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We start with a brief overview of the actual capital structure in banks. We then proceed with a detailed and structured discussion of why banks prefer debt as compared to equity. The benefits of debt are used to identify and quantify the effects of the capital regulations on banks.

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■ The role of the banking system in financial crises – a comparison between the crisis in Asia and the crisis in the Baltic countries

ELLEN BERNHARDTSON AND JILL BILLBORN¹

Ellen Bernhardtson and Jill Billborn are economists at the Riksbank's Financial Stability Department

The bankruptcy of the respected investment bank Lehman Brothers in September 2008 set off a wave of distrust between financial players that quickly spread around the world. Uncertainty about the creditworthiness of borrowers increased rapidly and the supply of credit dwindled. This resulted in a widespread economic downturn. One region that was hit particularly hard was Central and Eastern Europe, especially the Baltic countries. Today, almost two years later, the economies have begun to stabilise after major falls in GDP. The recovery has begun but is expected to go slowly, and many challenges still remain.

In many respects, events in the Baltic countries from the point when they joined the EU in 2004 to the start of the global financial crisis in 2008 are reminiscent of the events in several Asian countries that culminated in the Asian crisis of the late 1990s. In both of these regions, countries went through a transition from regulated economies to market economies in which the task of monetary policy became to maintain a fixed exchange rate. Both regions were also hit by a severe crisis after a long period of high economic growth, strong credit expansion, prolonged current account deficits and dramatic increases in property prices. Another common factor was that much of the capital came from abroad. Initially, this development was considered to be justified as both of the regions were expected to catch up with more developed countries. With hindsight, however, it is possible to see several signs that over-optimism took over.

¹ We would particularly like to thank Martin W Johansson, Kerstin Mitlid and Staffan Viotti for their valuable comments.

While there are many similarities between the regions, there are also major differences. One such difference is the banking system, especially with regard to ownership. In Asia, most of the lending was conducted by domestic banks which in turn funded their operations by borrowing from foreign banks. In the Baltic countries, the banking system is largely foreign-owned. The foreign banks may have contributed to the imbalances that were built up, but they may also have helped to slow down the downturn once the crisis was a fact. We will discuss this in this article. Foreign ownership may also have made it possible for the Baltic countries to opt for internal devaluation in an attempt to restore competitiveness rather than adjusting their exchange rates. Internal devaluation entails adjusting the real exchange rate by reducing wages and other components of public expenditure. However, as an internal devaluation is a long process it is also conceivable that it would lead to a more prolonged recovery.

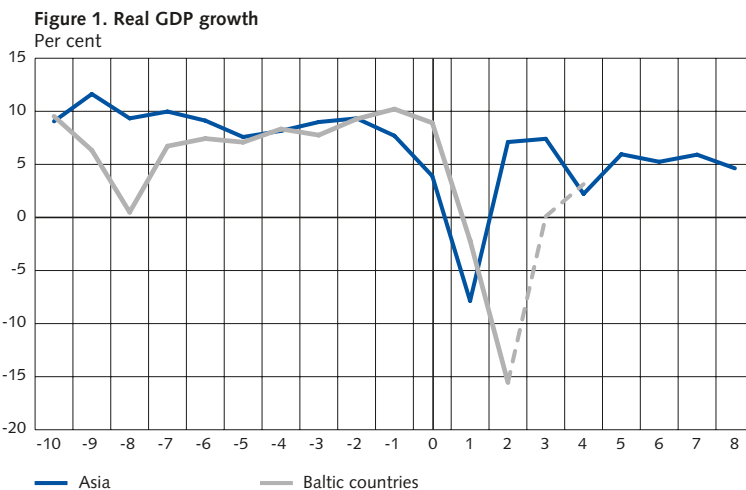
First, we describe developments in the two regions, beginning with the periods of growth. This is followed by a description of what triggered the crises and the consequences of the crises. We conclude with a discussion of the effects of the differences in the banking systems in the two regions. When speaking of the Asian emerging economies (“Asia”) in the 1990s we mean Malaysia, South Korea and Thailand. The Philippines and Indonesia are often included in this group but are excluded here as these countries are less developed than the Baltic countries and would therefore make it more difficult to compare the regions. The Baltic countries, that is Estonia, Latvia and Lithuania are often referred to as though they formed a single “Baltic region” despite the fact that they are three countries with their own specific characteristics and conditions. However, the economic upturn and the subsequent downturn in the three countries share many similarities, and the same is true of the other factors we will discuss here. Where relevant, we will discuss the countries separately.

In the graphs, the point marking the outbreak of the crisis, $t = 0$, has been set at 1997 for Asia and at 2007 for the Baltic countries. The reason for this is to make it easier for the reader to compare developments in the two regions even though there is a gap of 10 years between the two crises. It should be pointed out that the data is not of the highest quality in many cases and that data is not entirely comparable between the countries. The results should therefore be interpreted with caution.

Strong growth in the years before the crisis

Following the dissolution of the Soviet Union in the early 1990s, the Baltic countries underwent a transition from planned economies to market

economies. The financial markets were deregulated and economic growth picked up, although there was a temporary slowdown in connection with the Russian crisis in the late 1990s.² However, it was not until the Baltic countries joined the EU in 2004 and tied their currencies to the euro through ERM II in the following year, that growth really accelerated. Membership of the EU marked the start of a new era of confidence in the future with access to a larger market and the free movement of labour and capital. As a result, there was a rapid increase in the flow of capital to the Baltic countries. Domestic consumption soared from previously depressed levels, as did investment in housing. The rate of GDP growth was very high for a couple of years, at times reaching double figures, while real wages increased and living standards improved (see Figures 1 and 2). GDP per capita doubled during the 10 years that preceded the crisis. .

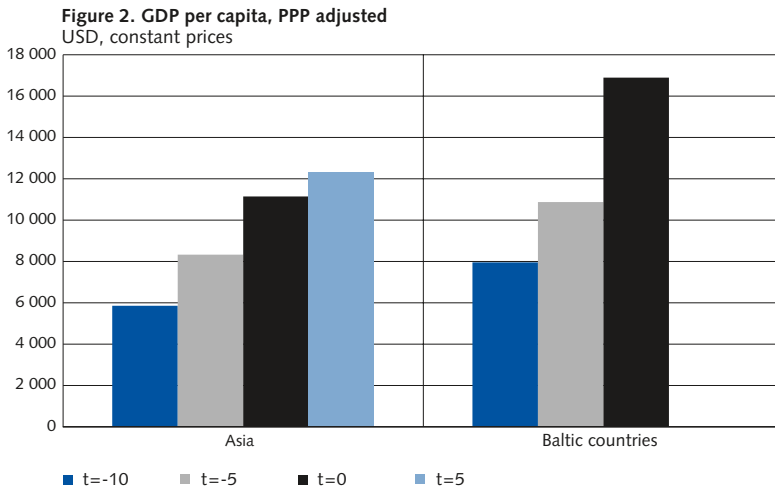


Note. Unweighted mean value.
 Note. For Asia t=0 is 1997, for the Baltic countries t=0 is 2007.
 Note. Broken lines are forecasts from Consensus Forecast, September 2010.
 Sources: IMF and Consensus Economics (Inc).

A transition similar to the one in the Baltic countries began in the late 1970s in a number of Asian countries, which during this period developed from agricultural economies into well-integrated market economies. In order to generate confidence in their currencies, most of these countries chose to tie their currencies to the US dollar, which in turn increased access to capital. Annual GDP growth reached approximately eight per

² In August 1998, the Russian stock market, money market and foreign exchange market collapsed. At the same time, Russia suspended payments on certain government securities. The crisis was triggered by a loss of confidence in the wake of the Asian crisis, but the underlying problems stemmed from the inability to manage domestic finances, political crises and an overvalued exchange rate. The Russian banking system collapsed in connection with the crisis and the country was excluded from international capital markets.

cent for several years in a row and, as in the Baltic countries, this led to a tangible increase in living standards (see Figures 1 and 2).

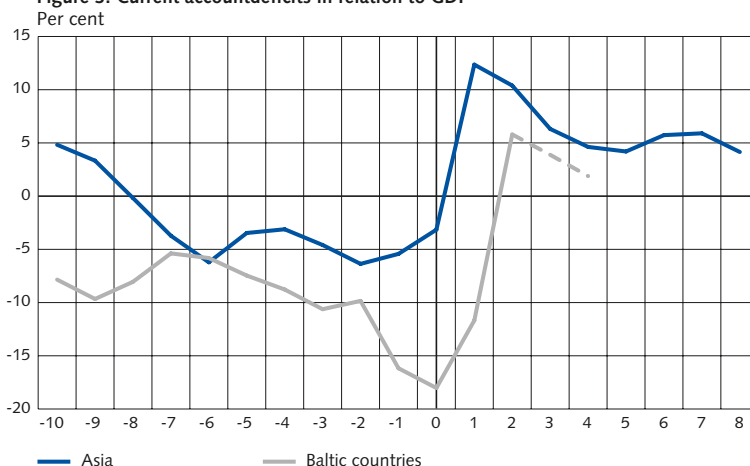


Note. Unweighted mean value.
Note. For Asia t=0 is 1997, for the Baltic countries t=0 is 2007.
Source: The World Bank.

The rapid economic development in the two regions initially followed the pattern that one can expect of transition economies striving to catch up with mature economies. The expectation that incomes would be permanently higher in the future encouraged loan-financed consumption. At the same time, low wages and high marginal yields attracted foreign capital, which then funded the development of the economies. Capital inflows were also facilitated by high confidence in the fixed exchange rates as they appeared to eliminate currency risk. This in turn entailed lower risk premiums and lower loan costs. At the same time, the high rates of growth led to unrealistic expectations of ongoing growth, which also contributed to the substantial capital inflows.

However, the net inflows of capital to the Baltic countries were larger in relation to GDP than they were in the Asian countries. These substantial capital inflows were reflected in the build-up of large current account deficits in the regions, although the average deficit was much larger in the Baltic countries than in Asia (see Figure 3). At this time, the Baltic countries had the largest deficits in Europe. This was not considered remarkable, however, given that current account deficits in growth years may be justified by the countries' attempts to catch up with mature economies.

Figure 3. Current account deficits in relation to GDP



Note. Capital inflows are not included in the current account. Income and expenditure relating to investments are, however, included.

Note. Unweighted mean value.

Note. For Asia $t=0$ is 1997, for the Baltic countries $t=0$ is 2007.

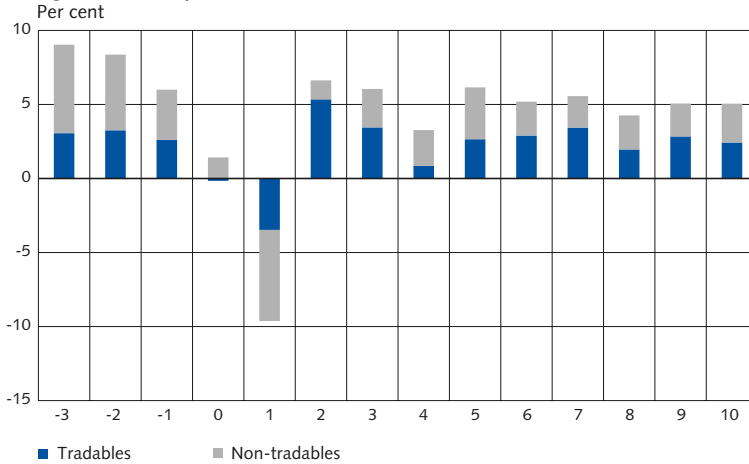
Note. Broken lines are forecasts from Consensus Forecast, September 2010.

Sources: IMF and Consensus Economics (Inc).

One problem, however, was that the strong growth that followed in the wake of the capital inflows was driven by investment in property and by consumption. A large part of the capital was thus channelled to non-tradables instead of to building up sustainable production capacity (see Figures 4 and 5). Development was also more extreme in this respect in the Baltic countries than in Asia. In Latvia, growth in non-tradables accounted for 77 to 95 per cent of total growth prior to the crisis. In Estonia and Lithuania the corresponding figure was 65 to 85 per cent. As a result, property and land prices increased dramatically during the growth years and then plummeted during the crisis.³ In Malaysia, the index for property-related shares increased by 330 per cent between 1990 and 1993, while the corresponding figure for Thailand was 500 per cent. In Estonia and Lithuania, property prices increased by approximately 120 per cent from 2005 to early 2007, which is when property prices peaked.

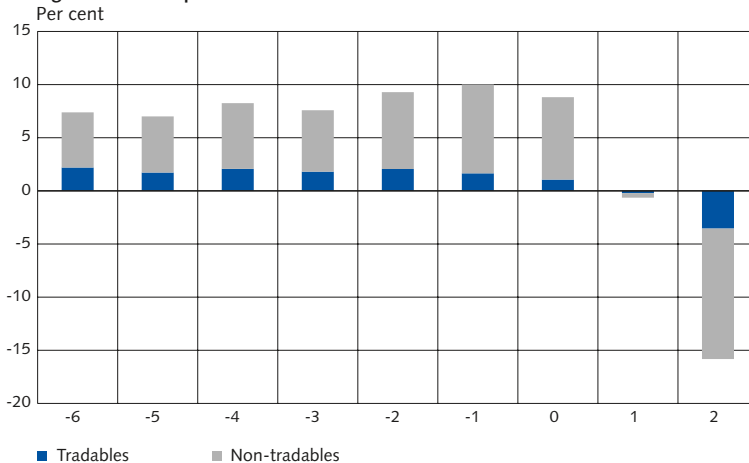
³ See Berg (1999) and Sveriges Riksbank (2007).

Figure 3. Growth per tradables and non-tradables in Asia



Note. Unweighted mean value.
 Note. Data unavailable for Malaysia.
 Note. For Asia t=0 in 1977.
 Source: Reuters EcoWin.

Figure 5. Growth per tradables and non-tradables in the Baltic countries is 1997

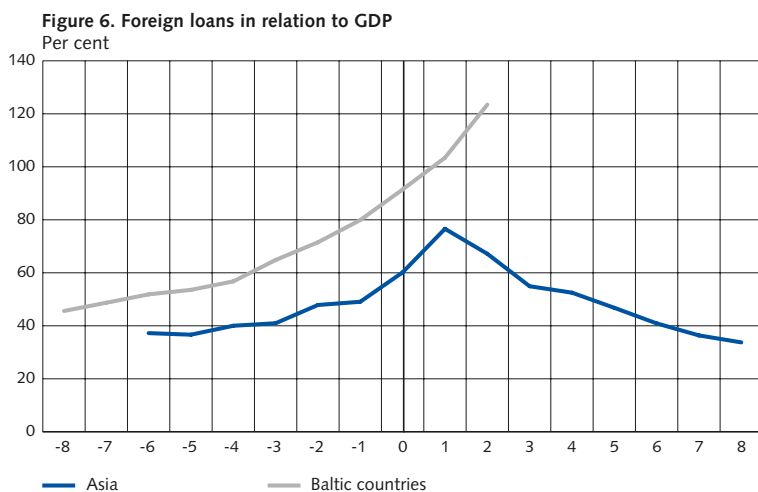


Note. Unweighted mean value.
 Note. For the Baltic countries t=0 is 2007.
 Source: Reuters EcoWin.

In the Baltic countries, an expansionary monetary policy also helped to stimulate the economy. Wages in the public sector were increased at the same time as the general tax burden was eased. Budget deficits increased in Latvia and Lithuania, despite the high level of growth. Estonia was an exception, however, as the fiscal surplus was saved in a so-called stability fund. This reduced the pressure on public finances when the crisis began.

Initially, the current account deficits in the Baltic countries were mainly funded by direct foreign investment, but in later years bank loans,

primarily from Nordic banks, predominated.⁴ This is reflected in the fact that foreign loans increased in relation to GDP (see Figure 6).



Nore. Unweighted mean value (not for South Korea)
 Note. For Asia t=0 is 1997, for the Baltic countries t=0 is 2007.
 Sources: Reuters EcoWin, Eurostat and IMF.

Lending to households and companies increased very rapidly – for example, borrowing by Latvian households increased by an average of 80 per cent in 2006. High inflation in combination with low interest rates meant that real interest rates were negative.

Even though lending increased from a low level, it did not take long before private debts in relation to GDP reached levels not far below the level of indebtedness in mature economies such as Sweden. A large part of the lending was also in euro – in Latvia, over 90 per cent of the loan stock was in foreign currencies.

In Asia too, there was a dramatic increase in foreign loans in relation to GDP. However, in contrast to the situation in the Baltic countries, the involvement of foreign banks was limited and the borrowing from abroad was instead channelled through domestic banks. Some of the capital inflows also went directly to domestic companies.⁵ It was also primarily the companies that increased their borrowing, while household borrowing increased to a lesser extent. The lending to companies was marked by great optimism, which to a certain extent may have been because the bank was often part of a group and was given the task of supplying other compa-

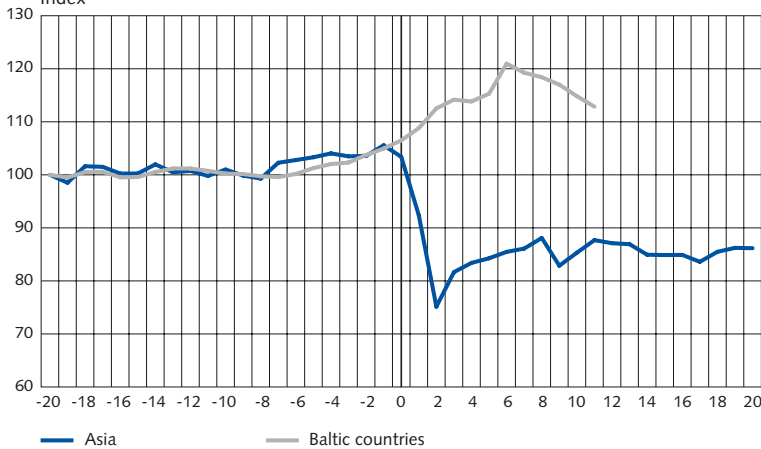
⁴ See Sveriges Riksbank, (2007).

⁵ Estimates in Radelet and Sachs (1998) show that at the end of 1996, the banks in South Korea accounted for 66 per cent of the external debts while the companies accounted for 28 per cent. In Malaysia, the banks accounted for 29 per cent and the companies for 62 per cent. In Thailand, the corresponding figures were 37 per cent and 60 per cent.

nies in the group with loans – a system that increased the risk of subjective judgments and *moral hazard*. Most of the lending was in domestic currency and, as few banks hedged themselves from currency risk, the banks or the companies that had borrowed directly from abroad ended up carrying major risks. In Thailand, the banks were required to protect themselves against currency risk, but they largely did this by providing loans in foreign currencies to domestic companies, thus transferring the currency risk to the corporate sector.⁶

Rapid economic development and the large capital inflows meant that the currencies in both regions appreciated in real terms. The average appreciation in Asia was actually moderate compared to previous experience in transition economies, but the level varied greatly from country to country. The currencies of Malaysia, Thailand and South Korea were tied to the US dollar. When the dollar appreciated significantly against the yen in 1995, the competitiveness of the Asian countries was weakened.⁷ In the Baltic countries, real exchange rates appreciated soon after the currencies were tied to the euro and competitiveness deteriorated (see Figure 7). This development was primarily driven by high wage increases and rapid price increases. In Latvia, for example, nominal wages increased by 30 per cent in the year preceding the crisis, while inflation reached almost 18 per cent. One result of this was that admission to the EMU was postponed as the countries were not complying with the price stability requirement in the Treaty of Maastricht.

Figure 7. Real effective exchange rates
Index



Note. Unweighted mean value.
Note. Quarterly data. 100 at t = -12, Q3 1994 for Asia and Q4 2004 for the Baltic countries.
Source: Bank for International Settlements (BIS).

⁶ See Eichengreen and Hausmann (1999).
⁷ See Corsetti et al. (1998).

Severe economic crisis

ASIA

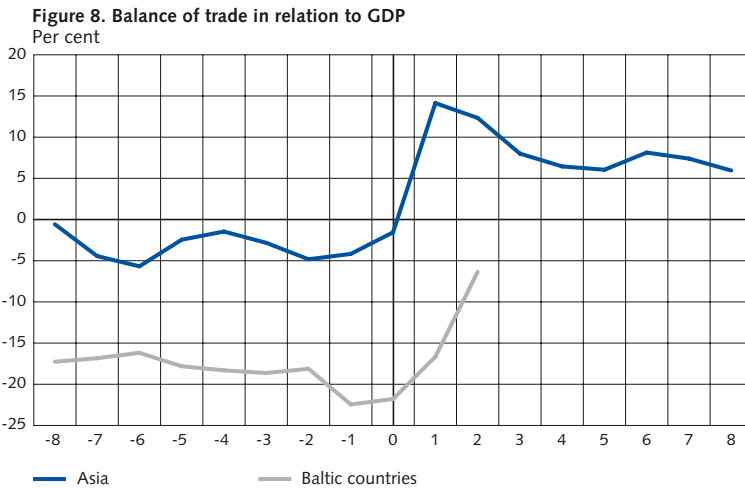
The first signs that the boom in Asia was coming to a close appeared in 1995 and 1996. At the same time, the macroeconomic imbalances in the region became increasingly apparent. The appreciation of the dollar undermined the competitiveness of the countries, as did China's advances on the export market. When growth declined at the same time, many companies in the region experienced problems. The companies also often had substantial loans and thus little chance of surviving a period of reduced profitability. In South Korea, several of the large conglomerates, so called chaebols, went bankrupt. In Thailand and Malaysia it was instead the previously thriving property sector that suffered extensive bankruptcies. The problems in the property sector had a direct impact on the banks.

As a result of these events, people began to increasingly question how much longer growth could continue in the Asian countries and the previous wave of capital inflows began to dry up. The summer of 1996 saw the first attacks on the Thai currency, the baht.⁸ At the same time as the Thai central bank defended the country's fixed exchange rate, it was forced to pump money into the country's stricken banks. It also became difficult for the central bank to defend the exchange rate using the interest rate – a higher interest rate made the situation worse for companies and banks. In early July 1997, the Thai central bank gave up and abandoned the fixed exchange rate. Malaysia was not as dependent on foreign capital as other Asian countries, but when Thailand abandoned its fixed exchange rate, confidence in the exchange-rate regimes of the other countries declined and the pressure increased. Malaysia's central bank abandoned its fixed exchange rate regime shortly after Thailand did so. In mid-October, Taiwan devalued its currency, which put further pressure on the South Korean currency. South Korea had used a large part of its reserves to support bank branches abroad that were experiencing liquidity problems. Following several attempts to defend the exchange rate, South Korea allowed the currency to float in November 1997. The devaluations marked the fact that the crisis had really arrived – capital inflows to the countries dried up completely when foreign banks decided not to renew their loans in the region. The domestic banks thus suffered an acute liquidity crisis. The devaluations also triggered a spiral in which foreign debt increased, banks and companies collapsed, asset prices plummeted and interest rates increased as a result of the reduced supply of capital. In some cases, domestic savers also withdrew their money from the banks.

⁸ See Kaminsky and Schmukler (1999).

The crisis had a huge impact on the financial sector in the respective countries, as did the rescue measures taken by the various governments. In both Thailand and South Korea, government efforts focused on closing down insolvent banks. In Thailand, 56 of a total of 91 financial institutions were forced into bankruptcy.⁹ At the same time, what remained of the financial system received substantial capital injections from the State. South Korea and Thailand received support from the IMF. The costs of these rescue measures seriously undermined public finances.

By the end of 1997, the currencies in the region had depreciated heavily. Although the weak currencies created problems for many banks and companies, they also boosted the recovery of the countries. In Asia, deficits quickly became substantial surpluses. Already one year after the outbreak of the crisis, the average current account surplus was more than 10 per cent of GDP. In contrast to the situation in the Baltic countries, the recovery in Asia took place at a time when the rest of the global economy was strong. There was a sharp increase in exports as a percentage of GDP, while imports remained at approximately the same level. After only two years, GDP had recovered to the level that prevailed at the start of the crisis and the balance of trade was in surplus (see Figure 8).



Note. Unweighted mean value.
Note. For Asia t=0 is 1997, for Baltic countries t=0 is 2007.
Source: Reuters EcoWin.

THE BALTIC COUNTRIES

In the Baltic countries, the banks began to gradually restrict their lending in 2007. This was one of the factors that led to a decline in domestic

⁹ See Corsetti et al. (1998).

demand, and the first signs that economic growth was beginning to slow down appeared in late 2007. However, the economic collapse did not come until almost a year later after Lehman Brothers filed for bankruptcy. The appetite for risk declined all over the world and development in the Baltic countries was increasingly regarded as being unsustainable. When the global economy then went into recession, exports from the Baltic countries also fell. The Baltic countries were thus unable to switch to export-driven growth when domestic demand declined. In 2009, GDP fell by 14 per cent in Estonia, 18 per cent in Latvia and 15 per cent in Lithuania. This represented a fall to the GDP levels of 2005. The entire increase achieved during the period of economic boom was thus cancelled out. Property prices also fell: from the peak in early 2007 to the trough just over two years later, nominal prices fell by between 50 and 70 per cent in the three countries.¹⁰ Nevertheless, the current account soon showed a surplus because imports fell more than exports. However, the trade balance in the Baltic countries is still negative, despite the fact that three years have passed since the downturn in the region began. In Asia, the balance of trade showed a surplus approximately one year after the crisis. Unemployment increased rapidly in all three countries and the credit-worthiness of the borrowers also deteriorated rapidly. The banks' lending declined and their loan losses increased. Major losses and an outflow of foreign deposits led to the largest domestic bank in Latvia, Parex Banka, being taken over by the State. Pressure on the currencies also increased, particularly in Latvia where the central bank was forced to purchase large quantities of lats in order to support the currency. Speculation about whether the country would devalue and the growing budget deficit finally forced the Latvian government to apply for financial support from the International Monetary Fund (IMF) and the EU, which was granted in December 2008.

Instead of writing down the value of the currency, the authorities in all of the three Baltic countries decided to implement internal devaluations, that is to reduce wages and other public expenditure. The intention was to halt the runaway deficits in the national budgets and to restore competitiveness. However, as the currencies were still tied to the euro the countries initially continued to lose competitiveness as the euro was strengthened when investors went looking for more secure investments. At the same time, exports from countries outside the eurozone increased when the currencies depreciated. It was, therefore, not until the second half of 2009 that the internal devaluations began to have the desired effects on the real exchange rates.

¹⁰ Refers to average nominal square-metre prices for apartments. Definitions may vary from country to country and comparisons should therefore be made with caution. Sources: Latvijas Banka and Lietuvos bankas.

The recession in the Baltic countries has now bottomed out and the recovery has begun. Exports have increased again and there are also signs that imports are beginning to recover.

Despite this, however, and despite the many similarities with the situation in the Asian countries, several factors indicate that the recovery will be slower and more prolonged in the Baltic countries.

First, domestic demand is expected to be weak for a long time to come.

Both the households and the companies need to amortise their large debts, which will reduce the scope for consumption and investment.

The internal devaluations will also have a dampening effect on domestic demand. Studies show that in Hong Kong, for example, it took six years before real consumption returned to the level that prevailed before the Asian crisis. Real investment, on the other hand, is still lower than it was before the crisis.¹¹ This may indicate what can be expected in the Baltic countries in the period ahead.

The crisis in the Baltic countries was triggered by the rapid decline in international demand when the global financial crisis began. The fact that the global economy as a whole is in recession is highly unusual, and has not happened in the modern era.¹² In contrast to the situation in Asia, the Baltic countries could thus not rely on strong demand abroad when domestic demand collapsed. Studies also show that recessions that coincide with financial crises, or with recessions in several other countries, tend to be more prolonged.¹³ Crises associated with major falls in property prices also tend to last longer.¹⁴ Although the global economy has begun to improve the recovery is still fragile, partly because the European debt crisis is casting a shadow over the future growth of the eurozone. This is creating uncertainty about the future development of the exports of the Baltic countries. In addition, the Baltic countries have chosen to strengthen their competitiveness by implementing internal devaluations. This has led to a slower adjustment process than in the Asian countries where the substantial currency depreciations immediately strengthened competitiveness and exports.

Another factor that indicates that the recovery in the Baltic countries may take longer than in Asia is that the imbalances in the Baltic countries appear to have been much greater when the crisis began. The current account deficits and the capital inflows from abroad were larger than in Asia. Growth in the Baltic countries was also dominated to an even greater extent by non-tradables.¹⁵ A sustainable, export-led recovery requires investment in the tradables sector.

¹¹ See IMF (2010).

¹² See for example Sveriges Riksbank, (2009a).

¹³ See IMF (2009a).

¹⁴ See IMF (2009b).

¹⁵ National statistics agencies

However, the internal devaluations may facilitate this structural transformation as lower costs may attract foreign companies to once again establish operations in the Baltic countries. Similarly, the fact that Estonia will join the EMU in January 2011 may contribute to this, as the risk of devaluation will then be entirely eliminated.

What role have foreign banks played?

Both crises were preceded by rapid credit growth. In Asia, as mentioned above, foreign banks had only a limited presence before the crisis began. In 1996, foreign banks controlled less than 4 per cent of the assets in Thailand. The corresponding figure in South Korea was 6 per cent. Malaysia was different in this respect in that it permitted foreign banks to have wholly-owned subsidiaries in the country, and the percentage of assets owned by foreign banks was therefore higher than in the other two crisis-afflicted countries at over 22 per cent.¹⁶ The limited presence of foreign banks in Asia was mainly due to a long tradition of strict regulation of the access and operations of foreign banks. Although, under the letter of the law, foreign banks were permitted in certain cases, in reality they were prevented from establishing operations in these countries. In Thailand, for example, no new banks licences for foreign banks had been issued in the 20 years before the outbreak of the crisis. The stock markets and bond markets in the region were also relatively undeveloped, which increased the importance of the domestic banks for the supply of capital. Nevertheless, the foreign banks came to have a major impact on the economies through their lending to domestic banks in the region.

Following the devaluations, confidence in the Asian economies evaporated and the domestic banks found it increasingly difficult to fund their operations. Capital inflows to the region dried up rapidly, and even became negative. It was overwhelmingly loans from foreign banks that dried up, while direct investment, which anyway constituted a very small part of the total capital inflows, was practically unaffected by the crisis (see Figure 6).¹⁷ The already considerable downturn in economic activity was also reinforced by the dramatic fall in the banks' capital as a result of substantial loan losses.

The Asian crisis gave rise to an extensive restructuring of the banking system. One of the consequences of this was an increase in the presence of foreign banks in the region as the authorities sold parts of the domestic banks, or even entire banks, to foreign investors.

In the Baltic countries, the modern commercial banking system began

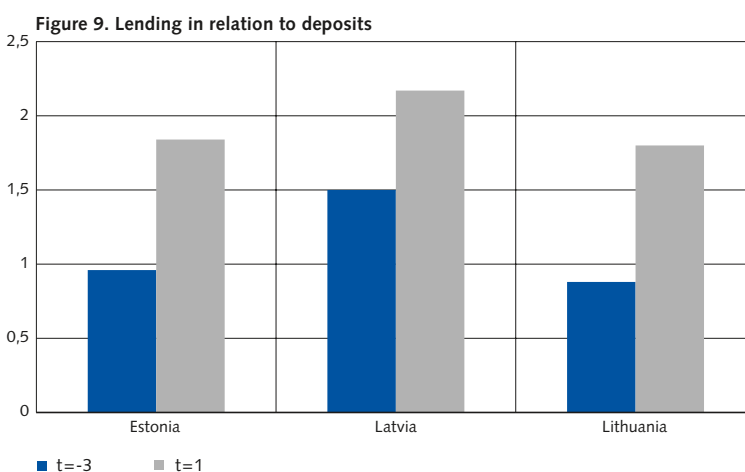
¹⁶ See Montgomery (2003).

¹⁷ See Radelet and Sachs (1998).

to take shape during the structural transformation that took place when the countries became independent in the early 1990s. Domestic banks such as Hansabank and Parex were among the first to set up business at this time. In the later 1990s, the Swedish banks Swedbank and SEB were among the first foreign banks to establish operations on the new market and did so by acquiring holdings in market-leading domestic banks. By means of gradual takeovers, the Swedish banks became majority shareholders in 2005 and the Baltic banks became subsidiaries in the respective bank groups. These subsidiaries also adopted the name of their parent bank as a sign of the Swedish banks' long-term commitment in the Baltic countries. It was around this time that expansion really accelerated in the region and the Baltic subsidiaries accounted for an increasing share of the bank groups' operating profits and lending. This share also continued to increase steadily until the financial crisis began.¹⁸

Today, the Swedish and other Nordic banks dominate banking operations in the Baltic countries to a varying extent. In Estonia, 95 per cent of the lending comes from Nordic banks, of which 80 per cent from Swedish banks. In contrast to the situation of the Asian countries at the time of the crisis there, this means that domestically-owned banks are practically non-existent. In Latvia and Lithuania, foreign banks are not as dominant and the domestic banks have significant market shares.

Initially, the funding of the Swedish subsidiaries in the Baltic countries largely took the form of deposits from the public but, as the demand for loans increased, an increasing share of the lending was funded using loans in euro from the parent banks. The rapid expansion of credit was



Note. Defined as lending to the public in relation to total deposits in the bank sector.
Sources: National central banks.

¹⁸ Nordea also has operations in the Baltic countries but these account for only a small part of the bank's total lending.

reflected by the fact that lending to households and companies increased dramatically in relation to deposits (see Figure 9).

In turn, the parent banks mainly funded their activities by borrowing euros on the international capital markets at very low interest rates. These could then be lent directly to the Baltic subsidiaries. As a result of the fixed exchange rates and the expectations that the countries would soon become members of the EMU, the currency risk was regarded as practically non-existent, which meant that the parent banks probably did not compensate for this. The Baltic subsidiaries were therefore able to access inexpensive funding despite the high risk. Overconfidence in the economies of the Baltic countries also meant that euro rates could be kept low for the customers despite the fact that the borrowers' incomes were in domestic currencies.

In relation to GDP, capital inflows were larger in the Baltic countries than in Asia. This could be seen in the ratio of foreign loans to GDP and in the proportion of short-term foreign loans in relation to the international reserves. However, despite great pressure on the reserves, particularly in Latvia, the central banks managed to maintain the fixed exchange rate.

One reason why foreign loans increased so much in the Baltic region before the crisis may be that the lending was from parent banks to their subsidiaries, which increases the risk of subjective judgments. Furthermore, the explicit objective of the banks was to gain market shares in the region. These could be factors that partly explain why the current account deficits grew so large in the Baltic countries. However, although the high level of lending may have contributed to the severe crisis that subsequently broke out, the presence of foreign banks may also have been a stabilising factor that meant that the fluctuations in capital flows were not as extensive as in Asia.

The Baltic subsidiaries did not suffer a liquidity crisis when the financial crisis began as they were largely able to rely on loans from their parent banks. The exposures of the Swedish parents to their Baltic subsidiaries actually decreased somewhat in connection with the crisis and the subsequent recession. But the parent banks nevertheless continued to supply their subsidiaries with loans to a great extent. Significant remaining exposures to the subsidiaries probably acted as incentives for this, and not extending the loans would have entailed major losses over and above the equity involved. A decision to not extend the loans would also have aggravated the economic downturn. The banks' reputations were at stake: they would probably have had to pay a price in terms of a loss of confidence if they had withdrawn from what was regarded as a domestic market.

The Swedish banks also strengthened the capital base of their subsidiaries, which made it possible to avoid a bank crisis despite substantial loan losses. The fact that government measures were not required to rescue systemically-important banks also meant that there was no need to burden public finances with the costs of an extensive bank crisis, as was the case in Asia. In Latvia, however, the government was forced to capitalise the domestic bank Parex.

The fact that it was possible to secure a large part of the capital inflows meant that the pressure on the Baltic currencies was lower than the pressure on the Asian currencies. Devaluation could therefore be avoided even though the pressure, above all on the Latvian lat, was very high at times. Maintaining the fixed exchange rate was thus in the banks' interests too as debts and loan losses would have increased very rapidly in the event of a devaluation.

Conclusion

Financial crises often follow a similar pattern and are often preceded by similar developments. This is demonstrated not least by the Asian crisis in the late 1990s and the crisis in the Baltic countries 10 years later. One similarity between the two regions was the great dependence on foreign, often short-term capital that was channelled to investment in non-tradables. The capital inflows were supported by fixed exchange rates that generated confidence in the currencies. With hindsight, it can be said that several of the similarities between the regions were signs of imbalances. It is also possible that the major presence of foreign banks contributed to the imbalances becoming much more substantial in the Baltic countries than they did in Asia.

Once the crisis arrived, however, it may be said that the Baltic countries benefited from the predominant position of the foreign banks as the capital fluctuations were not as dramatic as those in Asia. Withdrawing would have led to even greater losses for the banks than had so far been the case. In this respect, the high foreign debt of the Baltic countries did not become a problem to the extent it did in Asia. However, although the subsidiaries did not suffer a shortage of liquidity, the Swedish parent banks were punished for the high loan and devaluation risks in the Baltic countries. Funding costs increased and it became difficult to find funding at longer maturities, above all in foreign currencies. Financial institutions without direct exposures to the Baltic countries were also affected. This meant that Swedish authorities were forced to take measures to ease the funding situation of the banks. The Riksbank supplied the liquidity required and the Swedish National Debt Office introduced a government

guarantee programme for borrowing and a capital injection programme for solvent banks. This made it easier for the Swedish banks to meet their commitments in the Baltic countries which consequently, in contrast to the countries in Asia, were able to avoid a bank and currency crisis. The presence of the Swedish banks thus had a stabilising effect on the Baltic countries but, due to the integrated financial system, financial stability in Sweden was affected instead.

Several lessons can be learned from the crisis in the Baltic countries. One is that there are risks associated with a high level of borrowing in foreign currencies when the borrowers' incomes are mainly in domestic currencies. History is full of examples where this has led to major loan losses at banks in connection with devaluation.¹⁹ This is also demonstrated by events during the Asian crisis.

In the Baltic countries, this major credit risk became in turn a funding risk for the foreign parent banks and, ultimately, a cost for the authorities in the home countries of the parent banks when these banks found it difficult to borrow on the capital markets.

An important lesson to be drawn from the comparison between the crises is that the ownership structure in the banking system may be of decisive importance. If the countries in Asia had experienced such a severe economic downturn as the Baltic countries, the capital inflows would probably have dried up completely. The ownership structure in the Baltic countries led to a different outcome in which the capital stayed in the region, thus acting as a shock absorber when the economies crashed. It also made it possible for the authorities to opt for internal devaluation rather than devaluation of the exchange rate, although at the cost of a slower recovery.

¹⁹ See for example Sveriges Riksbank (2009b).

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■ Why banks prefer leverage?

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Introduction

The aim of this article is to study the implications of the new banking regulations for banks. We restrict our analysis to capital regulation. Even though the new banking regulations entail much more than updated capital regulation, increasing the quality and amount of equity in banks lies at the heart of the new regulations.

We start with a brief overview of the actual capital structure in banks. We then proceed with a detailed and structured discussion of why banks prefer debt as compared to equity. The benefits of debt are used to identify and quantify the effects of the capital regulation on banks.

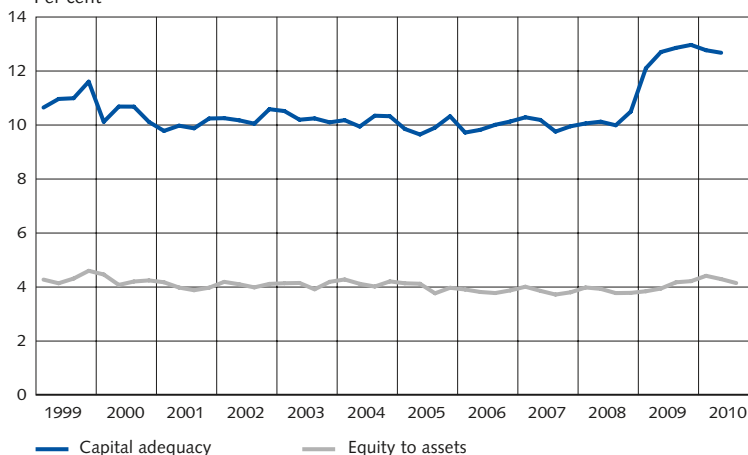
Capital structure in the banking sector

Before turning to the implications of the new capital regulation for banks, it may be useful to take a quick look at the capital structure in banks. Banks have historically had a high share of leverage in their capital structure. On average, Swedish banks have had equity-to-asset ratios close to 4% (see Figure 1).² This means that a bank loan of 100 units has on average been financed by 96 units of debt and 4 units of equity, implying a ratio of debt to capital equal to 24. Note also that the capital adequacy ratio, defined as the regulatory capital divided by risk-weighted assets, has been around 10%, that is 2 percentage points higher than the regulatory minimum. Without this voluntary buffer, the leverage ratio could have been even higher.

¹ Contact address: reimo.juks@riksbank.se. The author would like to thank Ferre De Graeve, Göran Lind, Kerstin Miltid, Olof Sandstedt, Albina Soultanaeva and Karl Walentin for helpful comments. The author is especially thankful to Staffan Viotti for his support and advice on the structure of the article.

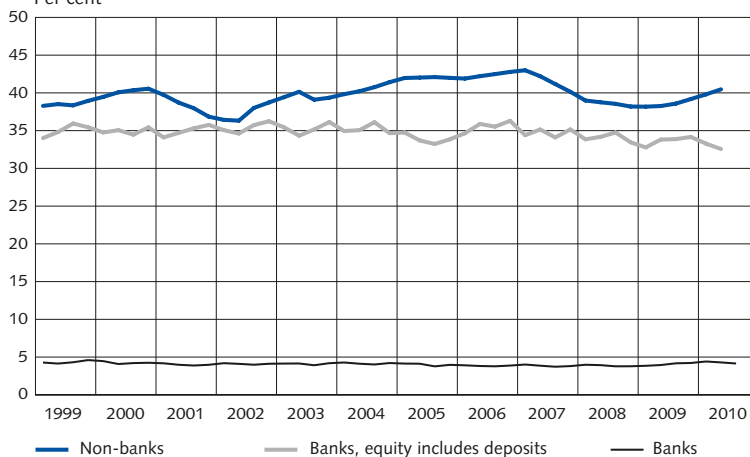
² Swedish banks are rather representative even for international banks. This ratio is similar for UK and US banks (see Haldane et al. 2009). Note also that the share of equity financing in banks have not always been that low. For instance, in 1880s banks in the US and UK had capital ratios equal to 24% and 16%, respectively (see Haldane et al. 2009).

Figure 1. Capital adequacy and equity-to-asset ratios in Swedish banks
Per cent



An even more suggestive picture appears when one compares capital structures in banks with those in non-banks (see Figure 2). On average, non-banks have equity-to-capital ratios close to 40%. This means that banks use a leverage ratio that is 16 times the one used in non-banks. One might argue that the leverage ratio in banks is high due to deposits. This is, however, incorrect: even after excluding deposits from the amount of debt, banks tend to be more leveraged than non-banks.

Figure 2. Equity-to-asset ratio in Swedish banks compared to non-banks
Per cent



Benefits of debt

Given the high leverage ratios in banks, it is natural to ask what the benefits of leverage are compared to equity financing in banks. Below we first

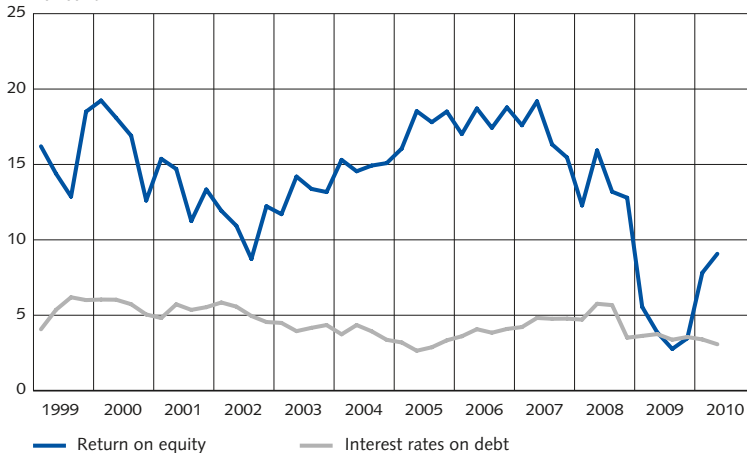
list and discuss the popular arguments made in favour of debt as compared to equity financing in banks. We then proceed with more structured arguments.

DEBT IS CHEAPER THAN EQUITY

A popular argument raised in favour of debt is that debt is cheaper than equity: the interest rates on debt are usually much lower than the required rates of return on equity. When one looks at the historical data, the cost of equity (measured in ROE) has been on average 9-10 percentage points higher than the cost of debt for the Swedish banks (see Figure 3).

A major problem with this argument is that it completely ignores the reasons why some rates of return are higher than others. When debt holders calculate their required rates of return, they take into account risks related to their investments. So do the equity holders. Therefore, the only reason why the equity holders demand a higher rate of return is because their claim is riskier than that of the debt holders.

Figure 3. Cost of equity and debt for Swedish banks
Per cent



But what is it that makes equity holders bear more risk compared to debt holders? To understand this, it is useful to think about equity holders as well as debt holders as a group of investors who together own an entity. This group of investors is entitled to the total cash flow that is generated by the entity. The risk that this group of investors must bear is determined by the magnitude and nature of this total cash flow. Entities that generate a low and uncertain cash flow are clearly more risky and hence less valuable than entities that generate a high and certain cash flow.

Importantly, this total level of risk has nothing to do with the way investors, as a group, share this risk among each other. If the entire entity were only financed by one investor, the total risk would be borne solely by that investor and the required rate of return would reflect the total risk. If the entire entity were financed by more than one investor, the total risk would still be the same, but it would be shared among many investors. The rules that determine how this risk is shared among various investors also determine the riskiness of every individual claim.

In the light of this discussion it is clear that the capital structure only determines how the total risk is borne by different claimants. Debt is a claim that is designed so that in general it assumes a very limited share of the total risk compared to equity. Thus, as banks increase the share of relatively safe leverage in their capital structure, they effectively shift a larger fraction of total risk to the equity holders. Even if a bank uses more “cheaper” forms of financing, their total financing costs will not decrease because the total risk has not changed.

The reasoning above is a simplified version of a very famous theorem in finance, called the Modigliani-Miller theorem. For more detailed information about this theorem, please see the Appendix.

DEBT HELPS TO MAXIMIZE ROE

Another popular argument raised in favour of debt stipulates that debt as opposed to equity is an essential part of the banks’ business because it helps to increase shareholder value via a higher return on equity, ROE.

This argument has two parts: (i) the relationship between leverage and ROE, and (ii) the relationship between ROE and shareholder value.

The first part of the claim is true only under certain special circumstances. ROE can be rewritten in terms of return on assets, ROA³:

$$ROE = \frac{ROA \cdot A - r \cdot D}{E} = ROA + \frac{D}{E} (ROA - r)$$

From this equation it follows that an increase in leverage ratio⁴, D/E , can increase ROE only if ROA is higher than the after-tax interest rate on debt, r . Therefore, higher leverage increases ROE in good times, but decreases ROE in bad times.

Of course, banks expect the return on assets to be on average higher than their interest rate on debt. Thus, it is true that a higher leverage ratio leads to a higher *expected* ROE. This leads to the second part of the

³ Return on assets, ROA, is defined so that it does not depend on the capital structure. This means the net income ignores the interest payments. This way of presenting ROE is taken from Admati et al. 2010.

⁴ Note that the amount of total assets is kept fixed.

claim: would shareholders prefer higher or lower *expected* ROE provided that the change in ROE comes from the pure changes in the capital structure?

Recall from the previous section that required rates of return are determined by the underlying risks. As the leverage increases, two things happen simultaneously: the expected ROE increases, but the share of total risk which is borne by the equity holders also increases. In the end, these effects balance each other so that the shareholder value remains unaffected. For an illustrative example, see the Appendix.

DEBT PROVIDES A TAX SHIELD

A relatively uncontroversial benefit of debt is related to taxes. The claim is that debt is preferable to equity because interest rate expenses can be deducted from the taxable income while dividends are not tax deductible.

The issue of taxes has two sides: the magnitude of benefits and the distribution of benefits.

As for the magnitude, Table 1 illustrates the tax effects stemming from increased equity financing on the total cost of financing. As banks substitute tax-favoured debt with equity, banks lose value due to the reduced tax shield. Taking the average interest rate on debt to be 7% and the tax rate on profits to be 30%, the changes in the weighted average cost of financing due to taxes are relatively modest. In an extreme case, banks that increase their equity-to-asset ratio by 10 percentage points (say from 4% to 14%), would experience an increased cost of funding by 21 basis points. This cost would fall by half if we were to use a more realistic 3.5% interest rate on debt.

It is important to note that the calculation presented above is likely to over- rather than underestimate the tax shield. It ignores the fact that banks have other opportunities to shield taxes, and that banks do not always have positive profits.

A completely separate issue is whether this lost tax shield is a legitimate cost to banks from the social point of view. Banks might indeed gain from this subsidy, but since this subsidy comes at the expense of the lost government revenue, this is just a wealth transfer from the government to banks and not a true cost to society. Therefore, even though the reduced tax shield might lead to an increased cost to the banks, the tax argument cannot be used against capital regulation.

DEBT HAS GOVERNMENT GUARANTEES

The most prominent explanation of why banks use so much leverage compared to equity is based on government guarantees.

To make the argument clear, let us first ask an intriguing question: what hinders non-banks from taking up as much leverage as banks do? Arguably, they also face a positive gap between the cost of equity and debt, want to make use of valuable tax shields and might also wish to cheer up their shareholders by maximizing the expected ROE.

One of the reasons why non-banks do not use a high leverage ratio is related to financial distress. The costs of financial distress are usually associated with the costs of default, such as various legal fees and the value lost during liquidation in the bankruptcy process. But financial distress can be very costly even if there is no actual default or bankruptcy. A highly levered firm is risky for various stakeholders. As a result, a levered firm finds it more difficult to sell its products, get inputs from suppliers and attract employees than an unlevered firm.

In addition to financial distress, there are two other reasons why non-banks do not use a high leverage ratio. The first is the so-called risk-shifting problem. As leverage increases, managers that act in the interests of shareholders have strong incentives to invest in projects that actually tend to decrease the total value of the firm. The reason why managers undertake these projects is that the equity owners pocket most of the gains in the event of success, while the losses in the event of failure are borne mainly by debt holders. Any actual benefit of risk-shifting for shareholders is, however, only illusory. In a rational world, debt holders will foresee the potential for risk-shifting and will demand an ex ante compensation for it. Ultimately, it is the shareholders who bear the full cost of risk-shifting.

The other reason is the so-called debt overhang problem. In the presence of a large, risky debt, firms might be unable to finance projects that would actually increase their total value. The reason is that most of the investment gains would go to the existing investors, especially to the debt holders, leaving the new investors without a required rate of return.

The costs of financial distress together with the problems of risk-shifting and debt overhang are the main reasons why the owners of non-banks are reluctant to make full use of the tax and other benefits of debt mentioned in the previous section. For banks, these leverage costs must be significantly smaller to justify an extremely high leverage ratio.

It is hard to see why these costs would be smaller for banks given the traditional maturity mismatch and hard-to-value assets in the banking sector. History has illustrated that even the slightest misperception of the bank's profitability might trigger a run on a highly levered bank. Given the illiquid nature of bank loans, such a run would be extremely costly and would probably lead to bankruptcy. Therefore, these costs usually tend to be larger rather than smaller for banks.

The reason why banks do lever up despite the seemingly high costs of leverage has to do with government guarantees. Banks, unlike non-banks, play a central role in the functioning of the entire economy. A crisis in the banking sector is likely to cause a crisis in the real economy, leading to various social-economic problems. A government cannot therefore refuse to bail out systemically-important banks. This means that governments provide explicit and implicit guarantees for banks' creditors who in turn will require a lower rate of return.⁵

Profit-oriented banks will exploit the implicit guarantees in two ways. First, they will increase the proportion of financing covered by these implicit guarantees. Secondly, they will also engage in risk-shifting activities. When extremely risky loans succeed, the banks' equity owners will pocket the gain; when they fail, the costs to equity owners will be limited to the amount of equity. It is the government who would step in to save the bank creditors, eliminating or reducing the usual market discipline of bank creditors.

How realistic is this argument of risk-shifting and government guarantees? Would not the government take steps to prevent this? Indeed, the problem of risk-shifting is nothing new to the regulators. The real challenge, however, has been to deal with it. As illustrated by the recent crisis, banks tend to find various ways to circumvent the regulations. Excessive reliance on short-term debt as well as securitize-and-buy-back types of arrangement are good examples of how banks got around the regulations. In the first case, the costs of refinancing risks were effectively transferred to the government and in the second case, larger risks could be undertaken without contributing enough equity.

One of the aims of the new banking regulations is to prevent banks from shifting various risks to the government.⁶ By demanding more and better-quality equity, the new capital regulation limit banks' ability to rely excessively on subsidized debt. Even though the reduction of subsidized debt in the banking sector increases costs to banks, it is not a cost from the social point of view. These government guarantees can be viewed in exactly the same way as the tax benefits associated with debt.

How large are the increased costs to banks from the reduction of subsidized debt? This clearly depends on the magnitude of government subsidy in bank debt. One way to calculate this subsidy is to use a capital asset pricing model (CAPM) that relates the required rate of return to the

⁵ By and large, all forms of financing sources have a certain degree of explicit and implicit guarantees. These guarantees are likely to be largest for more senior claims such as deposits and secured funding and lowest for more junior claims, just above the common equity.

⁶ The overarching goal of any regulation should be to increase general welfare. By limiting banks' ability to risk-shift, welfare is increased not only due to the lower probability of a financial crisis, but also due to limiting the resources devoted to projects that have negative net present value.

magnitude (measured as beta) and price of the risk (measured as risk premium). The discount in this framework would depend on two parameters: (i) a fall in the magnitude of risk in debt due to government guarantees and (ii) the magnitude of risk premium.

In the example presented in Table 1, an average investor in bank debt will require an interest rate that is 100 basis points lower due to the government guarantees.⁷ This result can be obtained from the realistic parameter values: bank debt has the true beta of 0.25, the debt, given that there are government guarantees, is risk free and the risk premium is 4%.

Are these effects large or small? To interpret the results correctly note that the equity-to-asset ratio rather than the capital adequacy ratio is used in the Table below. To obtain the changes in the capital adequacy ratio, the increase in the equity-to-asset ratio must be multiplied by the ratio of total assets to risk-weighted assets. For Swedish banks, this ratio was 2.5 in 2009. Therefore, an increase of 2 percentage points in the equity-to-asset ratio translates into an increase of 5 percentage points in the capital adequacy ratio, which is well above the new Basel standards. This means that the increased cost of financing to banks due to the capital regulations would be no more than 6-7 basis points.

Table 1. The increased costs of financing due to taxes and government guarantees

Changes in the cost of financing in basis points			
Increase in E/A	Tax effects	Guarantees	Guarantees and tax
2%	4.2	2.0	6.2
4%	8.4	4.0	12.4
6%	12.6	6.0	18.6
8%	16.8	8.0	24.8
10%	21.0	10.0	31.0

Notes: Interest rate on debt is 7%, tax rate is 30% and the government implicit guarantee to debt is 1%. The cost of financing is measured as the weighted average cost of capital, E/A is a proportion of equity in the financing structure

OTHER CONSIDERATIONS

In addition to the benefits of debt discussed previously, there are other arguments why debt might be preferable to equity. These include the disciplining role of debt, information sensitivity and the amount of equity capital in the economy. Even though none of these arguments can explain why banks prefer more leverage than non-banks, they do suggest some additional sources of costs to banks due to the new regulations.

Leverage as opposed to equity is considered as an important disciplining device for managers. This claim is based on the understanding

⁷ An alternative method of calculating this discount is to use credit ratings that separate government guarantees from the banks' internal financial strength. This method would give a discount of between 100-150 basis points.

that debt is a hard claim: it can force firms to bankruptcy, while equity cannot. Since bankruptcy is costly for managers, managers of leveraged firms have more incentives to act in the best interests of the owners. The weakness of this argument is that debt is a very crude disciplining device. Provided that other disciplining mechanisms are available to shareholders, such as compensation packages and the board of directors, it is not really clear why debt should play this role.

Another reason why debt might be preferable is based on asymmetric information. The new banking regulation might force banks to raise additional equity with the help of new rather than old investors. Due to asymmetric information problems, new investors are likely to require a premium over and above the risk-premium. Importantly, this discount is smaller for debt since debt is a safer claim than equity. This is a valid argument, but the effects are hard to quantify. Furthermore, with a relatively long transition period, banks can increase their equity with retained earnings which would eliminate these costs entirely.

The limited size of equity capital in aggregate is also sometimes mentioned as a reason why increasing equity financing might be costly. The claim is that the equity markets might be unable to accommodate massive equity issues by banks, unless significant discounts were offered.

While this is a legitimate concern, there are two conditions that must be fulfilled to make this effect substantial. The first condition is that professional investors, such as hedge funds, cannot arbitrage away factors that are unrelated to the fundamentals. One would think that in the presence of excess returns in the equity markets, professional investors would make use of these advantages until these excess returns are eliminated. The second condition is that non-banks themselves would not act as arbitrageurs by substituting equity with debt. For instance, if equity becomes relatively more expensive compared to debt, firms could add value by buying back some of their equity and issuing debt instead.

It is hard to see why these two conditions would hold in the current situation. There might be substantial limits to arbitrage in times of crisis, but not in normal times. Furthermore, it is hard to argue that there is or has been a shortage of risk capital. If at all, the argument is usually made in the opposite direction by claiming that the amount of capital has been too excessive to find risky investment opportunities.

Concluding remarks

We argue that the costs of the capital regulation for banks stem from taxes and government guarantees. Other costs related to various imperfections in the capital market might also arise, but are less likely. Reduced

tax shields and government guarantees are private costs to banks, but do not represent costs from the social point of view. All in all, the analysis indicates that the social as well as the private costs of equity financing in banks are small. Provided that there are substantial benefits from the higher equity financing in terms of the lower probability and costs of future financial crises, this implies a strong case for the higher capital requirements for banks.

Appendix: Modigliani-Miller theorem

The Modigliani-Miller theorem (1958) is perhaps the most important theorem in finance. Using non-arbitrage conditions, Modigliani and Miller (MM) showed that the value of the firm is not affected by its financing policy. The direct implication of this result is that various capital structure decisions, such as the proportion of equity in relation to the proportion of debt or the mix between short-term and long-term debt, are irrelevant under some conditions.

An easy way to understand the irrelevance theorem is to think in terms of risk and return. Since it is the asset side that determines the riskiness of the firm, the total cost of financing must be determined by the nature of total assets. The way a capital structure divides this risk between different investors should therefore have no consequences for the total value of the firm.

Like any theorem in science, the results of the MM theorem are obtained under some restrictive assumptions. Even though some of these assumptions are clearly at odds with reality, the MM theorem is an extremely powerful tool in understanding reality. The reason is that it presents a useful starting point for analysing any financing decision. The MM theorem pushes the analysis in the right direction: knowing the circumstance under which the financing decisions do not matter also tells us the circumstance under which they might matter.

There are two assumptions behind MM.⁸ The first is the so-called “**perfect markets**” assumption, which means that equity or debt issuances are fairly priced. The second is the so-called “**exogenous total cash flow**” assumption, which means that the total cash flow to all the firm’s claimants is unaffected by the firm’s financing choices. Both of these assumptions might fail under certain circumstances, breaking the irrelevance theorem.

The **perfect market** assumption is satisfied if markets are complete (i.e. any claim can be replicated), competitive and strong-form efficient, that is, all the private and public information is reflected in prices.

⁸ See Titman (2002) for a similar way of dividing the assumptions.

It is the last assumption that fails most often in real life. Managers usually know more about the underlying investment opportunities than outsiders, which introduces a wedge between external and internal financing (e.g. retained earnings). This in turn means that the value-maximizing firms tend to follow a pecking order. They rely first on internal sources, then on safe debt, risky debt and finally equity, which is the most information-sensitive claim.

The fact that markets are not strong-form efficient gives rise to the demand side for capital, as explained previously. However, the supply of investors' capital has so far played no role. If markets are complete and competitive, the supply of investors' capital is perfectly elastic at a price that reflects the fundamental value of future cash flows. This renders no role for investors' tastes and market timing.

However, even market completeness and competitiveness might be questioned in real life. It is well known that markets can be hot and cold, especially for junior claims such as equity and junk bonds. It is also clear that markets are not necessarily complete. Investors cannot necessarily undo all the financing choices of the firm to obtain their desired pattern of cash flows.

The **exogenous cash flow** assumption is satisfied if there is no asymmetric tax treatment, no cost of financial distress, no transaction or agency costs. All these assumptions are likely to fail in real life.

Taxes usually make debt financing cheaper than equity financing. Since interest rate payments are tax deductible while dividend payments are not, the total cash flows to all investors are no longer independent of the capital structure.

Debt has the potential to increase the total cash flows also in the absence of taxes. Leverage is considered as a disciplining device for managers. Since debt can force firms to bankruptcy, which is costly for managers, managers of leveraged firms have more incentives to act in the best interests of the firms' investors.

But debt can also reduce total cash flows. A highly-levered firm is likely to be perceived as risky by various stakeholders. As a result, it will find it more difficult to sell its products, get inputs from suppliers and attract employees than it would with a lower level of leverage. A high level of risky debt also leads to conflicts of interest between shareholders and debt holders, which also reduces the firm's value.

A stylized example

An entrepreneur has an investment project, which requires 1 unit of investment capital today. The cash flow that the project generates in the next

period depends on the state of the economy: 3.15 units in a state of boom and 1.05 units in a state of bust. The states occur with equal probabilities. The risk-free interest rate is 5%. The investment of 1 unit to the stock market index would generate 2.8 units in a state of boom and 0 units in a state of bust. These assumptions are summarized in the table below.

	BOOM	BUST	Expected
Cash flow to firm	3.15	1.05	2.1
Cash flow from stock market	2.8	0	1.4
Return	180%	-100%	40%
Investment needed	1		
Risk-free interest rate	5%		

How should the entrepreneur finance the project to maximize the value to himself? Let us consider two options: pure equity financing and pure debt financing.

Equity financing

The entrepreneur could sell a stake in the firm to outside investors. Since the funds required to undertake the investment project are equal to 1 unit, the stake sold to the new equity holders must be worth 1 unit. In order to calculate the percentage of the firm that must be sold to the outside investors, we must know the value of the entire firm which is given by the magnitude and nature of the cash flows. How much would any person be willing to pay today to obtain the cash flow in the next period as outlined above?

PRICING BY ARBITRAGE

One way to obtain the value of the cash flows generated by the firm is to replicate the firm's cash flows using the portfolio of stocks and risk-free bonds. An investment of A units in stocks and B units in bonds today would generate $2.8*A + 1.05*B$ in the boom and $1.05*B$ in the bust. To replicate the firm's cash flows, A and B must be 0.75 and 1 respectively (see the Table below). Two assets that have exactly the same cash flows must

REPLICATING PORTFOLIO	BOOM	BUST
Invest in stocks A	$A*2.8$	0
Invest in risk-free bonds B	$B*1.05$	$B*1.05$
Replication portfolio	$A*2.8+B*1.05$	$B*1.05$
Value if $A=0.75$ and $B=1$	3.15	1.05
Cash flow to be replicated	3.15	1.05

also have exactly the same value on an arbitrage-free market. Therefore, the value of the firm's cash flows is $0.75+1=1.75$.

Given the total value of the firm, it is easy to calculate the fraction that must be sold to the outside investors. This fraction is equal to $1/1.75$ or approximately 57.1%. The expected cash flow to new investors is 1.2 units, implying a rate of return equal to 20%. The expected cash flow and value to the entrepreneur are 0.9 and 0.75 units, respectively.

DEBT FINANCING

Alternatively, the entrepreneur could borrow all the money from the debt markets. The debt would be risk-free since the cash flows in all the states from the firm would be enough to make the debt payments. The cash flows to the entrepreneur would be as presented in the Table below. Note that the entrepreneur now obtains much higher expected cash flows than before with the equity financing (1.05 compared with 0.9), but the variation in the cash flows has also increased.

PURE EQUITY	BOOM	BUST	Expected
Cash flow to firm	3.15	1.05	2.10
New investors (57.1%)	1.80	0.60	1.20
Entrepreneur (42.9%)	1.35	0.45	0.90
DEBT FINANCING			
Cash flow to firm	3.15	1.05	2.10
Debt payment	1.05	1.05	1.05
Cash flow to entrepreneur	2.10	0.00	1.05

To find out how the entrepreneur values these cash flows, we can use the same replicating portfolio and non-arbitrage technique as before. It can be easily shown that the cash flows to the entrepreneur in the case of debt financing can be replicated by the investment to stocks equal to 0.75.

We can conclude that the value of the cash flows to the entrepreneur does not depend on whether debt or outside equity is used to finance the project. The result can easily be generalized to any combination of debt and equity financing, including risky debt. Note also that no specific asset-pricing model was needed to obtain this result.

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■ The price development in the Swedish housing market – a fundamental analysis

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During 2009, Sweden's GDP decreased by 5 per cent, the greatest economic contraction since the 1940s.² In the same year, mortgage lending increased by 8 per cent. House prices are now at a higher level than before the financial crisis. This has breathed new life into speculations about a Swedish house price bubble – and an imminent and significant fall in prices. In this article, we analyse the price development since the end of the 1990s. We show that directly quantifiable factors such as higher disposable income and lower real interest rates can explain almost 90 per cent of the price increase. Quantifying the effects of the institutional changes that have increased access to credit is more difficult – but these are probably significant. All in all, it seems unlikely that Swedish housing is, on the whole, overvalued.

A brief history

In many countries, the financial crisis meant the end of a long period of steadily increasing house prices. Prices had already started to stagnate on a number of markets in 2007, particularly in those US states in which subprime loans had grown the fastest. In Ireland, Spain and certain US states, prices have fallen by 40 per cent since peaking in 2006–2007. Apartment prices in the inner city of Copenhagen are currently 25 per cent lower than they were two years ago, while, in Riga, prices have been almost halved since their peak. However, a fall in prices has failed to materialise in Sweden. Although prices did indeed decline by about 5 per cent in 2008 (see Figure 1), this decline has already been reversed.

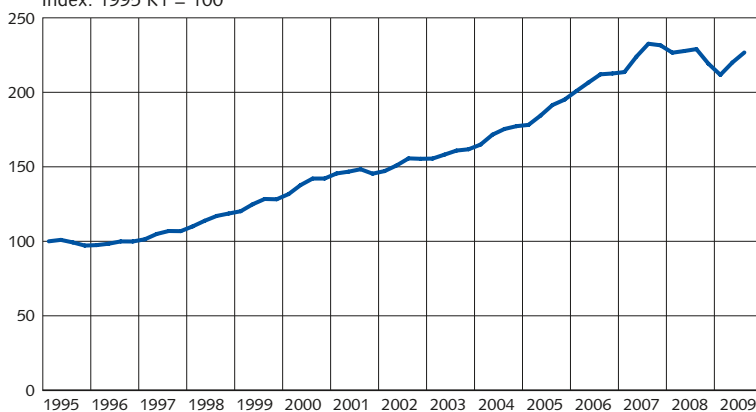
¹ The authors would like to thank Kerstin Mitlid, Albina Soultaneva and Vanessa Sternbeck-Fryxell for their valuable contributions to the various phases of this article.

² See R. Edvinsson (2005), "Growth, Accumulation, Crisis - With New Macroeconomic Data for Sweden 1800-2000".

Like most western countries, Sweden can look back on an exceptional level of growth in house prices over the last 15 years. Prices touched bottom in early 1996, in the aftermath of the bank and property crisis. Since then, house prices have risen continuously for 15 years, with the exception of a few isolated quarters during the IT crash and in 2007. And this increase has been dramatic. Between 1997 and 2009, Statistics Sweden's real estate price index for one- and two-dwelling buildings increased by about 176 per cent. Deflated by the consumer price index, this gives a yield of 133 per cent or an average (geometric) real yield of 6.7 per cent annually – a fantastic investment.³

Figure 1. Statistics Sweden's real estate price

Index: 1995 K1 = 100



Source: Statistics Sweden.

The development of house prices has gone hand in hand with household indebtedness. Households' real debts have more than doubled since the mid-1990s, while households' real incomes have only increased by 50 per cent.⁴ Almost 90 per cent of Swedish households' debts have a house or tenant-owner's right as collateral, and housing accounts for just over half of households' assets.

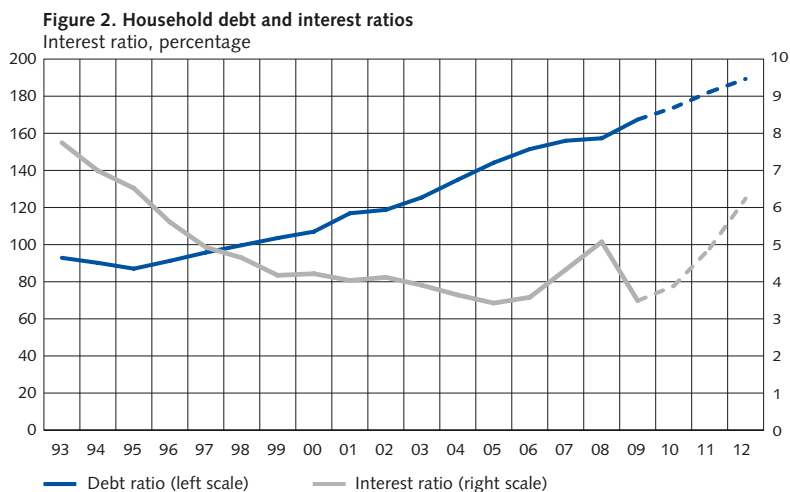
Figure 2 shows Swedish households' debt and interest ratios since 1993 – that is households' debts and interest expenses, respectively, after taxation, as a proportion of disposable income. The broken line shows a forecast two years ahead, where we have assumed that the debt ratio will continue to grow at the prevailing rate and that interest expenses will increase at the same rate as the Riksbank's repo rate path.

³ The standard deviation for the rate of price increase for these years was about 2.0 per cent. This gives a Sharpe ratio for the *real* yield of the real estate price index of over 3 per cent – a high value by any measure.

⁴ On the other hand, household loan-to-value ratios (that is, debt as a proportion of the value of assets) have not increased and amount to just over 30 per cent. Households' nominal net wealth is greater than ever, and even real wealth is expected to soon exceed the previous peak from the second quarter of 2007.

Alarming prospects?

Today, the debt-to-income ratio is at about 170 per cent, exceeding the levels prevailing before the banking crisis of the 1990s. Developments in 2009 were particularly striking, when unemployment rose by 2.2 percentage points and GDP declined by 5.1 per cent in the greatest economic contraction since the 1930s. Despite this, house prices continued to rise and household indebtedness grew by over 8 per cent. At the same time, the interest ratio is historically low, to the extreme interest rate situation, and to the variable interest rates applied to most households today. However, variable interest rates cut both ways of course – if the repo rate follows the Riksbank's forecast from October 2010, the interest-to-income will exceed 5 per cent within a couple of years, even if the debt ratio remains still. This would result in the highest interest ratio since the low-inflation policy took hold.



Sources: Statistics Sweden and own calculations.

Together with the “alarming prospects”, this development has led a number of experts to predict a coming fall in prices on the market. In a report from February 2010, the National Housing Credit Guarantee Board (BKN) claims that Swedish one- and two-dwelling buildings are overvalued by about 20 per cent.⁵ According to the BKN, the necessary price correction has been postponed due to the extremely low repo rate, but the price adjustment will occur as interest rates normalize. The BKN reaches this conclusion by comparing the cost of living in an owner-occupied homes and the cost of living in rented accommodation. Over the

⁵ "En bostadsbubbla kostar", National Housing Credit Guarantee Board, Market Report February 2010.

long-term and in a balanced market, the implied expenses for the owner-occupied home (due to mortgage rates, taxes, maintenance and renovation, depreciation, and expected capital gains) should be equal to the rent paid for rented accommodation. According to the BKN, a normalised mortgage rate of 5.5 per cent indicates that prices need to be decreased by about 20 per cent.

Foreign analysts expect an even more dramatic fall in prices. The International Monetary Fund's (IMF's) Global Financial Stability Report from April 2010 compares the prices of various assets with variables that historically have corresponded strongly with these prices. The report indicates that housing prices in Sweden are currently 2.6 standard deviations above the normal level. This deviation is the greatest of all asset types among all the countries included in the IMF's analysis. In The Economist's compilation of global housing prices, published in October 2010, Swedish housing is stated to be overpriced by 41.5 per cent.⁶ An almost identical figure was obtained by a study from the European Central Bank (ECB) of 18 industrialised countries in 2009. This study indicated that Swedish homes were the most overvalued in these countries, and that a fall in prices of 40 per cent would be needed for the Swedish housing market to reach equilibrium.⁷

Both The Economist and the researchers at the ECB arrive at their conclusions by comparing housing prices and rents over a longer period. They claim that this method works even if rents are regulated, as it is the change in the ratio of prices and rents that is used as input, rather than the ratio as such. We make the opposite assertion – that the method probably gives seriously misleading results as it takes no consideration of the changes in supply and demand that have different impacts on the regulated rental market and the free housing market. Above all, it ignores the changes to the financial markets in recent decades, which have both reduced the cost of housing finance and increased access to it.

Our analysis indicates that Swedish housing is not overvalued. Naturally, sudden falls in housing prices may occur, as experiences in recent years have shown – however, in the long term, it is more likely that prices will continue upwards, even after the interest rate situation is normalised.

Incomes and interest expense

In order to assess whether one- and two-dwelling buildings in Sweden were overvalued at the end of 2009, we make three assumptions. The

⁶ "Floor to ceiling", The Economist, 23–29 October, p. 82. Like us, The Economist used 1997 as comparative year.

⁷ Agnello, Luca and Ludger Schuknecht, "Booms and Busts in the Housing Markets – Determinants and Implications", ECB working paper No. 1071, July 2009.

first assumption is that one- and two-dwelling buildings were not over-valued (at least) during the first quarter of 1997. At that point, prices had bottomed out, but still had a long way to go to the peak of 1991, and the Riksbank's inflation target of 2 per cent had gained a firm footing among households. The second assumption is that households today are willing to spend at least as large a proportion of their disposable income on housing as they were in 1997. This should be a conservative assumption, as the shortage of housing in attractive areas has increased. There are also many indications that investments in housing standards have raised the quality of housing consumption in relation to other consumption (for example clothing and food), justifying a greater proportion of income being spent on housing. Thirdly, we assume that, taken together, other housing-related costs other than interests have not increased significantly more than general inflation.⁸

INCREASES OF DISPOSABLE INCOME

Between 1997 and 2009, households' disposable incomes increased from an average of SEK 198,000 to SEK 330,000 per year, an increase of 76 per cent.⁹ Deflated by the consumer price index, this gives a real increase of 50 per cent in 12 years, a major increase in prosperity. The development in the beginning of the 2000s, following the IT crash, were particularly extra-ordinary. The increase in disposable income is due to both higher real wages and tax cuts. All other factors being equal, house prices should thus have increased by 50 per cent in real terms for the interest ratio to remain on the same level as in 1997.

We assume that disposable incomes are driving the development of house prices in a ratio of one to one, but this is probably an underestimate. The households with the lowest incomes find it harder to obtain loans and live in rented accommodation to a relatively large extent. At the same time, the disposable incomes of creditworthy households have increased more than average incomes during this period.¹⁰ As there is only a limited possibility of switching between living in houses (or tenants' apartments) and in rented accommodation, house prices should thus follow the higher income trend. However, it is extremely difficult to say which income percentile represents the "marginal purchaser", so we will continue to proceed on basis of the average increase in income.

⁸ This assumption is less conservative. For example, electricity prices – particularly in recent years – have increased rapidly.

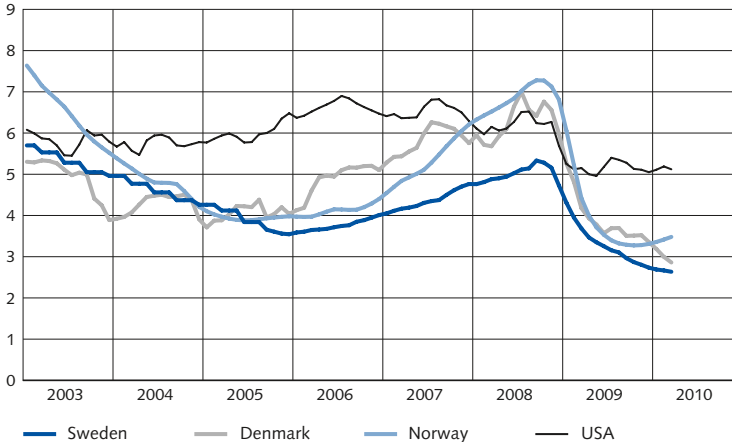
⁹ The development of disposable incomes for 2009 has yet to be determined in the official statistics. Our calculation for this year is based on the National Institute of Economic Research's estimate.

¹⁰ For example, the difference between average income and mean income increased, from about 21 per cent in 1997 to about 27 per cent in 2009.

LOWER REAL MORTGAGE RATES

Households' nominal interest expenses increased rapidly at the end of the 1980s, at the same rate as inflation, which was in double figures. At the end of the 1990s, after the Riksbank's inflation goal of 2 per cent gained credibility, a dramatic fall in inflation and interest rate levels followed. The steep decline of nominal interest rates has overshadowed the significant decrease of households' *real* interest rate costs that also started at the end of the 1990s. The decrease of households' real interest rates has three components: lower real interest rates, lower margins for the banks on mortgages and the shift towards increasingly short fixed-interest periods.¹¹ Today, Sweden is among those countries with the very lowest mortgage costs.

Figure 3. Average mortgage rates in selected countries
Per cent



Source: Reuters Ecowin.

The Riksbank regularly assesses the level of a “normal” repo rate. The repo rate should, in principle, be equivalent to the inflation target plus the real interest rate, where the real interest rate corresponds to the long-term annual level of productivity growth in Sweden. Many analysts claim that the real interest rate has actually declined since the 1990s, even if it is difficult to quantify. In February 2010, the Riksbank itself changed its assessment of the normal level of the repo rate – from the interval 3.5–5.0 per cent to the interval 3.5–4.5 per cent. This means that the average normal repo rate has declined from 4.25 per cent to 4.00 per

¹¹ As (nominal) interest expenses are tax deductible, the nominal interest rate situation also has an effect on real costs, as does the formulation of this deductibility. However, after inflation expectations were lowered in the mid-1990s, nominal interest rates remained relatively stable until the financial crisis. In the taxation reform of 1991, deductibility for interest payable was changed to 30 per cent, regardless of the individual's marginal tax. Since this, deductibility has been adjusted once.

cent. However, the inflation target has not been changed and households' inflation expectations are solidly anchored at around 2 per cent. We interpret this as a modest reduction of the expected real interest rate, from 2.25 to 2.00 per cent.

The banks' interest rate margins for mortgages have decreased sharply over the last decade. This development can be explained by greater competition, greater cost efficiency and lower capital requirements for mortgage lending as a result of the introduction of the Basel II regulations. Between 1997 and 2009, the banks' premium (in addition to its short-term funding cost) was, in principle, halved, from about 1.5 per cent to 0.7 per cent.¹²

Over the last 15 years, households' interest adjustment periods have progressively decreased. The proportion of mortgages subject to variable interest rates was about 8 per cent in 1997, compared with about 69 per cent in 2009.¹³ In other words, fewer households are paying for the insurance that fixed-interest rate loans entail. This change in households' behaviour increases their interest rate risk but also leads to lower long-term interest rate expenses. In our analysis, we have made the simplifying assumption that all fixed-interest rate loans have adjustment periods of five years, while variable-interest rate loans have adjustment periods of three months. In reality, also fixed-interest loans have also become progressively shorter – for example, extremely few households these days tie their loans for ten years. Between 1997 and 2009, the average premium was about 0.8 percentage points to tie a loan for five years, as opposed to a fixed-rate term of three months.

The table below shows how the real mortgage rate has changed from 1997 to 2009 and the effect this should have had on housing prices, according to our other assumptions.

¹² It should be pointed out that the analysis of margins is difficult, as official data (such as list prices) are often misleading.

¹³ Statistics Sweden has recently changed its definition of variable interest rate to include fixed terms of three months.

Table 1: Real mortgage rate 1997 and 2009

Per cent

1997	2009	
Real interest rate:	2,25	2,00
Expected inflation	2,00	2,00
Adjustment for bank risk	0,25	0,25
Adjustment for bank's margin	1,50	0,70
Adjustment for insurance premium	0,74	0,25
Interest before tax	6,74	5,20
Interest after tax	4,72	3,64
Real interest after tax	2,72	1,64
Reduction of real interest rate		39,70
Corresponding price increase		65,70

Source: Own calculations

The households' inflation expectation figures indicate that the Riksbank's inflation target has been solidly anchored since 1997.¹⁴ Inflation expectations in the slightly longer term, two and five years ahead, have always been close to the target of two per cent, which is also the figure we use in the analysis above. We have also used an addition of 0.25 percentage points, which is the average risk premium the market has demanded from the banks over the last 10–15 years.¹⁵ Finally, we assume that the representative household was entitled to a 30 per cent tax deduction for interest expenditure at both points in time.

The calculation indicates that the (average) real mortgage rate has decreased from 2.72 per cent to 1.64 per cent, indicating that the cost of housing (or the alternative cost) has decreased by about 40 per cent since 1997. It is worth repeating that this calculation is based on a normalised interest rate situation, rather than today's extremely low interest rates.

All in all, our analysis indicates that a combination of higher real disposable incomes and lower real mortgage rates can explain about 87 per cent of the rise of prices since 1997 (116 of 133 percentage points in the real estate price index).

¹⁴ In contrast, the repo rate at the start of 1997 was still high at 5.5 per cent. If we had used the actual real interest rate at the time (i.e. the prevailing repo rate minus expected inflation), the effect of the interest rates would have been far greater, alone accounting for over 90 per cent of the rise in housing prices. However, we have assumed that households expected a rapid normalisation of the repo rate.

¹⁵ In the years leading up to the financial crisis, risk premiums were significantly lower than this. They then increased significantly during the crisis. However, the extremely low repo rate compensated for this. We assume a normalised situation as regards both margins and repo rate.

Other factors

Bank's lending practices have changed significantly, particularly for mortgages, during the 2000s. The most important changes are for down payments and amortisations, which have lower made it easier for people to enter the housing market. Young households with little wealth and relatively small incomes – but with high expected future incomes – can now compete with households that are already in the housing market in a completely different way to the situation 10–15 years ago. This may have had a significant effect on housing prices.¹⁶

Our data shows that the average repayment period rose from 49 to 87 years in the period 2002–2009, almost doubling. Before 2002, there were no reliable figures for repayment periods, but it seems likely that these were even shorter in the mid-1990s. The requirements on down payments have decreased, from a general level of 25 per cent in 1997 to about 10 per cent in 2009. The most junior part of the mortgage loan – that is, the part traditionally seen as entirely too risky to be held on the mortgage institution's books – has decreased to a corresponding extent.

Another change is the introduction of senior lending. For the last few years, individuals with very low mortgages can increase their borrowing, even if their incomes are not high enough for the current interest payments.

It is extremely hard to quantify the price effect of the more generous credit rules. This would require information on which households were subject to the previous restrictions (at different points in time), and how these households have been affected by other changes taking place, such as to taxation. Let us therefore just illustrate the potential effect: with a 49-year linear repayment scheme, the annual amortization is just above 2 per cent of the purchase sum; with an 87-year repayment period, this becomes 1.1 per cent. If we use the information in the table above, the annual expenditure after tax was 6.7 per cent of the purchase sum in 1997, but only 4.7 per cent in 2009. Those households forced to limit their mortgage loans due to these expenses rather than the cost may thus pay about 40 per cent more, in real terms, for the same home today.

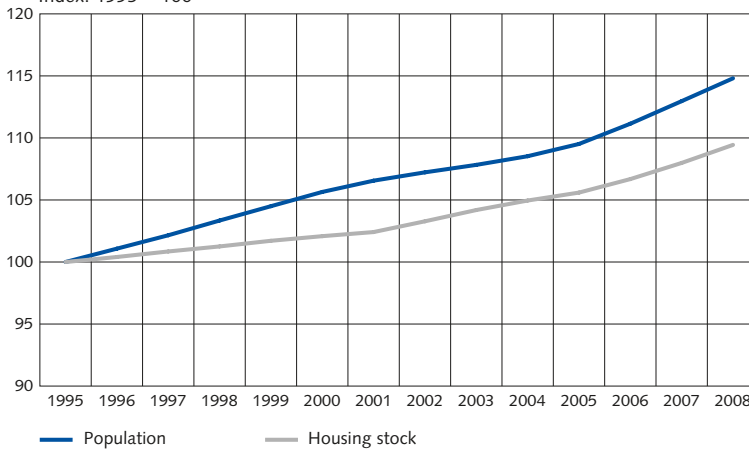
Another factor that has changed is property taxation, which has been decreased in stages between 1997 and 2009. In 2008, the state property tax was replaced by a municipal property charge. The property tax was, in principle, fully funded within the housing sector, but the municipal property charge only covers 75 per cent of the previous property tax. The rest is funded through a ceiling on deferment, through interest charged on

¹⁶ "The rise in U.S. Household indebtedness: Causes and consequences", K. Dynan and D. Kohn, Finance and Economics Discussion Series 2007-37.

deferment and through the increase of the capital gains tax chargeable on property sales (from 20 per cent to 22 per cent). The transition to the lower property charge thus entailed an improvement to households' cashflows.

Finally, the equilibrium price should also be affected by the level of access to housing. Over the country as a whole, the stock of housing (one- and two-dwelling buildings, apartments and multi-dwelling buildings) has increased faster than the population since 1997. This should indicate that housing has become a relatively less scarce resource, which would suggest a lower equilibrium price. However, the country's housing stock is probably not a decisive factor for the price trend. As was previously mentioned, in regions with strong growth, such as Malmö and Stockholm, the population has increased significantly faster than the housing stock. While many rental properties have been converted to tenant-owners' apartments, this has not increased the total supply of housing.

Figure 4. Population and housing stock in Stockholm
Index: 1995 = 100



Source: Statistics Sweden.

Conclusion

Over the last decade, we have seen housing prices develop strongly, accompanied by a growing loan stock for the funding of housing purchases. Even during 2009, Swedish housing prices increased by as much as eight per cent, despite the fact that the western world was being impacted by the worst recession of the post-war period. Many analysts, including the IMF and The Economist, have concluded that Swedish housing is over-valued by as much as 40 per cent.

In this article, we demonstrate the opposite – the house price development can largely be explained by two real factors: higher disposable

incomes and structurally lower real mortgage rates. We reach this conclusion by comparing the (real) cost for housing as a proportion of disposable income between 1997 and 2009, given a normalized repo rate. This comparison is based on two conservative assumptions: that Swedish housing was not overvalued in 1997, and that households today are willing to invest at least as large a proportion of their disposable incomes on housing as they were in 1997. In our opinion, analysts concluding that Swedish housing is seriously overvalued are using an incorrect method. By comparing housing prices with rental levels and other asset prices, they overlook the significant structural changes taking place on the credit market over the last decade – both as regards the cost of mortgages and access to funding. Our conclusion is that Swedish housing prices are probably not at all overvalued, even with a normalised interest rate level.

Naturally, house prices market may drop anyway, particularly on local markets. Just as for other assets, house prices are largely steered by expectations of future prices. In Stockholm's inner city, the price of tenant-owner's rights fell by about 15 per cent during the autumn of 2008, as many purchasers withdrew from the market. However, there were few transactions, as sellers preferred to wait instead of accepting the prevailing prices. Price falls – like price increases – can easily become self-fulfilling prophecies.

Many factors can influence analyses. In this article, we have used the real incomes, taxes and interest rate margins of 2009 as a basis. All of these factors can change. Households' disposable incomes are expected to continue to increase over the years ahead, albeit at a slower pace. The Basel Committee on Banking Supervision has recently decided on higher capital and liquidity requirements for banks – the Basel III regulations. If capital and funding costs increase for banks, this should, in turn, entail higher interest rates for households. At the same time, investors' required rates of return should decrease as the banks become more stable, so the increase of the capital cost is expected to be slight.

On 1 October 2010, Finansinspektionen's (FI's) mortgage ceiling entered into effect. FI hopes that this regulation will influence households' behaviour, above all by increasing amortisation of the highest loans – however, it is not expected to have any noticeable effect on house prices in general. No fall in prices in the Swedish housing market should be expected in the years ahead, but rather a continued – albeit somewhat more moderate – increase in prices.

■ Financial consumer protection – goals, opportunities and problems

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REMIT OF SUPERVISION

The remit of Finansinspektionen the Swedish financial supervisory authority, primarily concerns two things: promoting a stable financial system, and contributing to adequate consumer protection in the financial area.¹

The motives for specific government interest in conditions in the financial market can be summarised as follows:

- **The financial sector is important for the functioning of the economy.** Financial regulation and supervision is ultimately aimed at ensuring financial systems and markets are economically efficient. It must be possible to make payments, trade in securities and arrange credit in principle in all situations. Otherwise the entire economy will incur major costs and losses.
- **The financial sector is sensitive to disruptions that can easily spread.** This is because primarily banks have a liquid liability side on the balance sheet (in the form of deposits) and an illiquid asset side (in the form of lending), while financial firms are closely intertwined financially. Consequently liquidity disruptions or weakened confidence in a participant often also rapidly affect other participants. The risk of disruptions spreading and destroying the financial sector's ability to function is called systemic risk.
- **The market cannot deal with systemic risks alone.** Disruptions of the order that threaten the system can neither be prevented nor dealt with by the firms alone. Consequently the Government has an important part to play in the financial area, for example through regulation and supervision.

¹ See for example *Government Bill 2010/11:1* (Budget Bill): "The overall objectives of Finansinspektionen are to promote stability and efficiency in the financial system and consumer protection in the financial area [...]."

- **Even small participants can have a negative impact on the market.** Normally it is only the major financial firms, in particular the major banks, that have the potential to create direct, acute threats to systemic stability. However, even minor participants can impact the functioning of the market negatively, for example by damaging confidence in the market.² In other words, even for minor actors, there are sometimes externalities, and thus also systemic aspects, that should be considered.
- **The consumer is often at a great informational disadvantage in relation to the producer.** Systemic risks are not the only reason for central government interest in the financial area – the need for consumer protection is another. Financial services are in fact often complicated, while often involving large amounts of money for the individual. It is true that the need for consumer protection is not unique to the financial area, but nevertheless there is a considerable difference in degree compared with most other areas, partly because it is often difficult even with hindsight to assess the quality of the services.
- **Consumer protection has two dimensions** *One dimension* concerns protection of consumers' assets and claims, which the financial firms manage in one or another form. For this, it is not sufficient for the "system" as a whole to be stable. Individual financial firms must also be financially and operatively stable, so that they can fulfil their commitments to savers, insurance policy holders and investors. *The second dimension* of consumer protection is about ensuring that consumers receive correct, relevant and understandable information about the services offered and that the service terms are reasonable.

Delving more deeply into what these objectives entail and how they can or should be managed, it quite soon becomes apparent that these are complex objectives that often require weighing up with discernment.³ Nonetheless the financial stability objective can now be regarded as reasonably well defined from an analytical starting point. The objective is also well accepted among market participants – there is a broad consensus on the necessity of central government involvement, as well as agreement on the overall principles for how the Government and the Riksbank should act and the allocation of roles between them.

² Carnegie and HQ Bank, which were subject to Finansinspektionen's intervention in 2007 and 2010, can be seen as examples of this. In some situations a minor participant can also have significance for the stability of the system, which was most recently exemplified in autumn 2008.

³ As an example: that a bank is financially stable is a central consumer interest. But basically stability is a matter of the bank's profitability, and profitability can be based on the consumer paying high interest rates and charges to the bank.

However, it is a different picture as regards the goal of adequate consumer protection. There is an all-pervasive lack of precision and clarity in laws, regulations and authority, both as regards what precisely consumer protection in the financial area should entail and as regards who should be responsible for what. The latter concerns the balance between consumers' own responsibility, firms' responsibility and government responsibility. Central government responsibility must in turn be allocated between different agencies, mainly (but not solely) between Finansinspektionen (FI) and the Swedish Consumer Agency.

At the same time, measures that concern consumer protection are often the part of financial supervision that most closely affect and are monitored by the general public and the media. It is a problem that the goals and division of responsibilities are unclear, and this also makes it difficult to communicate what financial supervision does (or does not do) and why. Therefore, there is reason to discuss and try to develop ideas about and approaches to financial consumer protection. This article aims to discuss some – but not all – aspects of this.

Why consumer protection?

SOME REASONS

Central government involvement in consumer protection in many areas and different forms can be justified on the basis of different premises. One reason, which is often central but will not be discussed more here, is redistribution policy: just as in many other areas, there is reason here to assume that people with less education and lower incomes in general not only have poorer previous knowledge, but also fewer possibilities of seeking and evaluating information, lodging complaints, bringing legal action etc. Consequently they also have a worse bargaining position in relation to companies.⁴ Accordingly, action to increase consumer protection can be of benefit in the first place for the weak groups in society. Not least in the United States, the financial sector specifically has been used as a channel for pronounced socio-political and redistribution policy ambitions: the notoriously famous *sub-prime* loans are an (obviously unsuccessful) example.

Another approach to consumer protection is to see government initiatives as a way of creating a better balance between the market participants – producers and consumers – so that the market is ultimately more effective. Focus then falls on representing the general interest of consumers rather than on giving advice and help to individual consumers.

⁴ See for example Campbell, Jackson et al., *The Regulation of Consumer Financial Products: An introductory Essay with Four Case Studies*.

This view proceeds from the premise that the consumer is at a more or less typical structural disadvantage, since

- the consumer finds it difficult to assess the producer's willingness and ability to meet its commitments, particularly in the longer term
- the consumer has less access to relevant information about the goods or service
- the consumer has neither practical nor theoretical qualifications for taking in and acting rationally on the basis of the information available.

FI tries to deal with this by means of three main types of supervision:

- Monitoring firms' financial and operative stability, in other words ensuring that consumers' assets are secure and that the firms can deliver what they have undertaken to deliver.
- Ensuring that firms are owned and run by reputable people, for example by examining the conduct of owners and company management. These can then be expected to have the objective of providing information to their customers as well as treating them correctly and honestly in other respects.⁵
- Ensuring that firms provide correct and relevant information to consumers, manage conflicts of interest efficiently and otherwise deal with their customers in an acceptable way.

Expressed in another way FI's consumer protection policy means that FI is to draw up rules as well as control and monitor firms and markets that consumers are unable (or only with difficulty are able) to monitor themselves.

In addition, in recent years, FI has, on the instructions of the Government, tried to reduce the informational disadvantage by promoting better consumer education. The purpose is to try and achieve a higher level of knowledge of financial matters. Consumers are to receive a kind of assisted self-help, so that they will be better equipped to make their own rational decisions when confronted with financial offers and financial information.

Knowledge disadvantage as a base – but is the financial sector unique?

The basic view is that, on the whole, the consumer is rational and fully capable of making sensible decisions – provided that he or she receives relevant and comprehensible information. But is the information imbalance between seller and buyer in the financial sector so unique as to motivate

⁵ "Fit and proper" is of course a basic prerequisite for an efficient financial market, from both the systemic and the consumer perspective.

this special attention from the public authorities? A person buying a car or a house – also costly and complicated products – is normally at a clear knowledge disadvantage too in relation to the seller.

The role and place of consumer protection in the context of supervision and regulation has been more or less prominent over time, to some extent depending on the issues that were in focus in economics and the financial market. The Bill for the new banking legislation that came into force in 2004, which was based on the Banking Law Committee's Report and to a great degree was a response to the stability crisis of the 1990s, states the following:

“The objectives of government policy in the financial area are to promote a stable and effective financial system with good consumer protection. Effectiveness and consumer protection are not, however, unique objectives for the financial area but general objectives that can be said to apply to the entire economy.”

The text of the bill can be interpreted to mean that systemic stability is the entirely predominant interest, and that there are really no specific consumer protection problems for the financial sector. This interpretation is strengthened in that the Bill does not raise any arguments or considerations concerning consumer protection in other respects.⁶

But even if one considers consumer protection issues in the financial area to be of a special nature, accordingly justifying special government measures, it must be remembered that far from all financial services are expensive, difficult to assess or have some other quality that justifies government involvement. For example, no sophisticated financial knowledge is needed to select and use basic payment services or a home insurance policy.⁷ There are also great differences both in demand for financial services and in the need for protection between different individuals, depending on factors such as income, education, age and attitude. Hence the need for consumer protection varies a great deal for different parts of the financial product range and for different individuals – which in practice means that one cannot pursue a meaningful consumer protection policy either for financial services in general or for consumers in general. Instead the financial supervision related to consumer protection, just as the systemic supervision, must focus on the areas in which there are clear risks and problems.

⁶ See *Government Bill 2002/03:139*, “Reformerade regler för bank- och finansieringsrörelse (Reformed rules for banking and finance business)”, p. 156. If the interpretation is correct, the consequences of the argument were not on the other hand fully fulfilled, because if systemic stability were the only material and unique objective of government activity in the financial area then FI's supervisory remit should reasonable have been radically redrafted. Only a fraction, at a high estimate 1 per cent, of the 3,900 or so firms currently subject to FI's supervision, can be regarded as obviously relevant to systemic stability.

⁷ What is meant here is that it is fairly simple to understand the principle structure and function of a home insurance policy. But the more specific conditions, as to when and how the insurance policy can be used, may of course be quite complicated.

In the same way there are more circumstances that make the picture more complicated in the financial area than in most others. Apart from the basic fact that financial firms are entrusted in various ways to manage the vast majority of people's financial assets – which already in itself imposes special requirements on how the firms conduct their business – there are also some more specific aspects to take into account; namely that

- some products have a decisive significance for the customer's entire financial situation
- some products have a very long "delivery period", such as pension savings
- it is often difficult for the customer, even with hindsight, to determine whether the product was good or bad, and the extent to which this was due to the merit or fault of the producer.

If we return to the comparison with buying a car or home, in those cases it usually becomes more clearly and rapidly evident whether the products have delivered what they promised, as well as what this is due to. The fact that it is so difficult to evaluate the quality of financial services with reasonable speed and precision also means that it is difficult to manage the problems by means of guarantees, which otherwise constitute a market solution that usually functions well for other complex products, such as cars.

This gives a special dimension to the need for government regulation and supervision. An area that in some respects is very similar to the financial area is health care: here there is often the same combination of complexity, major and long-term significance for the individual's life situation and difficulties in evaluating effects and quality. And for exactly these reasons health care is also an activity that has advanced control procedures and regulations (for example licensing requirements), and is subject to government supervision (in this case through the National Board of Health and Welfare) – just because the consumer interest must be safeguarded.

The importance of confidence

The complexity of the products is, in addition, an important reason for the admittedly woolly and sometimes misused concept *confidence* being of such central importance to the financial sector, just as it is to health care. A basic objective for financial supervision is to reduce the consumers' information disadvantage. But it is unrealistic to believe that

the disadvantage can be completely eliminated – a clear difference will remain, even in the best of worlds. If the customer does not otherwise have the knowledge, time or possibility to match the producer's knowledge advantage, he or she faces two alternatives: either to buy the service and trust that the producer is competent and serious, or to do without the service. The latter may in some cases be impossible in practice, or at least both risky and costly. In other words, confidence must take over where certain knowledge ends – if any exchange is to take place.⁸

Hence the information imbalance is an important reason why confidence is an important factor in the financial market.⁹ Another important factor is that there are very clear externalities, so that the problems of confidence in a firm or a sub-market easily spread to others. In some cases, problems of confidence can also directly threaten stability. The classic type of financial crisis – a run on a bank – is the obvious example. The global liquidity problems in the autumn of 2008 may very well also be seen as an outflow of inadequate confidence between the participants.

On a market with the desired level of confidence, market participants can buy and sell while being reasonably certain that they will not be swindled, that agreements will be kept and that counterparties will comply with the rules, both written and unwritten. Insufficient confidence impairs the market's functioning and efficiency, while a failure of confidence forces counterparties to seek protection via more or less expensive insurance arrangements, detailed agreements and so on. Confidence is thus not only a feel-good factor, but is also very much a matter of efficiency.¹⁰

However, the existence of confidence on a market does not imply that the market may (or even should) be risk-free. Confidence means that the meeting of seller and buyer – the implementation of the transaction and the information surrounding this – works in the expected correct manner, but not that the outcome of the transaction is guaranteed in any sense. For example, the assumption that a fund manager will always provide a yield of x per cent is an expression of wishful thinking, rather than constructive confidence.

⁸ Conversely, no confidence is needed in the seller if the buyer knows all the relevant facts about the product. It is not necessary to have confidence in a tobacconist to dare to buy an evening paper or a bar of chocolate.

⁹ In discussions of the confidence concept it is often maintained that confidence is not a quality in itself but rather an expression of a *relation* between two or more parties. The quality that makes such a relation possible is *credibility*, which in turn may be a function of factors such as competence, transparency and integrity.

¹⁰ There exists a quite comprehensive body of literature that describes and analyses the significance of trust and confidence, sometimes designated *social capital*, in economic development. Chapter 2 of the Commission on Business Confidence's report (SOU 2004:47) presents a relatively detailed discussion of this subject.

Society can contribute towards the strong build-up of confidence in various ways. This is primarily a matter of creating rules, monitoring compliance with these rules and intervening against those who break them. One concrete example is the "fit and proper" assessment carried out by FI, which is aimed at preventing individuals with criminal records or who are otherwise obviously unsuitable from conducting financial operations. However, the government can only provide a wide-meshed net. The necessary, more finely-meshed net is formed by the ethical standards and attitudes existing and being developed on the market and in society in general. This also includes a measure of healthy scepticism and critical thinking, based on the realisation that any market will always include opposing interests.

BUT ARE CONSUMERS REALLY RATIONAL?

The basis of FI's consumer protection policy has, in general, always been formed by the unstated principle that consumers are essentially rational – the problem is a lack of information and a lack of knowledge of how to process information. Being able to remedy this would also mean, in principle, solving the consumer protection problem.

When a consumer receives correct and relevant information about a product and can understand this information, that consumer thereby becomes responsible for taking more or less high-risk financial decisions – and for bearing the consequences of those decisions. According to this approach, the government cannot – and should not – provide safety nets against financial risks, or even prevent individuals from consciously choosing to take financial risks.¹¹

However, in recent years, certain events have cast a somewhat new light on the aims and means of consumer protection.

In general, it can be said that the financial crisis has resulted in greater attention being paid to the phenomenon of "insufficient rationality" in market behaviour. The fact is that the crisis brought to light quite a full and varied range of behaviours and phenomena that can hardly be described as rational. This has led to renewed interest in behavioural economics, an area in which research has long focused on developing a more realistic view of people's ability to act rationally, as well as incorporating this into economic theory.

More specifically, attention has been paid to problems of rationality in conjunction with the debate on text loans, as well as the mortgage ceiling decided upon by FI during the autumn. The mortgage ceiling can be seen as a measure intended to do more than merely trying to give

¹¹ The former is, of course, a precondition for the latter, if a serious moral hazard is not to arise.

consumers more and better information, as it means that FI is specifying a general ceiling for consumers' risk exposure for credit in which housing forms the collateral. Very high mortgage loans may indicate that certain borrowers have failed to understand the risks they are taking, but may also mean that certain borrowers have overexposed themselves to financial risks in an irrational manner, even though they have, in principle, understood the risks. In such cases, the regulations can be interpreted as indicating that FI actually does not accept the ability of certain consumers or borrowers to act in a long-term and rational manner.

It could thus be said that, apart from being ill-informed, consumers are also showing signs of various behavioural disorders. The basis of such behavioural disorders is that consumers are short-sighted or otherwise systemically irrational when it comes to certain financial decisions. In addition, it may be that consumers – or, for that matter, producers – take excessive risks in certain situations, as they expect (with or without justification) that somebody else (the government) will bear the cost of an unfavourable outcome. This is what is known as moral hazard.¹²

The basic issue is thus whether (and under which circumstances) it is reasonable and acceptable for an authority to reject consumers' rationality and directly or indirectly force different behaviour. Does an authority have the right to act as a guardian?

For one thing, it could be said that, for better or worse, there are fairly abundant elements of this within many social areas. Alcohol policy is an obvious example; the law on compulsory seat-belt usage is another. The list of such regulations is very long, and proposals for new initiatives of this kind constantly come and go in the political and media debates. Extra taxation on sweets and unhealthy food, compulsory cycle helmets and quotas for parental allowances are just a few examples that have circulated recently. Indeed, the financial regulations have long included such elements, even if these have not been dominant. For example, the following can be found in FI's general guidelines 2005:3 (*Finansinspektionen's general guidelines regarding consumer credits*):

"For mortgages, the lender should make an estimate of housing costs as part of the assessment of the borrower's debt-servicing ability. The borrower should be informed of the content of this estimate, as well as the fact that it may be affected by agreed but as-yet unimplemented amendments to the tax and benefit systems that may be of considerable importance. The borrower should also be informed of the impact of changed interest rate levels on the estimate."

¹² As regards loans to households, it may be noted that banks and other lenders are not particularly motivated to be restrictive in their lending, as individual persons can never normally have their debts written off, for example via bankruptcy. Whatever happens, the bank will have the entire lifetime of the client in which to get back the money lent. This allows it to feel fairly secure.

Of course, this is partly intended to ensure the lender manages its own risks as regards the borrower, but it also embraces the ambition that the consumer should avoid becoming unsustainably indebted. The text also implies that the client is unable or unwilling to understand the risks this entails. Another example can be found in insurance, in which both deductibility for pension savings and the rule that pension savings may not be withdrawn before the age of 55 basically express the ambition of “helping” savers act in a way that will be beneficial in the long run.

Are consumers under-informed, irrational or both?

THREE MODELS

The principal basic issue is thus one of how the consumer is regarded as a participant. Is the consumer well-informed or uninformed, rational or less rational? Is the consumer informed or rational in certain regards and in certain situations, but not in others? What is the rule and what is the exception? These assessments provide the basis for our view of the need for consumer protection and how this should be formulated.

Neoclassical economists discussed the concept of *the economic man*, a buyer or consumer who, like the producer, was thoroughly well-informed and entirely rational. If we accept that this is a reasonable approximation of reality,¹³ there is hardly any need for any consumer policy whatsoever, neither in the financial area nor in any other area.

The next stage of the development of economic theory involved the modification of the hypothesis of perfect information. Within many areas – with the market for used cars forming the classic example¹⁴ – the seller has a near-total informational advantage over the buyer, even if the buyer is completely rational. This conceptual model forms the starting point for the consumer protection philosophy applied by FI. The producers have a knowledge and informational advantage that FI wishes to help reduce, or at least to deal with in a manner that makes the consumer into a more equal partner on the market.

If another step is taken in this review of the neoclassical hypotheses, the assumption that the consumer is always or almost always rational disappears. This is the basis of so-called behavioural economics, which attempts to integrate a psychologically more realistic view of how consume-

¹³ However, it should be pointed out that no serious economist has ever believed or claimed that this model depicts empirical reality, particularly not on the individual level. A theoretical model should be seen as a map, making it easier to find a path through the landscape. By consciously simplifying and refining reality – sometimes to a very far-reaching extent – basic driving forces and mechanisms can be exposed. A theory or model should be evaluated on the basis of how helpful this process is. The naïve criticism that economic theory and economic models do not describe “reality” in a detailed and recognisable manner is thus usually entirely meaningless.

¹⁴ George Akerlof (1970), “The market for ‘Lemons’: Quality Uncertainty and the Market Mechanism” in *Quarterly Journal of Economics* 84(3).

rs actually act.¹⁵ For example, a study by the UK's FSA (Financial Services Authority) claims that psychology governs peoples' actual behaviours on the Financial markets, rather than their knowledge and insights.¹⁶

DIFFERENT LEVELS OF IRRATIONALITY

In rather more concrete terms, this means that, among other problems, information overload must be considered. This refers to the time taken and the major practical difficulties than may often be encountered by individual consumers when looking for, receiving and selecting information, and when choosing and implementing the decisions that will maximise their benefit. Certain studies have shown that excessive amounts of information or too many alternatives lead to less advantageous decisions. This overload of information and choices can also lead people to avoid or postpone making decisions.

Consumers thus do not at all need to be "stupid" to act irrationally. This can just as easily be a consequence of the consumer not having the time or interest to absorb, assess, and act on available and correct information. It may also be the result of the consumer lacking the knowledge needed to evaluate this information. However, at this point, it should be said that this is an issue of inadequate capacity as regards receiving and processing information, rather than irrationality in the usual meaning of the word.

It can also be observed that many decisions that could be classed as irrational are due more to great uncertainty or high risk propensity than to normal stupidity – decision-making may entail a clear risk, but also a reasonably decent chance that things will turn out well. For example, a person borrowing extensively against his or her home is certainly taking a major risk, but *may* also be a winner if interest rates, housing prices, income trends and so on go his or her way. No matter how much we may doubt the chances of a positive outcome, it still cannot be ruled out – and there is, of course, reason to point out that nobody, not even government authorities, actually *knows* how the future will turn out. Many apparently irrational financial decisions thus share the characteristics of games of chance – although with considerably greater stakes, it could be added.

¹⁵ This is discussed in *Beteendeekonomi och konsumentpolitik* by Robert Östling, published by the Ministry of Integration and Gender Equality, 11 March 2009. See also *Consumer Financial Protection* by Campbell-Jackson et al.

¹⁶ Several investigations have demonstrated that the fairly widespread attitude towards financial issues as being a boring subject is, in practice, a major reason for many decisions being made on the basis of insufficient knowledge.

FAULTY LOGIC MANIFESTED

Alongside this, another well-known characteristic of the human mind is that decision-making is sometimes not just a matter of finding the time to read and obtain information, or of taking high but basically calculated risks – at certain times, we may also prioritise short-term goals at the expense of long-term ones, make obviously incorrect risk assessments, and generally be inconsistent in our decision-taking. It is possible to make an almost endless list of everyday examples of this: we don't do as much exercise as we know we should, we cycle without helmets, we eat too many sweets and too much unhealthy food, we ignore car seatbelts and take out horribly expensive text loans late at night.

In recent years, relatively comprehensive research has been conducted into these issues. A few phenomena that could be cited as examples of irrationality follow:¹⁷

PROBLEMS OF SELF-RESTRAINT

Problems of self-restraint can play a part in any decision that entails some form of short-term sacrifice in order to achieve an improvement in the longer term. This may be a matter of refraining from consumption here and now in favour of saving for a pension (for example), but could also be a matter of smoking, frequent consumption of alcohol or unhealthy food, avoiding physical exercise or many other behaviour patterns. In all of these cases, there is a risk of failing to meet more long-term interests. An argument could thus be made in favour of public measures to help citizens with these problems of self-restraint – such as government pension and social insurance systems, increased taxation on tobacco and alcohol, and so on.

FRAMING EFFECTS

Framing is an issue of how the alternatives in a decision are presented and linked to other decisions in a more or less relevant manner. One form of framing that is often used in the context of advertising is the claim that a customer would be able to save money by purchasing a product at a reduced price, even though a saving would only be made if the customer bought the product at the normal price level – which is not necessarily a relevant comparison. Another type of framing effect is sometimes called mental accounting: having one “mental account” for small expenses and another for larger expenses. This can take the form of not hesitating to pay SEK 50,000 for extra furnishings for a new house or new car, at

¹⁷ See Kahneman, D.; Tversky, A.: “Prospect Theory: An analysis of Decision under Risk” in *Econometrica* 47(2), 1979. See also Östling: *Beteendekonomi och konsumentpolitik*, p. 17-27.

the same time as great effort is expended on finding minced meat at a bargain price.

LOSS AVERSION

Psychological experiments have demonstrated that people are often more sensitive to losses than profits – that is, a loss is experienced as being worse than a correspondingly great decrease of profit. Loss aversion means that the reference point that determines what is defined as a loss or profit becomes decisive. For example, the purchase price of a product may form one such – more or less relevant – reference point.

It has also frequently been demonstrated that people are more risk-inclined when it comes to losses than profits, in the sense that, for example, gamblers (and investors!) who have incurred great losses can take very high risks when attempting to “win back” these losses – in other words, throwing good money after bad.

CALCULATIONS OF PROBABILITY

In traditional economic theory, the implicit assumption is that most people have a generally correct view of the probability distribution of the various conceivable outcomes of investment decisions or loan decisions (for example), and will act accordingly. However, many common and systematic deviations from the expectations considered reasonable according to probability theory have been documented. For example, there seems to be a systematic tendency among many people to overestimate risks with low probability or limited potential consequences, and to simultaneously underestimate risks with higher probability or with greater negative consequences, and to act accordingly. This may explain why many people are happy to pay expensive insurance policies for their television sets, but cut corners when it comes to householders' comprehensive insurance or accident insurance, and why many people significantly increase the risk of being affected by serious traffic injuries (and fines) by speeding, even though the amount of time gained is usually marginal.

Is irrationality systematic?

It seems almost trivial to observe that the hypothesis of the inadequately rational consumer would seem to be true in light of how people actually behave in their daily lives. Almost all of us – the author of this article included – will no doubt recognise themselves in several of the examples given above. But, even so, this is *not* sufficient justification to abandon the hypothesis of rationality as a defining feature when describing and analysing consumer behaviour and the need for consumer protection.

The issue is thus whether, and to which extent, there exists a system of *classification and dominance* as regards irrationality. It is entirely possible to maintain the basic assumption of rational behaviour among individual consumers if their behaviour over a longer time span is examined. A person can be considered to be generally (if not perfectly) rational, even if they do occasionally make mistakes. And, as regards consumers as a whole, it could also be imagined that mistakes and bad logic among different individuals largely cancel each other out. Consequently, the facts that a small number of individuals consistently behave in a more or less idiotic manner, and that the overwhelming majority now and again take less sensible decisions, does not mean that irrationality should be seen as characteristic and standard behaviour. Therefore neither should it for the *starting point* for policy and analysis of consumer protection. On the other hand, it is a factor that should be considered.

A few conclusions regarding regulation and supervision

In which respects, then, can we state that there exists a both marked and systematic irrationality in market behaviour that should affect the formulation and application of a financial consumer protection policy? Of course, here there exists a serious problem in that this cannot be supported by quantitative data, not even in indicative form, as far as is known.

However, it would not be going too far to regard the circumstances mentioned as being so common and, in certain contexts, so significant that they should be included and weighted into discussions on the formulation of regulations and supervision.

The next stage is to then figure out how and in which way irrationality should be handled within the framework of FI's consumer protection policy.

An obvious and basic problem for any party wishing to intervene so as to correct this irrationality is that the party performing the correction – usually the state in some form – does not necessarily have the correct information or otherwise know best. This suggests that restraint and caution should form the basic approach in government attempts at correction. It should also be remembered that FI cannot regulate consumers' behaviour, only *companies'* behaviour. The starting point then becomes preventing, through regulation, companies from improperly taking advantage (or attempting to take advantage) of consumers' weak sides in marketing, the presentation of information, the wording of agreements, and so on.

If FI is to intervene in an issue, and the motive for this goes beyond what may be considered traditional requirements for relevant and correct

information, it should firstly be possible to demonstrate clear indications of irrational behaviour to a significant extent in the case in question. These indications must also be well-founded. Secondly, it should be possible to demonstrate that this may lead to significant problems for individual consumers and for society. Thirdly, there should be convincing arguments that the measures to be implemented by FI are relevant and effective.

To sum up, five points for a general consumer protection policy for the financial area could be set down. FI should thus:

- 1) Ensure that companies have the necessary capital strength and risk management strategy to guarantee delivery capacity.
- 2) Ensure that consumers receive relevant, correct and comprehensible information on products, terms and conditions.
- 3) Support confidence in the financial market, its participants and its products, among other means by ensuring that companies are run and conducted by responsible individuals, and that they have functioning governance and control systems.
- 4) Promote increased knowledge of financial issues and products among consumers. Knowledgeable consumers create demands for increased efficiency and for better and more transparent products, at the same time as they reduce scope for less responsible participants.
- 5) Be able to intervene if and when there arise clear indications of systematically irrational behaviour among consumers that may have significant negative effects on broad consumer groups, and check these risks through regulations directed towards the financial companies, if this can be done in an effective manner.

In an abbreviated form, the first three points form the basis of the activities that FI has conducted, and continues to conduct, in the area of consumer protection. The fourth point, in which FI has made active efforts in recent years, forms an important complement to these points. The fifth point, finally, is a possibility that can be exploited in certain specific situations.

What is to be responsible and who is do what?

A TARGET-MEANS MATRIX

The discussion above has focused on how a government consumer protection policy in the financial area could be justified and how the content of such a policy could be formulated. However, as stated in the introduction, the fairly significant lack of clarity on financial consumer protection does not just affect its targets, means and ambitions, but also how

responsibility should be allocated among different participants. Below, we present a few reflections on this latter area, focusing on the allocation of duties and responsibilities on the government side.

In the introduction, a few of the basic targets for financial supervision were discussed. It could be said that supervision has two main targets, which in turn can be broken down into different sub-targets that can be and ought to be handled with partially differing methods. The figure below is an attempt to structure this.¹⁸ Obviously, such attempts always entail a certain measure of simplification and standardisation of reality – this is no exception. The boundaries between the different boxes are far from being as sharp in reality; to a certain degree, this is a matter of the same things being considered from different angles. The figure still fulfils the function of starting point for determining the type of issues to be covered by supervision and the manner in which supervision may be organised and structured. It should otherwise be noted that the management of individual consumers' business and problems is not charted here, as such management does not come under the normal meaning of supervision. At the same time, it is obviously an important activity – and one which requires great resources – when consumer protection is considered in the whole of its extent in society.

SUPER-VISORY FOCUS \ TARGET	PROTECTING THE SYSTEM	PROTECTING THE CONSUMER
STABILITY <i>(Prudential Supervision)</i>	Financial and operative stability and adequate risk management among central financial companies.	Strong financial stability and risk control in companies administering client assets. Commitments towards depositors, insurance policyholders, fund-unit holders etc. must be fulfilled.
MARKET CONDUCT and INFRASTRUCTURE "fit and proper"	Transparency and security in trading systems, on marketplaces and in clearing and settlement. Functioning governance/control, accountancy and auditing of financial companies. Counteracting finance-related crime, among other means through background checks of owners and management.	Correct and relevant information to consumers and investors, reasonable terms and conditions, and correct treatment of clients. Raising consumers' awareness, in certain cases acting directly in consumers' long-term interest.

¹⁸ An earlier variant of the figure can be found in *SOU 2003:22*, "Future financial supervision".

The problems of how supervisory targets are to be formulated, and of how and by whom supervision is to be conducted, have been concentrated, with some simplification, in the box at the bottom right. The two uppermost boxes are quite unambiguous and well-defined, and quite obviously form the core of financial supervision. The bottom left box is also largely a natural task for financial supervision, even though there are grey zones in which other authorities must also act. The optimum allocation of duties and responsibility between authorities is also far from self-evident here.

As regards the lower right square – that is, topics that should generally be associated with the concept of consumer protection – the allocation of duties and responsibility is significantly less clear. To start with, responsibility is divided between FI and the Swedish Consumer Agency, on the basis of different regulatory platforms: FI acts on the basis of commercial legislation (which includes operating regulations and other specific financial legislation), while the Swedish Consumer Agency acts on the basis of the Swedish Marketing Act and the Swedish Consumer Contracts Act, among others. In addition to this, a number of other participants are involved, for example the consumer departments – institutions for advising and assisting individuals, co-financed by government and industry – and the National Board for Consumer Complaints (ARN). Unlike FI and the Swedish Consumer Agency, the consumer departments, ARN and the Consumer Ombudsman (KO) pursue individual consumers' cases.

This fragmented structure is probably dubious from an efficiency viewpoint, and is definitely poor from a consumer viewpoint – it is not easy for a consumer to know to whom to turn in the event of a problem. It is true that FI has long had a both comprehensive and formalised cooperation with the Swedish Consumer Agency, but, from the consumer's perspective, this does not solve the problem to any great extent.

Consequently, this has been discussed repeatedly and in different contexts. Occasionally the solution has been advanced that the Swedish Consumer Agency should take all (or a larger share) of the responsibility (as in the Consumer Policy Commission¹⁹), occasionally that FI should take a clearer leading role (as in the Commission on Business Confidence²⁰). However, at the same time, in both of these cases (as in others), several problems have been noted as regards concentrating activities into one authority. In FI's case, the risk of conflicts of interest and resources that may arise in certain situations has been pointed out. In the Swedish Consumer Agency's case, it has been pointed out, among other misgivings, that the Agency lacks the competence and closeness to the financial

¹⁹ *SOU 2000:29*, "Starka konsumenter i en gränslös värld".

²⁰ *SOU 2004:47*. See particularly Chapter 10.

market considered to be important for supervision to be effective. Consequently, in both of these cases, the proposals have ended in a shifting of focus rather than in any streamlining.

The development of consumer protection that has certainly taken place in recent years – for example, the increased resources allocated to the consumer departments and FI's active work on consumer education issues – has thus been within a mainly unchanged, and fragmented, responsibility framework.

So are there any new facts on the table that could justify a new approach? Perhaps, perhaps not. The various arguments for and counter-arguments against the solutions put forward over the years are still relevant. But changes in the financial and institutional environments also mean that different arguments and aspects can both increase and decrease in relevance and strength, so that a solution that was appropriate yesterday may be less appropriate today, and entirely inappropriate tomorrow.

Two clear and important factors are at play in this context.

- The importance of strong consumer protection on the financial markets is growing at the same rate as the range of financial products offered to households becomes increasingly comprehensive and, in certain areas, increasingly complex.
- Financial supervision focused on stability is being assigned increasingly comprehensive tasks, among other reasons due to the increased international harmonisation of regulations (both in the EU and globally), which both entails more comprehensive regulations in many areas and also makes tighter international supervisory work necessary. This process has been further hastened by experiences during the financial crisis.

In other words, both of the main areas of financial supervision are facing increased pressure and an increased need for renewed efforts. Viewed from the point of view of a supervisory authority, this may lead to different conclusions. On one hand, it can be seen as an argument for more and stronger efforts – and for increased resources – in both supervisory areas, so that knowledge of the different aspects of the financial sector's conditions can be used in a coordinated manner and synergies between the different areas can be exploited. On the other hand, it can also be seen as a reason for streamlining activities, in which the financial supervisory authority would focus on one or more of the boxes in the figure above, while another body assumes responsibility for the other boxes.

Examples abroad

The United States Congress decided during the year to concentrate and upgrade consumer protection work in the financial area. To do this, the Consumer Financial Protection Bureau was founded within the framework of the Dodd-Frank Act. The intention is for the authority to have a strong and independent position and to be able to work broadly, both with overall issues and with concrete assistance to individual consumers. Financial education is also one of its defined areas of activity. The authority will have its own budget, albeit within the framework of the Federal Reserve, the US central banking system.

In the United Kingdom, the Financial Services Authority (FSA) has, for many years, had a broad supervisory role as regards financial consumer protection. Roughly transposed to Swedish conditions, it could be said that the FSA combines the roles of FI and the Swedish Consumer Agency (in the financial area) under the same roof. This year, with the Bank of England having been given the specifically overriding responsibility for the financial stability system, a shift in focus has taken place regarding the FSA's tasks, which can now be said to be more focused on consumer protection in a broader sense.

Interesting changes in the institutional circumstances of important countries in our geographical area have thus taken place recently. Even though foreign solutions and experiences seldom or never can be copied directly into Swedish circumstances, there is still, obviously, every reason to examine what may be relevant and applicable in this country.²¹

Some alternative models

One solution inspired by the new US model, based on the principle of streamlining, could be to restrict FI's remit to financial *companies* and the relations between these. FI would then no longer be involved with relations between companies and consumers. Instead, this responsibility could be transferred to the Swedish Consumer Agency, possibly in cooperation with the consumer departments, or to a new authority for financial consumer protection with some features in common with the new US authority and/or the FSA, if it is deemed that financial consumer protection needs a well-defined mandate and resources of its own. In

²¹ See, for example *A Report on the Mandate, Structure and Resources of the Swedish Financial Supervisory Authority* by Howell E. Jackson, James S. Reid (2010), p. 34: "In recent debates over financial consumer protection in the United States, one of the most contentious issues was the relationship between the newly created Consumer Financial Protection Bureau and traditional supervisory agencies. While the resulting legislation is hardly a model of jurisdictional clarity, the legislation does offer one approach to separating supervision from consumer protection and Swedish officials might wish to consider how the United States has addressed this matter".

such a case, FI's consumer protection responsibility should be delimited as capital value protection (that is, companies' financial and operative stability) – a task closely connected with the system stability target.

This would mean clearer mandates and clearer responsibilities for all authorities involved, which would be positive from all aspects, not least for consumers. In addition, FI would have a clearer focus, as it would be possible to decrease the number of companies under FI's supervision considerably. The fact is that several categories of financial company are without relevance in the aspects of both systems and capital protection (for example, non-life insurance companies and insurance brokers). In this case, FI should not have any supervisory responsibility over these companies.

An alternative model could be for FI to maintain and broaden its role to also include those aspects of financial supervision currently carried out by the Swedish Consumer Agency, but for this to take place in a part of FI that has its own mandate and its own budget – which be necessary to avoid resource conflicts. The connection to FI's other activities would be through the coordination of administration and policy. Such an arrangement would have a certain relationship with the proposals previously put forth by the Commission on Business Confidence. Such a model could possibly also be applied if, and to the extent that, FI is allocated further supervisory tasks outside the core area of financial supervision.

To sum up, no obvious optimal solution exists for presentation at this point. But the growing demands being placed on the different areas of financial supervision are making it necessary to develop both clearer and more expedient organisational solutions than those we have at present.

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