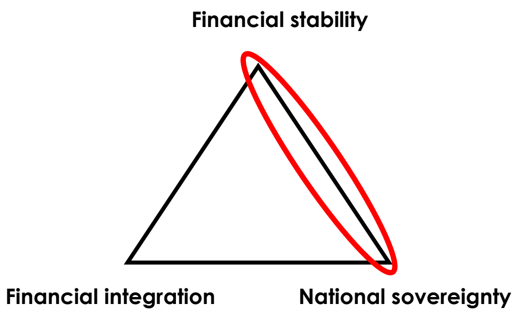
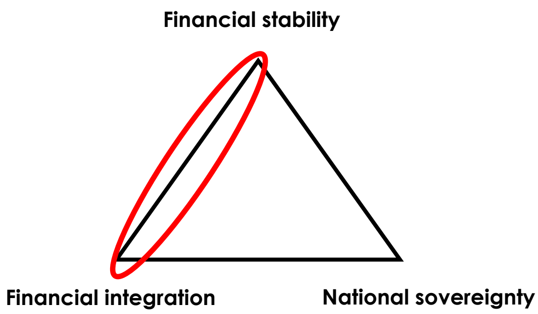


Figure 5



The Larosière group, which was given the task after the financial crisis of proposing how the financial system in Europe should be managed, tried to suggest a compromise: Continued integration, but slightly less national sovereignty and slightly more joint responsibility for supervision work. This led to the earlier "level 3" committees on banking, insurance and market supervision being transformed into authorities. The idea was to give them as much power as possible without changing the Treaty on European Union. At the same time, the European Systemic Risk Board, ESRB, was created. This can give warnings or recommendations when members – central bank governors and supervisory heads – assess that financial risks are building up in Europe. It is possible in both to vote in the authorities and the ESRB and the majority opinion applies.[10] This has proved important in preventing the deadlocks that the otherwise common method of a consensus decision can entail. Both the force and speed of action has increased substantially. But all of this concerns how one can avoid crises, not how they should be managed once they occur.

Nor did the Larosière group discuss, other than marginally, crisis management or winding up insolvent banks. However, the European Commission's newly-published proposal does deal with this, and so do new UK and US legislation that have arisen since the crisis. This is, of course, an important step in the right direction. Greater clarity with regard to how banks should be wound up will to a great extent affect both how the supervision is designed and how the banks act. As I said, it is wise to begin at the other end.[11]

…but difficult with cross-border agreements

However, the focus in the legislation, naturally enough in the UK and US legislation, but also the European proposal, is on how to manage *national* banks in distress. The cross-border problems are avoided to a great extent, even in the Commission's report. The fact that an integrated financial system in Europe also requires methods to resolve cross-border crises remains to be discussed. And of course this is connected to what I mentioned earlier, namely that it is much too sensitive an issue to discuss how the costs should be divided.

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[10] The supervisory heads do not have the right to vote in the ESRB. A 2/3 majority is required for recommendations and decisions on publishing warnings and recommendations.

[11] The crisis legislation also relates to another topical question, namely how much venture capital a bank is considered to need. If both authorities and banks know what will happen in a crisis, this should also affect the need for risk-bearing capital in the banks. The desire to be able to manage uncertainty in a crisis is an important motive behind the increased capital requirements in the Basel III Accord. If uncertainty is reduced, the capital need will decline. But the Basel Committee has not made this connection.

But if one is unable to manage even the preparations and procedures surrounding the distribution of costs in a crisis – what is known as ex ante preparations for ex post burden sharing – this will also have consequences. If nothing is discussed in advance, the natural consequence – what is known as the default option – will be that a cross-border bank in distress will be divided along national boundaries, regardless of how it is organised. The branch network in one country may, for instance, suddenly find itself entirely without IT systems and other central administrative functions, which are very costly to build up. The fact that this becomes irrational and can substantially increase the total cost of winding up the bank becomes a problem that cannot be resolved. Fortis and Dexia, at the most recent reconstruction in the autumn, can be said to be good examples of this from the recent crisis. They were both divided up according to national boundaries, and at least with regard to Fortis most appear to be agreed that this was not a good solution. In any case, it was a solution that cost the tax-payers an unnecessary large amount of money.

What conclusions can be drawn from this? I believe that if one cannot agree between different nations on how to manage cross-border banks in distress, it is probably just as well to realise that the most likely event is that a bank will be divided up along national boundaries in the event of a crisis. This insight will affect the thinking with regard to supervision, which should in turn affect the demands made of the banks. Perhaps one should ultimately require that each bank is organised so that the national units can operate entirely independent of one another? Of course, this is not in line with what has been agreed on up to now in Europe with regard to the banks' possibility to operate over national boundaries, but it is a natural consequence of not being able to discuss more rational solutions in advance.

This reasoning is of course highly relevant to us in Sweden, too. We have a number of banks in the Nordic and Baltic countries that have significant and important cross-border operations. I believe that one can require from both authorities and politicians – in all of the countries concerned – that they should be able to agree on a slightly better way of winding up a bank in distress than cutting it up along national boundaries. But if this becomes an overly heavy political burden we must expect the countries concerned to quite simply take over the part of the bank that is in their own country – even if this solution will be much more expensive in total for the tax-payers.

Now, however, there is hope. Just a few weeks ago the Financial Stability Board, which consists of ministries of finance, central banks and financial supervisory authorities in the G20 countries, published new norms for managing crises in cross-border banks. For instance, they discussed how to make bondholders bear their share of the costs in the event of a crash. When all of this has been translated into legislation that is applied by all of the countries, we will have managed important problems faced in winding up large, cross-border banks. But it still remains to be seen whether one can actually find princples for how the costs should be allocated between the different countries.

In the current debate on how much capital the banks need, it may also be worth remembering that the better legislation one has for winding up banks in distress, the less capital they will need to hold. The capital can be regarded as the buffer necessary to avoid tax-payers having to bear the costs in a crisis. If one has regulated how various lenders should contribute, the need for a buffer is reduced.

With these reflections, it is time for me to wind up. Not just my speech here today, but in a few days my time as a member of the Executive Board of the Riksbank. As I said, it has been thirteen very eventful years. At present the international debate is intensive and there are many tricky questions to be resolved – not least in crisis management and supervision of the financial markets. The job is still interesting. But there is a time for everything, and we all know that it is best to stop when you are still having fun.