

The market for asset-backed securities has been limited since the financial crisis. Consequently, a number of initiatives have been taken in Europe over the last year to reverse the trend. For example, the United Kingdom's central bank, the Bank of England, and the European Central Bank (the ECB) have published discussion papers on stimulating securitisation to increase opportunities for companies to obtain funding. In addition to these initiatives, certain new regulations linked to the banks having to fund themselves with more equity and making their debt funding more long-term may also increase the banks' incentives to securitise. Increased securitisation in Sweden in the future may place new demands on various participants on the financial market, such as banks, investors and authorities.

Securitisation – background, new initiatives and possible implications

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Securitisation is a technique for converting illiquid loans into bonds. This takes place through the sale of loans from a bank's balance sheet to a special purpose entity which issues bonds to fund the purchase of the loans. Securitised products played a key role in the financial crisis, when those problems that primarily arose in the United States were largely due to insufficient transparency surrounding securitised products.

Over the last year, a number of European authorities have taken initiatives aimed at improving the market for securitised products. In addition, the banks have argued that certain regulations may have side effects in terms of increased incentives for the banks to securitise credits. In Sweden, securitisation is not particularly common but in other countries, primarily the United States and parts of Europe, it is significantly more common. If new initiatives or regulations were to lead to Swedish banks choosing to securitise credits to a large extent, this would mean a structural transformation of the Swedish financial system. This structural transformation would place new demands on banks, investors and authorities.

In this commentary, we examine more closely the concept of securitisation, its connection to the financial crisis, the current state of the market, developments that could influence securitisation in Sweden and, finally, potential implications for the structure of the Swedish financial system.

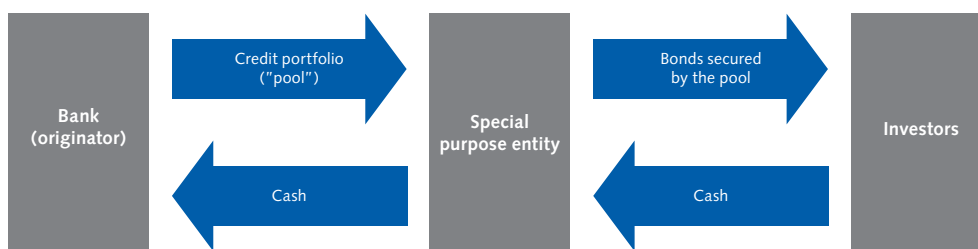
What is securitisation?

A traditional bank accepts deposits or other forms of funding which it then lends to companies and households. The bank then has the loan on the asset side of its balance sheet. However, the bank does not have to keep the loan, but can move it off its balance sheet by selling it to another market participant. One method of doing this is by what is known as securitisation.

When a bank securitises a mortgage loan (for example), the bank usually sells a portfolio (known as a pool), consisting of mortgages, to a special purpose entity. The bank that initially lends out the money and then sells the loan to the special purpose entity is known as the *originator*. The special purpose entity stands as owner of the loans and funds them by issuing bonds. These bonds are known as *mortgage-backed securities* (MBS), as the underlying mortgages bought by the special purpose entity form the collateral for the bonds. The bonds are in turn bought by various investors who thereby take over the credit risk in the mortgages, that is, the risk that the household will not be able to make the amortisation and interest payments, as these payments accrue to the investors in the bonds. The mortgages have thereby been converted to securities that can now be sold onwards. The investor purchasing the bond will only be exposed to the risk in the assets held by the special purpose entity and not to any other risk in the bank.

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Figure 1. Simplified illustration of transaction



What characterises securitisation?

Asset-backed securities are usually characterised by two things. First, the yield and risk of the bonds depend on the assets in the underlying pool and are thus not affected by the other assets held by the originator. Second, the credit risk in the bonds is divided into what are known as tranches. Even if these two characteristics are distinguishing features of securitisation, the same techniques are also used in other financial instruments such as covered bonds.

Let us describe the first characteristic – that yield and risk depend on the underlying pool – in more detail. Pooling loans involves a bank taking a number of loans and separating them from other assets so as to be able to sell them. The individual loans in the pool are intended to have similar overall characteristics, but will, by necessity, have individual differences. However, mixing a large number of loans in the pool will even out the differences for example with respect to probability of default between individual loans. Consequently, a party purchasing a pool will not need to have exact knowledge of the quality of the individual loans to be able to assess the quality of the pool since the idiosyncratic risks have been diversified away. This creates significantly greater possibilities to securitise and sell assets to external investors as these investors, instead of reviewing each loan individually, can rely on the average quality of the pool. Put simply, pooling of loans is a way to overcome the high information costs that, in many cases, would otherwise have made securitisation unprofitable, that is had the loans been sold one by one. This also means that certain types of loans are more suitable for securitisation than others. Those loans with greater similarities and for which good assessments of credit quality can be made are better suited for securitisation than loans without similarities and which can have individually-adjusted credit terms – such as loans to small and medium-sized companies, for example.

The second characteristic – that credit risk is divided into tranches – means that different investors receive different prioritisations according to which they have the right to the assets in and cash flows from the pool. The tranches with highest priority to the cash flows are usually called senior tranches. As investors in these tranches only take small risks, the yield on these tranches is usually also low. Conversely, investors in junior tranches, who must wait until all other investors have been paid before they themselves can receive their money, take greater risks but also receive higher yield in return. This thus means that the senior tranches bear a lower risk than the average risk in the pool, while the junior tranches bear a higher risk. Reallocating credit risk into tranches is thus a way of allocating risk among different investors with different risk appetites.

BOX – DIVIDING RISK INTO TRANCHES

The technique used to divide risk into tranches can be illustrated through a simple example consisting of only two loans. Each loan is worth SEK 100 if no default occurs and SEK 0 in the event of default. If both of these loans are combined, a pool with a nominal value of SEK 200 is created. This pool can then be divided up by issuing two different tranches, each with a nominal value of SEK 100, against it: one senior and one junior tranche. The junior tranche takes the first SEK 100 of any losses, while the senior tranche is only affected if the losses in the pool exceed SEK 100. As the junior tranche runs a greater risk of being affected by losses than the senior one, investors in the junior tranche want to be promised a higher yield as compensation for this higher risk.

As there are only two loans in the pool, the junior tranche gets a yield of SEK 100 if neither of the two underlying loans defaults but SEK 0 if either loan does. The senior tranche, however, gets a yield of SEK

100 as long as at least one of the loans does not default and SEK 0 only if both underlying loans default simultaneously. To determine the risk in the senior tranche, it is thus important to know not just what the risk of a loan defaulting is, but also what the risk is of both loans defaulting simultaneously. In other words, the connection or correlation between defaults in the pool is important for determining risk.

The greater the correlation between the loans is, the smaller the possibility of creating secure tranches becomes. If the loans are perfectly correlated, so that either all loans default or none default, the risk in a senior tranche is exactly the same as the risk in a junior tranche. In such a situation, there is no point in dividing the risk into tranches. But if the correlation instead is low, the risk of so many loans defaulting that it will affect the senior tranches is small. Secure senior tranches can thus be created by dividing the risk.

Securitisation was of great significance in the financial crisis

Securitisation is a technique that has long existed in the United States and has primarily been conducted by the government-sponsored enterprises Fannie Mae and Freddie Mac. However, the start of this century saw an enormous growth in securitisation and private actors started to play a larger part in this activity.

A large share of these new mortgages were granted to households with less ability to repay loans. These loans were called *subprime* loans. The loans were often issued by specialised mortgage institutions who then sold the loans on to large investment banks. The investment banks, in turn, securitised these loans and sold the securitised products on to various types of investors. By dividing up the risks into different tranches, the investment banks could create a large supply of securitised products that were considered secure at that time, even though the underlying loans were often of a low credit quality. At the same time tranches of lower credit quality were created which in many cases were bought by for example hedge funds.

One problem with many of the mortgage loans that were securitised was that the documentation surrounding the borrowers' economic conditions for repaying the loans was often unsatisfactory or entirely absent.² This meant that, in many cases, it was difficult to determine the actual level of risk in the loan. It became even more difficult when the loans were securitised in complex products.

One reason why the investors were willing to buy these products despite lack of transparency and documentation was that they in many cases relied upon credit ratings. A credit rating is an assessment of how likely it is that a certain issuer or security will default. This assessment is made by an authorised credit rating agency and is given on a scale where AAA is the highest rating and indicates very low risk. Credit ratings are thus a simple way of trying to signify a certain credit quality, which can make it easier for investors to determine whether a certain investment is appropriate for them. However, it was altogether too easy to get a high credit rating. In retrospect, it has become apparent that this was partly because the credit rating agencies' models were over-simplified and easy to manipulate.³

In addition, the banking sector purchased large amounts of bonds that were created by securitisation and which had AAA credit ratings, and used these as collateral for short-term borrowing. But when housing prices in the United States began to fall in 2007 and the number of persons unable to make interest payments increased, it became increasingly apparent that many of these housing-related securities were significantly higher-risk than had previously been believed.⁴ Confidence in credit ratings declined significantly as the extent of the problems was uncovered. Insufficient transparency, complexity and a lack of standardisation meant that, in many cases, it was altogether too difficult or expensive for investors to themselves assess the credit risk of asset-backed securities. These factors contributed to major price falls for such securities and extensive losses for the banks and other investors who had purchased this type of securities. The banks that had also used asset-backed securities

2. Gorton (2012).

3. For example it became apparent that the assumptions on correlation and house prices in many cases were naïve. Coval et al. (2009).

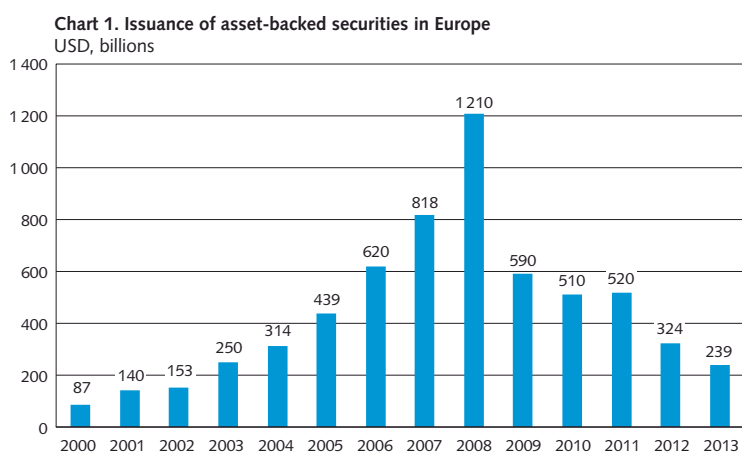
4. Brunnermeier (2009).

as collateral for short-term borrowing were affected by major funding problems when that possibility disappeared as the market's confidence in such securities sank.

Following the crisis, both authorities and private participants have implemented a series of measures aimed at mitigating at least part of the problems identified with securitisation. Many of these initiatives attempt to approach the problems of insufficient transparency and potential conflicts of interest that may exist between issuers and investors in asset-backed securities. The authorities have also changed the capital adequacy requirements for banks investing in securitised products and have placed the credit rating agencies under supervision.

The market for securitised products is relatively small today

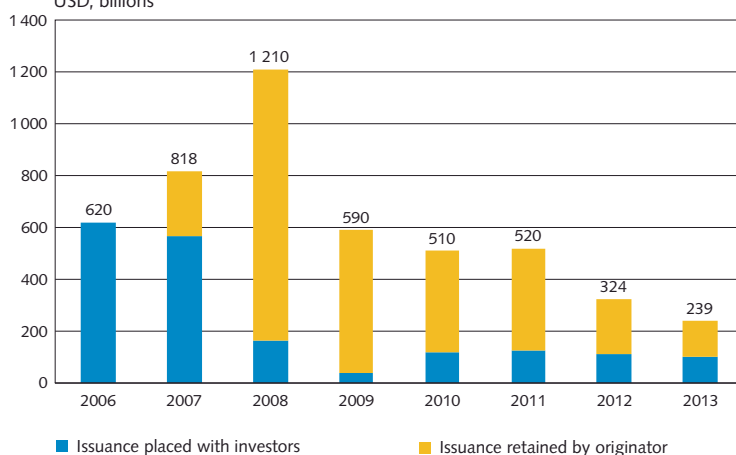
The market for securitised products has languished since the financial crisis. However, this development has not been uniform, but has varied from region to region. In the United States, the market for non-housing related securitised products, such as credit cards and auto loans, has recovered relatively well from the crisis. On the other hand, the market for the securitisation of mortgage loans continues to be almost exclusively dominated by the government-sponsored enterprises Fannie Mae and Freddie Mac. In Europe, the recovery has been weaker. Issuance volumes are relatively low compared with previous years (see Chart 1).



Source: Sifma

In addition, the main portion of what is nevertheless issued by special purpose entities in Europe is purchased by the originators themselves, that is by the parties that sold the loans to the special purpose entities (see Chart 2). The originators then largely use the securities as collateral for loans from the ECB. Their reason for doing this lies in the fact that an originator cannot use its original loans as collateral for such loans, partly because it would be difficult to transfer these to the central bank. On the other hand, it is possible to use asset-backed securities as collateral. Apart from receiving certain asset-backed securities as collateral for lending, the ECB has also started purchasing such securities.

Chart 2. Placed and retained parts of issuances in Europe
USD, billions



Source: Sifma

One conceivable partial explanation for investors not purchasing particularly many securitised products at present is that it is often more advantageous for originators to use asset-backed securities as collateral for loans from the ECB than it is to try and sell them on the market.

European initiatives to increase demand for securitised products and new regulations that could lead to increased supply

Over the last year, a number of European institutions, such as the Bank of England, the ECB, the European Banking Authority and the European Commission, have argued for an improvement of the supply of credits, primarily to assist small and medium-sized companies. This is because such companies, primarily in southern Europe, are experiencing problems in obtaining funding.⁵ In many cases, loan amounts for such companies are too small to allow them to borrow directly on the market and these companies are thereby largely dependent on bank funding. Notwithstanding the ECB having conducted an asset quality review and a stress test of the European banking system that shows improvements, certain problems remain and because of this there might be banks with limited possibilities to lend more money. In some cases banks may even need to reduce their lending.

Securitisation could thus be a way of increasing access to credit for smaller companies. This could take place directly via the securitisation of loans to smaller companies – pooling several loans together could make the volume large enough to allow for the issuance of asset-backed securities with collateral in these loans. But it could also take place by the banks securitising and selling off other assets, which in turn would allow them to use their existing capital to fund lending to small and medium companies to a greater extent.

European initiatives may increase demand for asset-backed securities

To facilitate the emergence of a functioning market for securitised products, these European institutions wish to build increased transparency and standardisation. This would allow various investors to more easily identify the risks and to better assess which products may be appropriate investment alternatives. In addition, these institutions argue that a distinction should be made in the various regulations between securitised products that can be considered less complex, on one hand, and those products that are more complex, on the other. They proposed that those products meeting certain criteria to be considered less complex should have lower capital adequacy requirements than the others. The Basel Committee on Banking Supervision and the International Organization of Securities Commissions have launched similar

5. See European Commission and ECB (2013).

initiatives aimed at creating better conditions to help investors distinguish between various types of asset-backed securities.

The European Commission has adopted a similar differentiation of various types of asset-backed securities in a couple of legal proposals on liquidity regulations for banks⁶ and capital requirement rules for insurance companies⁷. These initiatives could possibly contribute towards an improvement of conditions on the market for securitised products in Europe, even if the extent towards which they could actually ease the credit supply for smaller companies is less clear.

New regulations could also increase the supply of such securities

In addition to the initiatives taken to increase demand for asset-backed securities, there are also other measures taken by authorities that could, instead, influence the banks' incentives to securitise assets and which could thereby increase the supply of such securities. This is primarily a matter of various banking regulations that could make it less profitable for the banks to own certain types of assets and thereby make it more attractive to instead securitise them to a greater extent.

Since the financial crisis, the Basel Committee on Banking Supervision and other global standard setters have worked to strengthen the resilience of the financial sector. New regulations have primarily focused on making the banks fund themselves with equity to a greater extent, to make their debt financing more long-term and to maintain liquidity buffers. At the same time as these regulations are aimed at strengthening the resilience of the banking sector, they could lead to unintentional consequences. This is because the regulations may entail higher costs for the banks which, in turn, could make certain parts of their operations less profitable. A number of regulations that Swedish banks claim could create side effects in terms of increased incentives for securitisation are the leverage ratio requirement, the Swedish risk-weight floor for mortgages and the requirement for more stable long-term funding in the form of the Net Stable Funding Ratio. It is primarily assets with low risk weights⁸ that it is conceived could become less profitable for the banks, as well as assets demanding long-term funding.

Possible structural changes in Sweden

In Sweden, none of the four major banks have made use of securitisation to any greater extent. According to the major banks themselves, this is because their existing business models, in which loans are retained on the balance sheet, work well. However, the Swedish Bankers' Association, a trade organisation representing the banks in Sweden, has expressed the opinion that new regulations may lead the Swedish banks to abandon their business models for mortgages and other services. The Swedish Bankers' Association says that "if Swedish authorities provide too great incentives to the banks to abandon the model involving covered bonds, which is based on retaining mortgages on the balance sheet, this could lead to the banks having to securitise".⁹

Securitisation makes it possible to transfer credit and liquidity risk from the banking system to other participants. A decision by the Swedish banks to extensively securitise credits instead of retaining the risk could result in structural changes to the Swedish financial system. As the banks fulfil central functions such as the provision of payment services, the risk of shocks to the financial system under certain conditions could be reduced if risk was instead to be borne by participants other than the banks. This is because the default of loans that have been securitised would not affect the banking system but instead affects the participants who have purchased the securitised loans provided that these participants are not banks themselves. However, at the same time, such a reallocation of risks could make it more difficult for both authorities and private participants to assess as well as influence the risks in the financial system as the risks

6. LCR. http://ec.europa.eu/finance/bank/regcapital/acts/delegated/index_en.html.

7. Solvency 2. http://ec.europa.eu/finance/insurance/solvency/solvency2/index_en.html.

8. Low risk weights calculated with the models used for the 'regular' capital requirements. More information on how the capital requirement is calculated can be found in the article "How is a capital ratio measured?", Financial Stability Report 2013:1.

9. Swedish Bankers' Association (2014).

are spread across many participants. It is therefore important that those participants purchasing securitised products really are able to bear the risks that this can entail and that structural systemic risks are still addressed. It is possible that buffer requirements and other regulations may need to be introduced for other participants.

Even if there are advantages in spreading the risks more widely within the financial system, experiences from the United States during the financial crisis showed that risks that the banks believe they have removed from their balance sheets can come back.¹⁰ For example, for various reasons, banks may find themselves being forced to buy back asset-backed securities. One reason for this could be that the banks are acting as market maker for these bonds and can thus be forced to buy bonds back from participants wishing to sell. A further reason could be that there is a reputational risk leading the banks to deem it necessary to buy back asset-backed securities in the event that the underlying loans they originated themselves are impacted by losses. Reputational risk, in this case, refers to the risk of a conflation of special purpose entity and originator – if the special purpose entity encounters problems, the originator may be viewed in the same light, possibly leading to funding problems and other consequences.

Problems may also arise in that the originator does not have the same incentive to lend money to reliable borrowers if the bank does not subsequently retain the risk itself. In addition, there will also be a reduction in the banks' ability and incentives to actively work with their customers during the term of the loan to reduce the risk that these will encounter payment problems in the event that the loan is securitised. There will likewise be a reduction of the banks' incentive to restructure loans, for example by temporarily cutting interest payments over a period in which customers are facing payment problems. Allowing a customer to defer interest and amortisation payments is most usually a more effective way for the bank and economy to manage a borrower's temporary payment problems than having it file for bankruptcy.

All in all, it can be said that there are both advantages and disadvantages of securitisation. The net effect is difficult to assess and is dependent on how and in which setting the technique is used. A structural transformation involving Swedish banks securitising their credits to a greater extent would lead to new challenges regarding both transparency and how originators should assess borrowers and manage their loans during their terms which would need to be addressed. This could thus place new demands on various participants on the financial market such as banks, investors and authorities.

10. Gorton and Metrick (2012).



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