Lars Nyberg: The financial market turmoil

Speech by Mr Lars Nyberg, Deputy Governor of the Sveriges Riksbank, to the Riksdag Committee on Finance, Stockholm, 22 November 2007.

*   *   *

I would like to begin by thanking you for the invitation to come here to discuss how we at the Riksbank view the recent unrest in the financial markets. I shall begin by talking about the background to the market turbulence and about the spark that ignited the actual chain of events. Then I shall go on to discuss developments during the autumn and what we can learn from what has happened – as far as is possible at this early stage. In conclusion, I shall talk about the risks we see before us.

Rapid changes in the credit market

In recent years there have been major changes in the international credit markets. New agents have entered the market at the same time as new instruments have been introduced at a rapid pace.

At the core of the changes in the credit market is a phenomenon called securitisation. This has to a great extent been practised by US mortgage institutions and banks since the 1970s. So it is not a new phenomenon. In brief, securitisation entails a number of loans, such as mortgages or credit card accounts, being placed in a specially-created company, which is then financed by issuing bonds on the market. These bonds are usually called Asset Backed Securities (ABS). Managed properly, there are considerable advantages to securitisation. Illiquid loans are converted into liquid bonds, which can easily be sold. Many investors are happy to have credit risk in their portfolios for better diversification. But they do not want to manage individual credits, and they also want liquidity in their investments. They therefore appreciate the securitised products.

In recent years, however, it has become increasingly common for securitised loans (which have been converted into bonds) to be repackaged into various so-called structured credit instruments. An impressive variety of this type of structured product has arisen in a short period of time. Perhaps the most common form are those known as CDOs, Collateralised Debt Obligations. With a CDO it is possible to put together bonds from many different securitised loan portfolios and even to add other assets if desired. The idea is that the portfolio that has been put together is structured in different parts (tranches) with different credit risks (this is in practice often done by the large international investment banks). When interest income from the underlying assets starts coming in, it is distributed according to the order of priority of the tranches, or their seniority. First, the most senior tranches receive their allocation. After that the income is distributed to the second most senior tranches, and so on. Investing in a junior tranche thus entails greater risk than investing in a senior tranche, but on the other hand the earnings are higher. At the bottom is an equity-like part, which is only paid when all the others have received their share. But then they receive everything that is left. The advantage with prioritising the payments in this way is that one can sell the tranches to investors with different risk appetites. Those with a high risk appetite can buy the higher risk tranches, while more cautious investors, such as insurance companies and pension funds, can buy the tranches that are assessed to have the lowest credit risk.

But although there are advantages to packaging together securitised loans in a CDO, there are also disadvantages. One disadvantage is that it is expensive, time-consuming and difficult to assess the credit risk in the different tranches. The underlying assets may be of a heterogeneous nature. Moreover, there are products where a CDO is repackaged and in turn included as a component in another CDO, which will of course make it more difficult to gain an overview of the risk content. The credit risk in the structured products is often assessed by the credit rating agencies, which also rate the different tranches, at least the more senior ones. The credit rating agencies thus play an important role with regard to the structured products. Pricing is another problem. Tailor-made products are not in general subject to regular trading and price listings are rare. One is often reduced to employing mathematical models, which are based on estimated default frequencies for various credits, given the development previously observed. Quite simply, one calculates a price of what the instrument should be worth and hopefully the theoretical price will not differ too much from the price one gets if one actually sells it. The credit rating is often a decisive factor in the pricing.

The structured products are thus more adapted to investors' needs than the purely securitised products. But this has been at the cost of poorer liquidity.

Special investment companies soon emerged

It is essentially a good thing that new instruments make it possible to trade credit risk. Insurance companies, pension foundations and other institutional investors benefit from being able to invest in such products. And if the banks' balance sheets are relieved of the credit risk and investors with capital take on the risk, it is a positive development for financial stability. It increases the system's capacity to manage shocks.

However, not all of the credit risk has moved from the banks to financially strong investors. In recent years, many banks have started special investment companies that are separate legal entities outside of the banks' balance sheets. What these have in common is that they invest in assets with a high return and long duration, for instance, structured credit products, and finance themselves by issuing certificates in the short-term money market. The certificates are called Asset Backed Commercial Paper (ABCP). Depending on how they are constructed, the investment companies are often called "conduits" or Structured Investment Vehicles (SIV). "Conduits" are the more common of the two and account for almost 80 per cent of the outstanding stock of asset-backed commercial paper. An SIV has a more advanced construction than a "conduit". It is usually highly leveraged, 15-20 times the equity capital. It is not necessarily tied to a bank and the financing is largely for longer durations. But the need for financing in the short-term money market is nevertheless crucial.

Although the investment companies in themselves are not banks, they conduct bank-like operations; they have their own balance sheets and names and are in principal independent of the banks. But if an investment company is for some reason unable to issue new corporate certificates when the old ones fall due for payment, the bank guarantees the ability to pay, wholly or partly. The guarantees may be of a formal nature, where the bank commits itself to redeeming the certificate if the investment company is unable to do so. But a guarantee can also be of a more informal nature and based on the bank being unwilling to abandon its investment company in order to protect its name and reputation. Whichever is the case, it means that if an investment company linked to a bank faces financing difficulties, the problem is referred back to the bank, which must provide the company with sufficient liquidity for a short period of time. This is to some extent reminiscent of the situation during the Swedish financial company crisis, which started the 1990s bank crisis.

This construction with companies that have invested in assets that are difficult to value and have a long duration and which have financed themselves in the short-term money market with a guarantee from the banks is a powder keg – and a powder keg where the powder has been piled up more quickly and to a greater extent than both the market and the authorities have been aware. The igniting spark came from the US mortgage market, but it could have come from other areas.

Bad credits in the US mortgage market is the igniting spark

In the United States the financial innovations have gone hand in hand with a rapid increase in loan volumes. As is the case in most of the world, it is mainly households' mortgages that have increased. What distinguishes the United States in this respect is that a not insignificant portion of the mortgages have been taken by households with poor credit ratings.[1] These loans are called subprime loans. Although the subprime loans constitute a minority of the total mortgages, there are nevertheless significant sums involved.[2] It is worth pointing out here that of course it is not always wrong to grant loans for housing merely because the lenders cannot manage the banks' normal, fairly tough criteria. But it is always necessary to carry out a proper credit assessment. And the lender should be paid for the higher risk through a correspondingly higher interest rate. None of this happened in the United States. During spring 2005 and 2006 the credit assessments appear to have deteriorated, at the same time as loans were granted on terms that far from corresponded to the risks. The price of risk was quite simply too low.

However, during this period risk premiums on all assets fell. So it was not merely on subprime loans where the price was set too low. The same also applied, for example, to the market for leveraged buyouts.

Hedge funds were the first to experience problems

The first signs that the spark had reached the powder keg came during the summer, when it was evident that there would be more defaults on subprime loans than had been feared earlier. Two hedge funds tied to the US investment bank Bear Stearns were among the first to be affected. The funds had borrowed money which was then invested in structured credit instruments linked to securitised subprime loans. When the financiers wanted to pull out, the funds were forced to sell their assets. However, they were not successful as suspicions against subprime loans had increased and the funds collapsed with substantial losses. At around the same time the credit rating agencies began downgrading credit instruments containing subprime loans. As the ratings have set the tone for how the instruments are assessed, the downgradings have meant that the financial markets more or less lost confidence in anything that might contain subprime loans.

Finally the banks were also affected

But it was not only hedge funds that had invested in subprime loans. The banks' investment companies had also done so to a great extent. The buyers of the investment companies' certificates are usually risk averse investors who are choosing between buying short government securities and corporate certificates. When it became clear, or even when there was reason to suspect, that subprime loans were among the investment companies' assets, the demand for certificates fell drastically. Investors instead chose to buy short government securities, which meant that interest rates on these fell. One could say that the investment companies suffered a classic bank run. The parent banks were now forced to fulfil the liquidity guarantees they had made earlier. At the end of July the German bank IKB announced that it had suffered major losses through an investment company that had invested in subprime loans. Some weeks later another German bank, Sachsen Landesbank, experienced similar problems.

---

1 See also the Committee on the Global Financial System (2006): "Housing Finance in the Global Financial Market", CGFS papers, No 26.

2 Subprime loans comprised an estimated 13 per cent of the total mortgage stock in the United States in 2006.

The banks then began to hoard liquidity and distrust spread throughout the bank system. Banks that had investment companies did not want to lend money as they might need it themselves to meet their own guarantee obligations. Even banks without investment companies were unwilling to lend money as it was uncertain where in the bank system the credit risk was actually located. It was impossible to gain a clear insight into the complicated CDO structures. Consequently the interest rates on the interbank markets soared. Parallel to this, scepticism towards the credit rating agencies' ability to grade structured products increased, and this concerned not only products containing subprime loans.

Several central banks decided at this point to intervene in different ways in the interbank market. In general, the interventions contributed to reducing interbank rates towards desirable levels for shorter durations. For the longer durations the difference between the interbank rate and the risk-free rate remained substantial. The unwillingness to lend money was a hard blow to institutions dependent on financing from the market. For example, the British mortgage lender Northern Rock was forced to seek help from the Bank of England to manage its acute liquidity problems when it could no longer obtain financing.

The market turbulence during the autumn had relatively limited effects on the Swedish banks. The main effects were higher financing costs, some changes in the value of bond portfolios and less activity on some markets. Here an important factor was the fact that the Swedish banks did not have any significant exposure to securitised subprime loans, neither directly nor indirectly through investment companies.

Deficiencies in the functioning of the credit markets have been exposed

The rapid developments in the financial system over the past decade have essentially been beneficial. There is no reason to wish we were back in the financial iron age of the 1980s. It is also interesting to note that credit derivatives and hedge funds, which many people claimed would cause the next crisis, have not reinforced the problems in the market, but rather to them being handled.

Nevertheless, the market turbulence has shown that the deficiencies in the design and functioning of the credit markets need closer investigation. Some innovations appear to have been a little too fast for the market. At the same time, as I said in my introduction, it is still too early to draw any definite conclusions from what we have seen.

When loans pass through several channels and are repackaged along the way, there is often a long distance between the final investor and the party that originally issued the loan. This means that the incentive to make a thorough credit assessment declines. It appears as though the original credit grantor took too little responsibility in the repackaging process. The way that information on credit quality is passed on to investors is also open to debate. One of the credit rating agencies’ tasks is to fill in the information gap between the issuer and the end investor.[3] With hindsight one can note that this has not always been successful.

But even if there are deficiencies in the way that the credit rating agencies have worked with regard to structured credit products, there are also signs that many investors misunderstood how a credit rating should be used. They also need to take into account liquidity and market risks, which are not captured in the credit rating.

However, it is worth remembering that the market for structured credit products is entirely dominated by professional investors. There is thus no evident need for consumer protection that would justify the intervention of the authorities.

[3] For a more detailed discussion, see the Committee on the Global Financial System (2005): "The role of ratings in structured finance: issues and implications”, CGFS Publications no 23.

The difficulty in grading and pricing the various structured products remains. Some of them will probably disappear without being missed, and for exactly this reason. But it may be possible to develop simpler products that can even be traded on stock markets and thereby form a base for pricing more complicated instruments. The way the market manages this challenge is an important issue for the future.

Something that requires more thorough investigation is the directly problematic roll played by the banks' investment companies. They appear to have often existed because of so-called regulatory arbitrage. The banks have been able to circumvent the capital adequacy rules and liquidity rules by investing assets in apparently independent companies. Moreover, it has also been a mystery which banks have been exposed to which investment companies, how large the exposures are and what they have consisted of. This has made it difficult for market participants and authorities to assess a bank on a consolidated basis. Some of these problems are dealt with by the new capital adequacy rules in Basel II. Nevertheless, it is essential that the authorities play an active role to ensure better insight. And this is also very much in the market's own interests.

The uncertainty remains

The outcome of the current information will depend on how subprime loans are valued in the long term. If interest rate payments from the underlying loans are received as calculated, there is no need to write down the value for this reason. However, it looks as though there will be more defaults on payments than originally feared. In addition, it takes several months from the time that a household defaults on payment of a loan until it reaches the minus side of a balance sheet. Although a number of banks have already made major losses when forced to write down the value of their assets, it will be a long time before all the cards are on the table.

There are also considerable problems with valuations. Banks and other investors are to write down the value of their assets, but there are rarely any market prices for the structured products containing mortgages. The valuation problems may force the banks to take bigger write downs than what is motivated by the underlying credit quality.

An important factor in all of this is US economic activity. If there is a more rapid downswing than expected, the problems in the mortgage market may be more profound and spread to other sectors of the credit market. And of course the unrest in the financial markets can in turn contribute to a broader slowdown in the US economy.

The situation remains uncertain and there is considerable sensitivity to new negative information and to other shocks. And there will probably be more bad news from the United States and Europe.

We were all taken by surprise

This autumn has seen a number of unpleasant surprises and, as I have said, there is reason to believe that the unrest will continue. The Riksbank, like most other central banks, had previously warned that there were difficulties in the credit market, particularly the low risk premiums. The situation we have seen was therefore not entirely unexpected. However, something that was underestimated was how quickly and by how much the price of risk rose, as well as how quickly problems in a distant part of the US credit market could spread throughout the world and have such a strong impact on the interbank market, which is the actual core of the international financial system.

To those wishing to learn more about the market turbulence, I can warmly recommend the Riksbank's Financial Stability Report, which will be published soon.[4] The Report is celebrating its 10th anniversary and also contains an article on how central banks need to adapt their analysis and find new approaches to meet the challenges of operating in a constantly changing financial landscape. This is a task that is as exciting as it is important.

Thank you.

---

4 Financial Stability Report 2007:2 will be published on 4 December 2007.