Kerstin af Jochnick: Why does the Riksbank care about household indebtedness?

Speech by Ms Kerstin af Jochnick, First Deputy Governor of the Sveriges Riksbank, at the Centre for Business and Policy Studies, Stockholm, 31 January 2014.

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Household indebtedness and the Swedish housing market have been discussed at length in many contexts over the last year. Some say that the high level of indebtedness is a threat to economic stability, while others say that such concerns are unwarranted. One can look at household indebtedness and assess the risk from different perspectives, and perhaps this is why there are such differing views as to whether or not it is a risk. From a consumer protection point of view, it is relevant to assess how high indebtedness can affect individuals. The risk also needs to be assessed from a macro perspective, which is relevant for us at the Riksbank, given our monetary policy perspective. However, today I intend to talk about why we at the Riksbank are concerned over household indebtedness from a systemic-risk perspective, and how household indebtedness can affect financial stability.[1] It is namely necessary to make sure that investors, credit agencies and others have confidence in the Swedish housing and mortgage markets for our financial system to function smoothly.

It is easy to become short-sighted when assessing risk in the economy. I would therefore like to take a look in the rear mirror, at the period when we had a regulated credit market. Examining the background and reasons why households borrow more today than before is important in my view, as it enables us to understand how household indebtedness is linked to financial stability.

One can say that the period with a regulated market was one extreme, which was then replaced by another extreme, namely a free market with in principle unlimited access to global capital.

The credit market was strictly regulated until 1985 and there was relatively little degree of freedom for the institutions offering mortgages. Deregulation was in many respects necessary and desirable. However, the development we have seen since 1985 has created vulnerabilities in the financial system against which we must be vigilant. The funding of housing purchases has in principle moved entirely into the banking system, while the banks are to an increasing degree funding these mortgages short-term on the financial markets.[2] Swedish banks' market funding amounts to around SEK 3,500 billion, of which SEK 2,100 billion, or 60 per cent, is in foreign currencies. This means that the banking system is now more sensitive to shocks than during the period with regulation. A necessary condition for the banks to be able to finance Swedish housing is that market participants, investors and credit rating agencies have fundamental confidence in Sweden, in Swedish banks and in the Swedish housing market. If this confidence were to fail because investors considered the risks linked to household indebtedness had increased, the banks could find it difficult to obtain funding, or their funding would cost more. I would say that market confidence is essential for the stability of the financial system.

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1 The Riksbank usually discusses household indebtedness from a financial stability perspective in its twice-yearly Financial Stability Report. See, for instance, *Financial Stability Report 2013:2*. Sveriges Riksbank.

2 Previously, mortgages were often financed through housing bonds, which had maturities of around 30 years. Today, covered bonds are used instead, where newly issued covered bonds had an average maturity of around 4 years in the autumn of 2013. At that time, the average maturity of the outstanding covered bonds was approximately 3 years.

We saw in the most recent financial crisis that high indebtedness in the household sector can create problems, with some countries suffering a severe fall in house prices. When the value of houses declines, households begin to save more. When savings increase, consumption decreases and thus demand in the economy falls. Ultimately, this can lead to lower production and higher unemployment. We do not want to see this kind of development in Sweden.

It is also important to remember that there is interplay between developments in the financial markets and developments in the real economy. If we were to experience a fall in housing prices during a recession and thus similar problems to those experienced by other countries, it is likely that we would suffer both a decline in demand in the economy and that the banks would experience greater difficulty and greater cost in obtaining market funding. This in turn risks aggravating the recession further, which would result in a further rise in unemployment. It is therefore important to avoid incorporating potential vulnerabilities into the economy, such as large debts.

The growth of the mortgage market has laid the foundation of the current financial system in Sweden

The banks' dependence on market funding thus means that household indebtedness could potentially influence financial stability. The Swedish banks are also a little unusual in this context, as more than half of their total funding is made up of market funding, and a large part of this is in foreign currencies. Deposits from savers thus account for a relatively small percentage, compared with many other countries. Why is this? How have we in Sweden acquired a financial system that is so dependent on market funding and thereby vulnerable to a fall in confidence? If we are to understand this, we need to look back a couple of decades.

A strongly regulated and subsidised mortgage market

Some of you may remember how the Swedish financial system was governed by credit and foreign currency regulations for a long period of time, up until the mid-1980s. These regulations determined, for instance, who was allowed to borrow and on what terms. For instance, borrowing and lending foreign currency was not allowed.

These regulations allowed the state to control credit in society. The regulations were used to boost construction in the 1950s and 60s, for instance. Then, as now, there was a large migration to the cities, and a severe shortage of housing. One means of increasing construction was to push down the cost of building housing. Households and construction companies had the possibility to receive both interest subsidies and interest guarantees if they built housing in accordance with specific requirements regarding design and size. This led to a large demand for loans.

The regulations not only governed the terms for households' loans, but also the terms for the mortgage institutions' funding of the loans. Mortgage institutions were usually independent of the banks and funded themselves by issuing mortgage bonds. The maturity for these bonds was normally 30 years, but it could sometimes extend to 40 years, that is, much longer than today. Demand for these bonds was governed by the state through so-called liquidity ratios, which regulated how much the banks were forced to invest in mortgage bonds in relation to their deposits. Insurance companies were also obliged to invest in mortgage bonds. One could say that the state created a form of artificial demand for mortgage bonds. The bond yield was set by the Riksbank. It was thus probably lower than it would have been on a free market.

Steps towards market funding

Right from the start, mortgages were thus funded by bonds since the mortgage institutions were not allowed to receive deposits from the general public. The banks, on the other hand, were funded by deposits and short-term bonds, but were not allowed to issue long-term mortgages. However, the mortgages were indirectly funded by the general public's savings in that the banks were forced to invest in housing bonds.

In the 1960s, the general pension fund (AP fund) was established, which meant that the state gained further control over savings in the economy and over the conditions for the banks' funding. When pension allocations began to be deposited with the AP fund, it quickly grew to become the largest investor in mortgage bonds, among others.

Developments accelerated when the credit and currency markets were deregulated in the mid-1980s at the same time as technological developments were beginning in the financial markets. New participants entered the markets and began to offer new financial products, such as saving in unit trusts. The Swedish banks were not slow in following the trend and began to offer their customers their own unit trusts. Saving in unit trusts involved gains for both the banks and households. The banks gained a new source of income and households were given the opportunity to actively invest their savings and spread risk.

State initiatives have since continued to push household saving towards the securities market. "Allemansfonder" (national public saving funds), investment savings accounts, unit-linked insurances and individual pension savings are all examples of savings forms that are under certain circumstances taxed at a lower rate than savings in traditional bank accounts. These beneficial tax regulations have given households an incentive to increase their saving in securities.

As households have saved to a greater degree in securities, the conditions for the banks' funding have also changed. There is indeed a global trend for households to invest in unit trusts and other securities, but in Sweden saving in mutual funds is rather more extensive than in many other countries.[3, 4] Although household saving still finances the banks, it now done increasingly indirectly through the securities market, when pension funds and other financial agents, both Swedish and international, invest in the banks' bonds. This has meant that the number of intermediaries and links between different financial agents has increased. In other words, the system has become more complex.

A more integrated financial system

Mortgage institutions were for a long time independent of the banks, although there were indirect links in that the banks invested in the mortgage institutions' bonds. When the credit market was deregulated and liquidity ratios were revoked, these investments were to some extent replaced by direct loans to mortgage institutions. Over the years, the links between mortgage institutions and the banks have continued to strengthen. At the beginning of the 1990s, a number of amendments were made to the regulations, enabling the banks to acquire mortgage institutions. This laid the foundation for the major banking groups we have now.

Initially, the mortgage institutions continued to fund their operations with housing bonds, and from 2007 these were gradually replaced by what are known as covered bonds. Covered bonds have mortgages as collateral for their funding and according to the regulations governing the handling of these bonds, mortgages with an excessively high loan-to-value ratio may not be used as collateral. As the covered bonds are regarded as more secure by the market, the banks had the incentive to change over to this form of funding. Moreover,

[3] See, for instance, Chistelis, Georgarakos and Haliassos (2013), Differences in portfolios across countries: economic environment versus households characteristics. *The Review of Economics and Statistics*, March 2013, 95 (1), pp. 220–236.

[4] Another explanation for the banks' extensive market funding is that the Swedish occupational pension system means that Swedish households themselves do not save with the banks, which means that the banks must find funding in the markets. The pension funds in their turn invest substantially abroad, which means that the banks must partly fund themselves abroad.

many banks in Europe had already introduced similar covered bonds. However, mortgage institutions were not allowed to fund the entire stock of mortgages with these bonds. To cover the remaining amount, the mortgage institutions instead began to borrow from their parent banks, which in turn to a great extent obtained funding on the financial markets. This meant that the link between the mortgage institutions, the banks and the financial markets were further reinforced, and this also increased the complexity of the funding of housing.

During the 2000s, the banks' market funding in foreign currencies also increased. Part of this borrowing is used to finance mortgages in Swedish krona and the foreign currency therefore needs to be converted into krona on the FX market. I do not intend to go into this in depth; merely to observe that this has further increased the complexity of the Swedish financial system in that the number of intermediaries has increased. At the same time, the banks have become dependent on the FX market functioning smoothly.

Households' high indebtedness could jeopardise the banks' funding opportunities

Swedish household debt has been rising in line with the increase in housing prices since the mid-1990s. The fact that households today are so heavily indebted means, for instance, that they are sensitive to changes in their personal finances and to disruptions in the housing market, for instance. If housing prices were to fall, this could affect the banks' possibilities to fund Swedish mortgages. Let me try to explain why.

Funding using covered bonds is closely linked to the housing market

Around one half of the Swedish banks' market funding comes from covered bonds. When the banks issue these bonds, they earmark collateral that is only for the market participants investing in bonds. The investors often require a particular extra buffer of collateral, and so the banks often earmark more collateral than is required by the regulations. It is primarily mortgages that are earmarked, and funding with covered bonds is therefore closely linked to developments on the Swedish housing market.

If housing prices were to fall, for instance, housing declines in value while mortgages remain constant. Consequently, the loan-to-value ratio of the mortgage increases. As mortgages with an excessive loan-to-value ratio cannot be used as collateral, falling housing prices can thus mean that some of the collateral must be removed or replaced. As the banks have often allocated an extra buffer of collateral, there is scope to remove mortgages that no longer meet the requirements, without having to replace them with other collateral.

However, if the banks do not replace the collateral that has been removed, it may limit their possibilities to issue further bonds based on this collateral. The reason for this is that both investors and credit rating agencies often require a buffer of additional collateral. The banks can top up the collateral by earmarking other types of collateral, such as government bonds, by selling parts of their liquidity buffers or by issuing short-term securities and then earmarking the liquid funds they receive. However, the opportunity to top up the collateral in this way presupposes that the financial markets are functioning normally and that investors have confidence in the Swedish banks.

Heavily falling housing prices can disrupt market functioning

Covered bonds are subject to special legislation that ensures that these securities are very safe. Although this regulation has worked well so far, one cannot rule out the possibility that heavily falling housing prices could disrupt the functioning of the market and thus affect the banks. One cannot rule out the possibility that investors might reduce their holdings or perhaps no longer wish to own Swedish mortgages through covered bonds when housing prices are falling heavily. Although the risk of direct loan losses on the banks' mortgages is initially small, investors who perceive the uncertainty to be great and who have poor knowledge of the credit risk might wish to sell their holdings. If a general expectation of increased sales pressure also builds up, a large number of more well-informed investors might choose to sell their holdings of Swedish covered bonds to avoid large falls in value. This type of herd behaviour could create very negative price fluctuations on the bond market and perhaps even disrupt the functioning of the market.

The stress tests carried out by both the Riksbank and other analysts indicate that the Swedish banks would be able to cope with a large fall in housing prices without the earmarked collateral declining significantly. But regardless of this, we can be sure that the uncertainty regarding the covered bonds would increase if housing prices were falling and it is always international confidence in the Swedish housing market that is important here. However, it is difficult to predict at what loan-to-value ratio the Swedish covered bonds would begin to be perceived as less safe by the market. Perceptions of what is acceptable may suddenly change.

The fact that around one third of all Swedish covered bonds are owned by foreign investors is both an opportunity and a risk. The opportunity to spread funding has been positive, at the same time as we have previously seen that foreign investors tend to be the first to sell their holdings in times of unease, and that this can start a sales spiral. We saw this type of selling behaviour in 2007, for instance, when unease on the financial markets increased and the Swedish banks' exposure to the Baltic countries made investors want to sell the Swedish banks' covered bonds, which were perceived as high risk.[5] Investors then sought safer assets, such as government securities. During the second half of 2007, foreign investors reduced their holdings of Swedish covered bonds by as much as a quarter, from SEK 450 billion to SEK 330 billion.[6] It was primarily investors with a short-term investment strategy who withdrew, which meant that bond yields rose.

With the exception of the acute global financial crisis, however, the market for covered bonds has functioned well. Foreign investors' interest in Swedish covered bonds is currently high, which is evident in the low yield levels. But the more the banks become dependent on a particular source of funding, the more vulnerable they become if this market were to suffer problems.

High indebtedness makes households more sensitive

I have now talked at length about how the banks have been able to fund the large volume of mortgages and what stability risks this funding model entails. But in this context one must also take into account the reason for the increase in demand for mortgages and how this affects households.

There are several factors that can explain why this demand has increased. Higher incomes, low interest rates and rising housing prices are usually mentioned in this context. But credit terms have also changed, which has also affected how much a household can afford to borrow. The banks can now determine the terms and purposes of their loans themselves. At the beginning of the 2000s, many of the banks gradually abolished the requirement that households should amortise their loans. For the banks this was a means of taking larger market shares, and for the households it was a means of borrowing more. The banks also accepted lower down payments than before. In some cases, a household could take on a loan that corresponded to the full value of the housing. As a result, the loan-to-value ratio of mortgages today is higher than before and more loans are interest-only loans. Households have also become more sensitive to changes, partly because they have larger debts than before, and partly because they have taken the loans at variable interest rates. This means

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[5] See M, Sandström, D, Forsman, J, Stenkula von Rosen and J, Fager Wettergren (2013), The market for Swedish covered bonds and links to financial stability, *Economic Review*, 2013:2. Sveriges Riksbank.

[6] See L, Marklund (2014), Consequences of an increased loan-to-value ratio for the funding of mortgages with covered bonds, *The analysis group's memorandums on household indebtedness*, No. 7, Sveriges Riksbank. www.riksbank.se.

that higher interest rates could have an effect on the household's finances. A further reason for concern is that households' expectations of future mortgage rates are much lower than the Riksbank's. This could mean that households do not have sufficient scope in their budgets for higher interest rates.

A study based on data from the end of the 1990s and up to 2012 shows that households have acted rationally and that it has been financially beneficial for them not to amortise their loans.[7] It has been more profitable to instead invest their savings in financial assets, such as equity funds and fixed-income funds. This is because the return on these types of fund was high during this period, at the same time as mortgage rates were low and housing prices rose, with the exception of shorter periods of time. But although it has been a rational decision not to amortise the loans, I also believe that these conditions have laid the foundations for a new type of behaviour among households. It has quite simply become more common not to amortise. I am worried that households do not realise that the factors that previously justified a high level of indebtedness may change and that what was a rational behaviour before, may not be so in the coming period. Mortgage rates and the return on the equity market and mortgage market are not constant over time; they change. One conclusion of the results of this study is that it is important to create the right incentives via, for instance, the tax system.

The current situation has advantages and disadvantages

I have now painted a picture of how we arrived at our current situation, with a global and complex financial system and high level of household indebtedness.

There is no doubt that the financial system we have now has created considerable welfare gains. Households have been able to invest their savings in mutual funds instead of traditional savings accounts and have in this way been able to spread the risk in their saving and thus gain a higher return. For the banks, the greater degree of market funding has similarly entailed greater opportunity to spread risk between different funding sources. The possibility to obtain funding on the international capital markets has also meant that access to capital has increased and that the banks have thus been able to fund Swedish mortgages more easily and more cheaply. This in turn has meant that a larger number of households have been able to borrow and probably also at a lower interest rate than would otherwise have been the case.

However, the condition for these welfare gains is that there has been considerable confidence in the Swedish state, Swedish banks and the Swedish housing and mortgage markets. Today a large percentage of the market agents investing in Swedish bonds are outside of Sweden. This means that the Swedish financial system is also dependent on how other countries assess the Swedish mortgage and housing markets. It is important that these markets function well so that we can continue to enjoy a high level of confidence on the financial markets. We therefore have a major responsibility to ensure that the vulnerabilities are limited and that confidence remains strong. This is particularly important given the weaknesses that have emerged as a result of the structure of the financial system. The good access to capital and the large increase in mortgages has also meant that the Swedish banking system has grown, and become one of the largest banking systems in Europe. Moreover, the Swedish banking system consists of a few large banks that are closely interlinked. This means that problems at one bank can easily spread to other banks. All this means that the costs to society could be substantial if we were to suffer a financial crisis.

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[7] See T, Jansson (2014), Households' amortisation decisions, *The analysis group's memorandums on household indebtedness*, No. 4, Sveriges Riksbank. www.riksbank.se.

How do we attain a better balance?

As I said at the start, developments in the real economy and developments on the financial markets are interlinked and problems with financial stability thus risk having a negative effect on growth in the real economy. Problems on the housing and mortgage markets thus risk intensifying an economic slowdown by means of the financial markets and resulting in rising unemployment. As such a situation would affect demand in the economy, and thereby monetary policy, we cannot close our eyes to the risks linked to high household indebtedness. This is the case even though the Riksbank has limited opportunities to do anything about the underlying factors that are pushing up household debt.

Many people believe that macroprudential policy, which is now becoming established in Sweden, will resolve the problems of high household indebtedness all on its own. I do not think it is that simple. I believe that macroprudential policy is at present only able to alleviate the problems by increasing the banks' resilience to these risks and hopefully also dampening the indebtedness to some extent.

What do we need to do to obtain a better balance in the long run and to attain a development that is sustainable in the long run? I believe that we need input from several areas.

In recent years, a number of measures have been taken to dampen household indebtedness. For instance, Finansinspektionen (the Swedish Financial Supervisory Authority) has introduced a mortgage ceiling that limits how much a household can borrow in relation to the value of the property. Moreover, Finansinspektionen is working on introducing an "amortisation culture", that is, an environment that encourages more households to amortise their loans. The Swedish Bankers Association also recommends that borrowers should amortise their loans. Finansinspektionen has also raised the risk weights on mortgages, which means that the banks have to hold more capital when they issue mortgages.

We could perhaps also consider whether it is possible to create financial incentives for households to reduce their indebtedness, for instance, via the tax system. However, such solutions are beyond the mandate of the Riksbank. Regardless of what one decides to do, I believe it is very important to make households aware of the risks a high level of indebtedness may entail for their own finances. As I said earlier, there is a risk that many households are taking it for granted that the economic conditions that have prevailed in recent years will continue to apply.

But it is not only households' increased propensity to take on debt that has caused our current situation. If we look back, we can see that the rise in household indebtedness has gone hand in hand with housing prices. One important explanation for the rising housing prices is that the supply of new housing has been inadequate. Compared with many other countries, construction of new housing in Sweden has been very low. There are several factors that are usually highlighted as explanations for this structural problem: high costs for land and construction, the current legislation on planning, construction and the environment that makes strict demands regarding the type of housing that can be built, and rent regulations. I do not intend to go into this in depth now, but would like to note that structural measures are required in the housing market, which will contribute to an increase in housing and reduce the lock-in effect. However, such measures are beyond the mandate of the Riksbank.

We should perhaps also reflect on the banks' funding of mortgages, to create a better balance in funding sources and thus better stability. The banks' issues of covered bonds to fund housing have been successful and led to good access to funding and lower funding costs, and ultimately to lower mortgage rates. But one should also be aware that as covered bonds have become so common, we have also built vulnerabilities into the banking system: the dependence on the market for covered bonds functioning properly and the risk that the banks' balance sheets are too highly mortgaged limits the scope to take action in a crisis situation. An excessive share of encumbered assets risks putting the banks' other investors at a disadvantage, which can mean they become more volatile in times of financial stress. A study carried out a few years ago found that all of the four major Swedish banks were among the ten banks in Europe with the highest percentage of encumbered assets.[8] After the financial crisis, we can also see that Swedish banks are mortgaging more of their assets than before.

The matching between lending and funding may also comprise a risk, both with regard to maturity and currency. In Sweden, the matching between maturities is relatively poor.[9] I therefore take a positive view of the plans to introduce new rules to improve matching between maturities for lending and funding. We should be able to create more stability with longer maturities for the banks' funding.

I said at the start that I would keep to the stability and systemic-risk perspective, and have therefore not discussed the level of household indebtedness or the relationship to household assets. This would require a speech that was twice as long! My message is that household indebtedness is at a high level and that we have constructed a housing funding model that has made us sensitive to shocks. We need to have firmly established confidence in the Swedish housing market and the marker for covered bonds from both Swedish and foreign financiers, to ensure that our model functions properly.

I am well aware that the risks linked to household indebtedness and the housing market entail very complex questions. I also know that rapid and drastic changes risk leading to severe and dramatic adjustments of debts and housing prices. Naturally, we wish to avoid this. But at the same time, I think it is important to begin to take action. In the long run, it is no sustainable for debts to continue increasing at the same pace as today.

So why does the Riksbank care about household indebtedness? The Riksbank is concerned about household indebtedness partly because international confidence in the Swedish housing and mortgage markets are necessary conditions for our financial system to function smoothly. Financial developments in turn are linked to developments in the real economy. The indebtedness of Swedish households can thus affect the Riksbank's conditions to carry out its statutory tasks, price stability and financial stability. It is therefore important that the Riksbank continues to follow developments, analyses and highlights risks linked to household indebtedness.

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8 See Barclays 2012. (Over-promising? Encumbrance at European Banks, *Barclays Capital Equity Research.*

9 See Financial Stability Report 2013:2, Sveriges Riksbank.