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Macroeconomic imbalances - Sweden



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Macroeconomic imbalances – Sweden

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EXECUTIVE SUMMARY AND CONCLUSIONS

This in-depth review takes a broad view of the Swedish economy in order to identify actual or potential imbalances and the possible macroeconomic risks which they may entail. It should be acknowledged that the Swedish economy has performed very well in many respects, recording high GDP growth and a declining public debt ratio following from many important reforms undertaken over the last two decades. The main observations from this review are:

- **The Swedish current account surplus position does not seem to point to emerging risks.** From a longer-term perspective, the current account surpluses have brought Sweden's international investment position from a deficit to close to zero, thus correcting the debt accumulated in the 1970s and 1980s. There do not seem to be policies in place that artificially hold back domestic demand, with the possible exception of the construction sector. Sweden allows its currency to float freely, wages are set among social partners with no political intervention and fiscal policy has provided support to domestic demand in recent years. The surplus, thus, rather reflects prudent behaviour of various economic actors in Sweden (strong commitment to ambitious fiscal rules, pension savings by households) combined with less-balanced trends in other countries. Limited housing investment has also been a factor, although of smaller importance.
- **The competitiveness or export performance appear to be overall benign.** Sweden's gradual loss in global market share for exports of goods and services is not worse than for the majority of other mature western European economies and reflects the integration of fast-growing export-oriented economies, notably in Asia, into the world economy. The loss in market share does not appear to be rooted in unfavourable domestic cost developments, as unit labour costs have rather been growing slower than in its main trading partner countries and the real effective exchange rate has not shown any particular trend over the last decade or so.
- **Despite some mitigating circumstances, the high level of private-sector debt, in particular household indebtedness, deserves attention.** While corporate debt makes up the largest share of total private-sector debt, there are specific factors behind it (mainly the strong role of multi-nationals and of intercompany loans) which makes it less of a concern. In the case of household debt, however, the high debt level implies a heightened risk to macroeconomic stability by making households' balance sheets more sensitive to negative shocks, such as a fall in house prices, a prolonged period of low or negative economic growth or a real interest rate shock. In view of that risk, and the potential role of various policies in stimulating continued debt build-up, such as generous interest rate deductibility, close monitoring may be warranted.
- **Although house prices seem to have developed in line with fundamentals, the Swedish housing market represents an area where imbalances may emerge.** Some policies and features, such as supply bottlenecks and rental regulation in combination with changes to the tax system, may have created an upward bias in house prices. These policies and institutional features imply distortions or represent imperfections that carry an economic efficiency cost and could have a destabilising effect. Their interaction with tax policies and institutional features in the Swedish mortgage market, such as generous interest deductibility on mortgages and little amortisation, could also potentially increase the cost of these.

In this context, **the in-depth review concludes that Sweden is experiencing macroeconomic imbalances, which are not excessive but need to be addressed.** In particular, certain macroeconomic developments regarding private sector debt and the housing market deserve attention so as to reduce the risk of adverse effects on the functioning of the economy.

The policy response could include measures to foster prudent lending, reduce the debt-bias in housing taxation, strengthen mortgage amortisation requirements and promote the use of fixed interest rate mortgages. Possible measures to improve the flexibility of housing supply include simplification of the planning and zoning processes, fostering competition in the construction sector and further easing the regulation of the rental market.

1. INTRODUCTION

On 14 February 2012, the European Commission presented its first Alert Mechanism Report (AMR), prepared in accordance with Article 3 of Regulation (EU) No. 1176/2011 on the prevention and correction of macroeconomic imbalances. The AMR serves as an initial screening device, helping to identify Member States that warrant further in-depth analysis to determine whether imbalances exist or risk emerging. According to Article 5 of Regulation No. 1176/2011, these country-specific “in-depth reviews” should examine the nature, origin and severity of macroeconomic developments in the Member State concerned, which constitute, or could lead to, imbalances. On the basis of this analysis, the Commission will establish whether it considers that an imbalance exists and what type of policy follow-up it will recommend to the Council.

For Sweden, the AMR suggested the need to look more closely at whether Sweden is exhibiting macroeconomic imbalances of an internal and external nature. On the external side, the AMR highlighted a long series of strong current account surpluses which, however, coincided with a loss in market shares over the last years. On the internal side, the high level of private debt was identified as a matter of concern, mainly due to increasing household indebtedness in the context of strong increases of house prices over the last decade¹.

Against this background, Section 2 of this review looks more in detail into these developments covering both the external and internal dimensions, followed by specific focus sections on the housing market and private sector debt developments in Section 3. Section 4 summarises the findings and presents possible policy considerations.

¹ The AMR 2012 concluded for Sweden, that "there has been a record of persistently large current account surpluses, above the indicative threshold. This reflects positive private and public sector saving positions on the one hand but also to some extent subdued domestic investment, in particular in the construction sector. Indicators of cost developments such as unit labour costs and real effective exchange rates do not point to a loss in price competitiveness. At the internal side Sweden shows a very high level of private sector debt well above the indicative threshold. There has been increasing household indebtedness, which is now at high levels despite recent slower credit growth. This reflects very strong increase in house prices over the last fifteen years which have started to stabilise only recently."

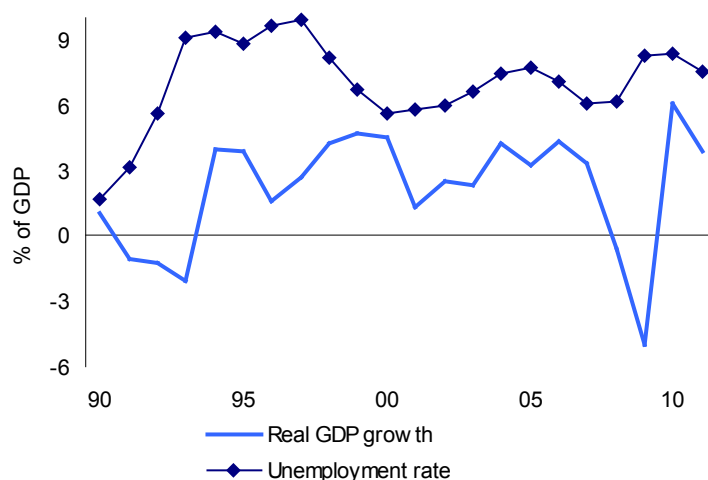
2. MACROECONOMIC SITUATION AND POTENTIAL IMBALANCES

2.1. MACROECONOMIC SCENE SETTER

When the 2008/09 crisis hit, the Swedish economy had a long period of strong growth behind it, with GDP growth averaging 3.5% over the ten years to 2007. With its dependence on exports of investment goods, Swedish GDP growth fell particularly sharply as global trade shrank and companies put investment plans on hold. However, thanks to the relatively quick return of confidence after the acute phase of the financial crisis, Swedish exports rebounded briskly on the back of the global recovery. Also, Swedish domestic demand held up reasonably well during the crisis, helped by expansionary fiscal and monetary policies and a relatively resilient housing market. The effect of the crisis on the labour market was therefore less intense than initially feared, with unemployment peaking at around 9% in 2010, before gradually receding as the recovery gained traction. In early 2012, it stood at around 7.5%. The recent global slowdown in the wake of the euro area sovereign debt crisis is again affecting the Swedish economy through its effect on exports and consumer and business confidence. Fiscal and monetary policies are not likely to provide the same cushioning as during the 2008/09 slowdown and high household indebtedness coupled with more restrictive lending practices is expected to lead to a more dampened development of private consumption.

Although Sweden has gradually been losing export market shares over several decades, this has not prevented Sweden from accumulating an unbroken series of large current account surpluses over the last decade. This reflects the positive net saving position of the government and the household sector since the important reforms of the fiscal framework and pension system of the 1990s. Strong economic growth and a trend decline in interest rates over the same period led households to accumulate mortgage debt, which has reached record levels and has accompanied a strong increase in house prices.

Graph 1: Real GDP growth and unemployment rate



Source: Commission services

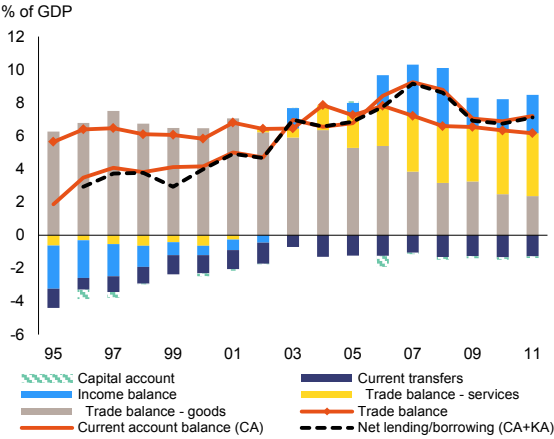
2.2. SUSTAINABILITY OF EXTERNAL POSITIONS

Sweden has recorded a series of large current account surpluses averaging more than 7% over the last ten years and exceeding the indicative scoreboard threshold of 6% since 2004. The current account surplus gradually expanded between the mid-1990s and 2007, when it peaked at 9.2% of GDP, before narrowing to around 7% of GDP in 2009-11.

Until the mid-2000s, the current account surplus mainly resulted from a strong performance in goods trade. The surplus in goods trade, which averaged around 7% of GDP between 1995-2005, reflected on the one hand a strong export performance benefiting from the currency depreciation in 1992 and a favourable product composition of exports (IT goods), and on the other hand subdued imports resulting from domestic demand being depressed after the 1991-93 crisis and the subsequent fiscal consolidation.

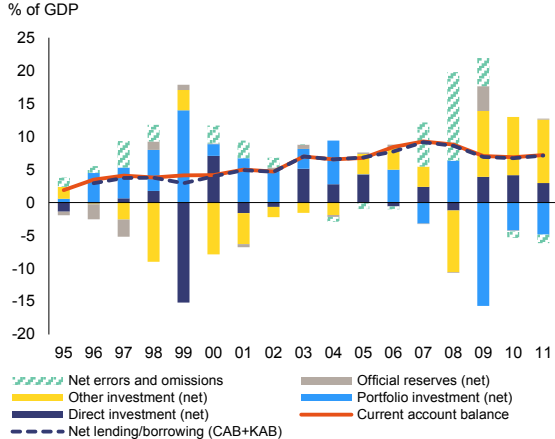
Since the mid-2000s, the rising surplus in services trade has fully compensated the steady narrowing of the surplus in goods trade and has become the main driver of the overall current account surplus. This development can be attributed mainly to a structural shift away from goods production to service provision in some industries (also sometimes labelled "servicification of manufacturing") as well as to expanding activities of multinational companies residing in Sweden and progressing cross-border vertical specialisation (see also the section on competitiveness and export performance)². At the same time, investment income has become an important contributor to the current account surplus since the mid-2000s due to significant net dividend inflows from Swedish investment abroad. Lower repatriated profits after the 2008-2009 crisis explain the narrowing of the current account surplus in recent years. Current transfers show a stable negative balance reflecting Sweden's position as a net contributor to the EU budget and an aid donor on a global level. Sweden's capital account typically records small outflows of about 0.1% of GDP and therefore does not have any significant impact on the external balance of the country.

Graph 2: Current account decomposition



Source: Commission services

Graph 3: Financial account decomposition

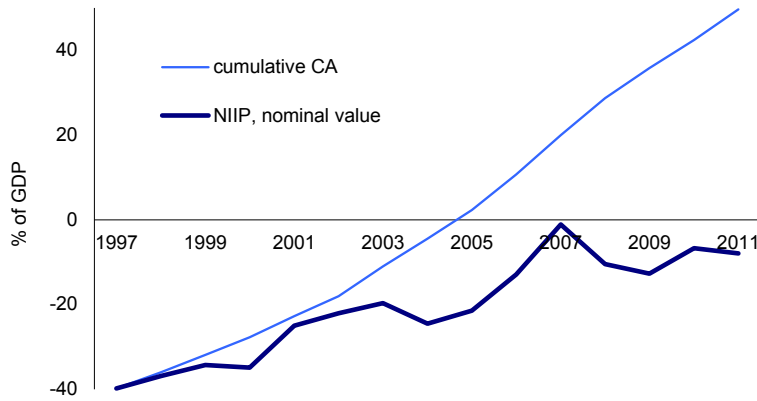


Source: Commission services

As a mirror image of the current account surplus, the financial account has recorded net outflows since 1995. Although the analysis of the financial account is complicated by high volatility of ever-stronger cross-border financial flows and large errors and omissions (especially in 2007-2009 when errors and omission averaged 8% of GDP), some limited observations can be made. Since 2000, financial flows from Sweden have typically been channelled through foreign direct investment, in the form of either direct acquisitions of companies abroad or lending to foreign subsidiaries. Since 2005, outflows in other investment have become increasingly important representing lending by Swedish banks abroad and repayment of debts to foreign counterparts. At the same time, portfolio investment has recorded net inflows since 2009 due to an intensified financing of Swedish banks and corporations through bond issuance, coinciding with increasing foreign demand for Swedish debt securities, including government bonds. Official reserves have been stable since 2007, except for 2009 when the central bank boosted its reserves by some 60% (3.7% of GDP) in order to be able to supply the Swedish banks with liquidity in foreign currency in a situation of limited access to international capital markets.

² Servicification of manufacturing connotes the increasing share of services in the output of manufacturing firms. This trend is strengthened by the tendency of companies to place some activities in specialised firms in, for instance, logistics, finance etc. With globalisation and liberalisation of trade in services, this has resulted in strengthening cross-border trade flows in services. See National Board of Trade (2010).

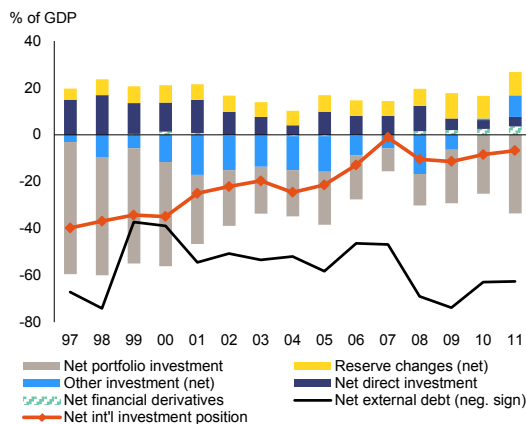
Graph 4: Cumulative current account vs. NIIP (% of GDP)



Source: Commission services

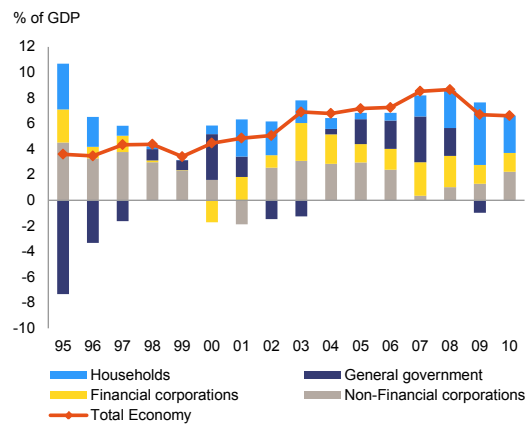
The net international investment position (NIIP) has improved considerably since the mid-1990s, but remains negative despite a long period of strong current account surpluses³. The NIIP improved from -40% of GDP in 1997 to -7% of GDP in 2011, mainly through a reduction of equity liabilities. However, cumulative current account surpluses over this period would result in a positive balance of 50% of GDP in 2011. Graph 4 shows that current account surpluses explain NIIP development relatively well until 2007, whereas other factors have influenced the NIIP since then. These factors include changes in the valuation of external assets and liabilities due to a different composition on both sides of the balance sheet, different returns within categories and exchange rate movements. Since foreign assets are mainly denominated in foreign currencies (88% in 2011), while the majority (58%) of foreign liabilities are denominated in the national currency, exchange rate movements have substantial effects. A decomposition of the NIIP reveals that the increasing discrepancy since 2007 is mainly on account of increasing value of Swedish bonds relative to the value of foreign bonds held by Swedes. With an increasing size of external assets and liabilities relative to GDP (which in the case of Sweden were 2.5 times larger than GDP in 2011), valuation effects become more important for the external position of a country than the current account flows. Some studies suggest that well-performing countries with efficient stock and bond markets (such as the Netherlands, Finland or Sweden) often find themselves with deteriorating or only slowly improving NIIP⁴. The level of net external debt was the fourth highest as a percentage of GDP in 2010 (after Greece, Spain and Portugal). This reflects the starting position (high external debt already in the mid-1990s) rather than adverse long-term developments. The rapid expansion of external debt after 2007 has been driven by stronger external borrowing by banks and intensified intercompany borrowing (for the latter, see also section on private sector indebtedness).

Graph 5: NIIP decomposition



Source: Commission services

Graph 6: Net lending and borrowing by sector



Source: Commission services

³ If measured at market value, Swedish NIIP would be slightly positive (12.5% of GDP in 2011).
⁴ Boonstra (2008).

Sectorial saving-investment balances show that the current account surplus has been underpinned by a high level of saving in the government, household and financial corporations sectors. The government balance turned to surpluses following the comprehensive public finance reforms in the second half of the 1990s. An ambitious surplus target for the general government sector was established, currently stipulating that an overall surplus of 1% of GDP be achieved over the business cycle. Households became net lenders as they increased their saving significantly in response to the economic crisis and tax reforms in the early 1990s⁵ as well as the pension reform at the end of the decade⁶. The 2008 crisis pushed households to further strengthen their saving, as a result of which the saving-investment surplus widened to around 5% of GDP in 2008-2010. The corporate sector has traditionally shown large surpluses, but no clear trend can be observed which could explain the shift towards large current account surpluses. Until 2000, the surpluses had been driven mainly by non-financial corporations, whereas financial corporations have taken over the lead since then. This reflects high profitability of Swedish banks stemming from their foreign expansion as well as increased investment by non-financial corporations in 2005-2008.

The positive saving-to-investment balance could also be partly explained by historically low domestic investment between 1995 and 2008, mainly in housing. The overall investment ratio plummeted during the crisis of the early 1990s and recovered very slowly, catching up with the EU average only in recent years. This trend was particularly visible in housing investment, which dropped from 6% of GDP in 1991 to 1.5% of GDP in 1995 and was still 1.3 percentage points below the EU average in 2011, despite a steady recovery and a house price boom in the 2000s⁷. Low housing investment in the last 15 years is mainly seen as a response to substantial changes in housing taxation in 1991-1993 and the economic crisis, combined with a large housing stock built in the 1970s, but some bottlenecks in the housing supply may also have played a role (see section on the housing market). Non-housing related investment had returned to the EU average level already by 2000.

Apart from some constraints to housing supply, policies that tend to suppress domestic demand or trigger an 'artificial' gain in price competitiveness do not seem to be in place. Two decades of adherence to a credible inflation-targeting regime and a free-floating exchange rate speak against the case of currency manipulation. This view is also supported by the relatively stable level of official reserves over the last decade. There are little signs of an undervalued currency. ECFIN and IMF calculations suggest that the real effective exchange rate of the krona was close to its equilibrium level in 2011 (a slight undervaluation of about 5% is estimated by both)⁸. The wage-setting is fully in the hands of social partners and has flexibly accommodated cyclical developments, without impeding upward wage adjustments. Unit labour costs have grown at a slightly slower pace than costs in Sweden's main trading partners in trade-weighted terms, but have not been abnormally low. The fact that Sweden experienced a house price boom in the period of large current account surpluses does not favour the view of suppressed domestic demand as a factor behind the external surpluses. On the contrary, demand in that period was boosted by significant income tax cuts supporting household disposable income.

Overall, it appears difficult to argue that the Swedish current account surplus represents or demonstrates an underlying imbalance in the economy. It rather reflects prudent behaviour of various economic actors in Sweden (strong commitment to ambitious fiscal rules, pension savings by households) combined with less-balanced trends in other countries. Limited housing investment has also been a factor, although of smaller importance. Domestic monetary and fiscal policies have not led to suppressed demand or undervalued currency. The allocation of part of national saving to foreign assets is therefore seen as an efficient allocation of resources as investors find the rate of return abroad more attractive than investment opportunities in the domestic economy. From a longer-term perspective, the current account surpluses have brought Sweden's international investment position from a negative position to close to zero, thus correcting the debt accumulated in the 1970s and 1980s.

Looking forward, several factors might lead to a reduction of the high Swedish current account surplus over the coming decade. First, a number of countries are now facing a long period of deleveraging in order to

⁵ The tax reforms in the early 1990s made it more profitable for households to save and less beneficial to take on debt. Interest income, which had until then been taxed together with personal income at 50 per cent or more, was taxed separately after 1991 at much lower rates (today 30%). Also the deductibility of interest payments from taxable income was decreased substantially in 1993.

⁶ In 1999, the public pension pillar was complemented with a compulsory private pension scheme. In addition, a large majority of employees (about 90%) save for pensions in sector-wide occupational pension schemes and some people opt to further secure their pension prospects with voluntary saving in private schemes.

⁷ Housing investment increased its share in total investment from 10% to 18% between 1995 and 2010, compared with a relatively stable share of 25-28% in the EU over this period.

⁸ IMF, Article IV Staff Report 2011. ECFIN's calculations are based on the CA norm methodology which suggests that a country with similar characteristics like Sweden should on average exhibit a balanced current account.

correct previous imbalances, therefore improving their saving-investment balances relative to Sweden. Second, competition to Sweden's high-technology exports is likely to gradually intensify as emerging economies climb up the technology ladder. And finally, as the Swedish population matures and the strong post-war generation moves into retirement, the country is expected to gradually move from saving to dissaving. ECFIN calculations suggest that for NIIP to stay close to zero in the coming decade, the current account should remain in balance, disregarding valuation effects.

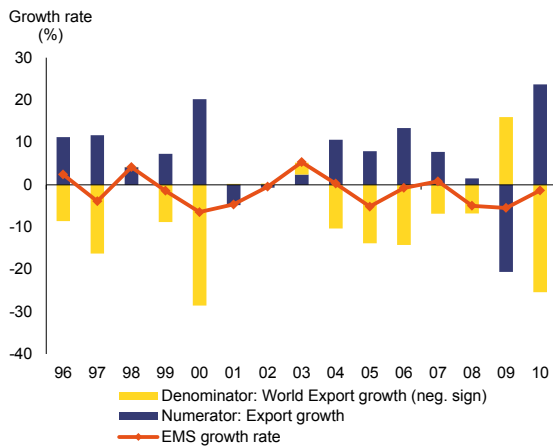
2.3. COMPETITIVENESS AND EXPORT PERFORMANCE

Swedish export market shares are on a downward trend. The Swedish trade balance has, however, shown a large surplus of around 7% of GDP since 2005, with the services balance playing an increasingly important role. Whereas until the mid-2000s, the surplus was mainly explained by goods trade (6% of GDP in 2005), since 2009 the services surplus is larger than the goods surplus, accounting for 4% of GDP in 2011. This is reflected in the on-going secular decline of Sweden's share in the global trade of goods. From a peak of about 2.1% in the early 1970s, Sweden's share of global exports shrank to 1.6% in 1995 and has since continued to decline (1.1% in 2010). This development partly reflects the integration into the world economy of a number of fast-growing export-oriented economies. This is partly compensated by an upward trend in Sweden's share of world exports of services, which in 2010 stood at 1.8%. On balance, the share of Sweden in global exports of both goods and services has fallen since 1995 from 1.5% to around 1.2% in 2010. The five-year average indicator in the scoreboard indicates that around half of that loss occurred over the 2005-10 period. It is however noteworthy that Sweden suffered a smaller decline in its market share than the EU15 average over this period.

Part of the reason for the on-going loss in market share for goods in recent years is the product and country mix of Swedish exports, with its heavy reliance on the rest of Europe, to which around two thirds of Swedish exports is directed. Swedish exports are also dominated by product groups for which demand is growing slower than total global trade. Since 2005, there has been a certain shift away from motor vehicles and electronic and telecommunication products to machinery and other equipment, petroleum and chemicals. This could reflect the increasing importance – albeit from a low base – of China and other developing countries in Swedish exports. These trends are also visible in the respective shares of various product categories in the Swedish trade balance, where the negative contribution from fuel products and consumer goods have become more significant and capital goods and, in particular, intermediate goods have become more prominent. After suffering a decline in the wake of the bursting of the IT bubble in the early part of the 2000s, the share of high-tech exports has been rather stable over the last decade, hovering at around 14% of total exports. After peaking at 1.5% in 1998, Sweden's share of global high-tech exports has been stable at around 1.1% in recent years.

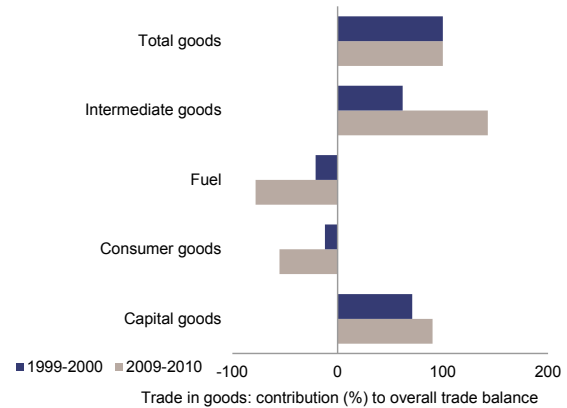
Behind the trend towards a higher share of services in Swedish exports lies a structural shift to service provision in some industries, driven partly by an intensifying international division of labour by multinational companies and partly by a longer-term reorganization within technology-intensive sectors from manufacturing towards services. While export market shares in motor vehicles and electronic and telecommunication products to machinery and other equipment decreased strongly comparing the 2000-2001 period with 2009-2010, knowledge-intensive services have been on the rise between 2000 and 2009. The categories that have expanded particularly significantly are tourism as well as computer, information and communication services, royalties and license fees, and other services.

Graph 7: Export market share growth (% y-o-y)



Source: Commission services

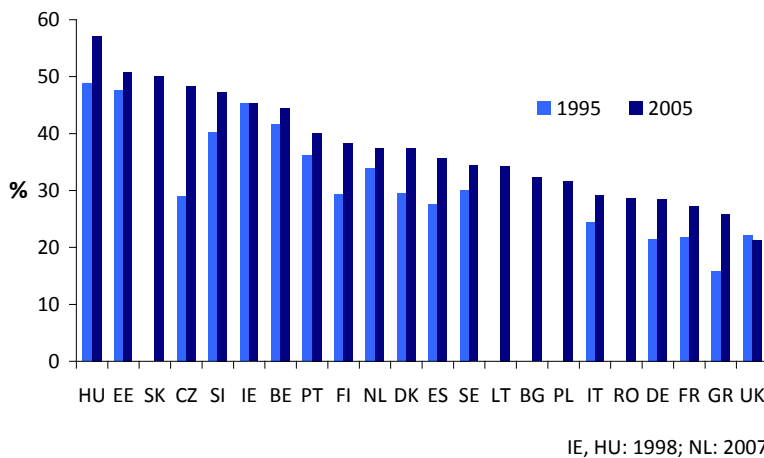
Graph 8: Contribution to overall trade balance for goods by Broad Economic Categories (%)



Source: Commission services

Compared to other Member States Swedish exports also showed a rather low (albeit increasing) import content in 1995 (30.1%) and 2005 (34.4%). This may to some extent indicate that Sweden's exports traditionally contain a relatively high share of domestic value added, despite the country's strong intermediary function in trade.

Graph 9: Import content of exports (% of total exports value)



IE, HU: 1998; NL: 2007

Source: Eurostat input-output, own calculations

Developments of unit labour costs follow the usual cyclical pattern and do not pose a significant problem.

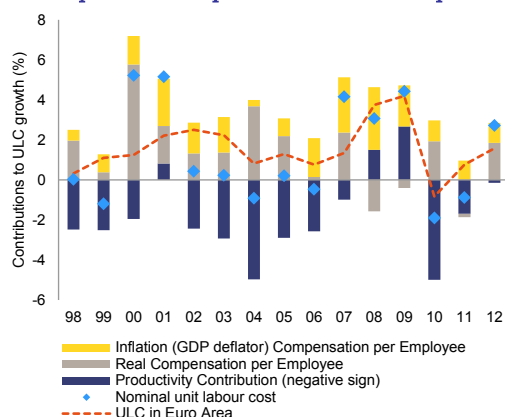
Low or negative productivity growth and high inflation pushed up *nominal unit labour costs* in the 2007-2009 period, and the subsequent strong productivity rebound and lower inflation led to falling unit labour cost in the 2010-11 period. This is the same pattern as observed in the previous cycle, where unit labour costs shot up in 2000-01, as productivity slowed while costs and inflation increased, only to fall back to virtually zero as the labour market cooled down and companies rationalised their operations. Measured against cost developments in trading partner economies, Swedish cost developments do not point to any serious competitiveness challenge. Although *the real effective exchange rate*, based both on HICP and unit labour costs, has showed some volatility, varying together with the gyrations in the nominal exchange rate, its 2011 level is close to its long-term average. Typically, the Swedish currency has weakened as the world economy has gone into recession only to regain the losses during the recovery phase. *Exporters' profit margins* (proxied by the relative development of export prices and unit labour costs) have increased slightly over the 2005-2010 period, despite being hard hit by the crisis of 2008-2009.

Taking a broader perspective on competitiveness, the World Economic Forum's Global Competitiveness report consistently ranks Sweden very high, with Sweden coming in third in the 2011-12 edition (out of more than 140 countries). Among Sweden's strengths are its high technological readiness, the quality of its institutions and its higher education and training (ranked 2), whereas it scores lower on macroeconomic stability, infrastructure, health and primary education (ranked in the 13-18 bracket) and labour market efficiency (ranked 25).

Sweden's good competitiveness position is supported by its top-performer status in innovation and R&D. Among the EU countries, Sweden ranked best on innovation performance in the 2011 Innovation Union Scoreboard⁹. Sweden performs exceptionally well in business R&D expenditures. It dominates in three out of 8 innovation dimensions on the scoreboard, namely human resources, finance and support, and firm investments. The only domain in the innovation process where Sweden could further improve is the commercialization of innovative products. Sweden is below the EU average on this indicator on the Scoreboard, with a negative trend.

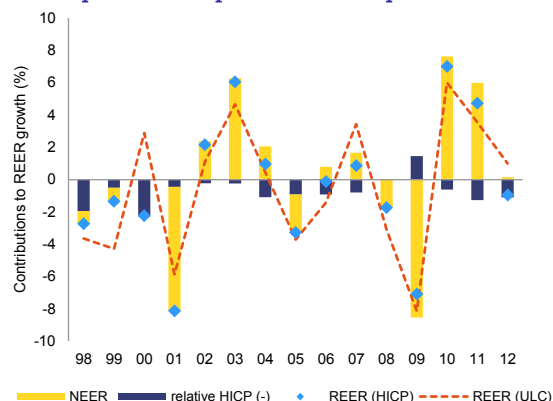
Against this background, it seems reasonable to conclude that, despite its declining export market shares, Sweden does not exhibit serious problems regarding its competitiveness or export performance. Its gradual loss in global market share for exports of goods and services is not worse than for the majority of other mature western European economies and reflects mainly the integration of fast-growing export-oriented economies, notably in Asia, into the world economy. It seems that the loss in market share is not due to unfavourable domestic cost developments, as unit labour costs have rather been growing slower than its main trading partner countries and the real effective exchange rate has not shown any particular trend over the last decade.

Graph 10: Decomposition of ULC developments



Source: Commission services

Graph 11: Decomposition of developments in REER



Source: Commission services

2.4. PRIVATE SECTOR INDEBTEDNESS

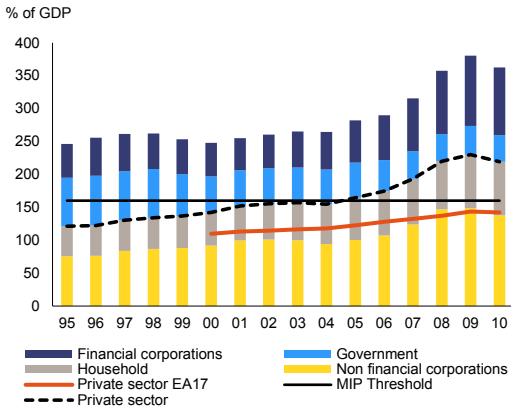
While the Swedish public debt has come down significantly over the last 15 years, falling from almost 90% to 40% of GDP between 1995 and 2010, gross private debt expanded to high levels over the same period (from 156% to 237% of GDP). About two thirds of private debt is generated by non-financial corporations (155% of GDP in 2010) and one third by households (82% of GDP in 2010). The shares of the two sectors in total gross private debt have been relatively stable over the last 15 years, as both corporate and household debt grew at a similar pace. Corporate debt remains high even if measured by consolidated data (137% of GDP in 2010), which balances out mutual lending between Swedish corporations. To complete the picture, financial corporations also contribute significantly to the country's debt. Notable is the doubling of financial corporate debt after 2005, which was to a large extent matched by growing assets, reflecting mainly the expansion of Swedish banks' activities abroad.

As regards the non-financial corporate sector, the relatively high debt-to-GDP ratio can to a large extent be attributed to the strong presence of multinational companies residing in Sweden. As multinationals service their debt with revenues from global sales, the sustainability of the debt is not directly linked to Swedish GDP, which makes the indicator less appropriate for Sweden. Also, an important part of the corporate debt (about one third or 57% of GDP) represents intercompany loans from abroad which are used by multinationals to minimise their tax bill and overcome imperfections in local capital markets through reallocation of lending within the group. The large share of intercompany lending clearly overstates the debt burden of Swedish

⁹ (http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm)

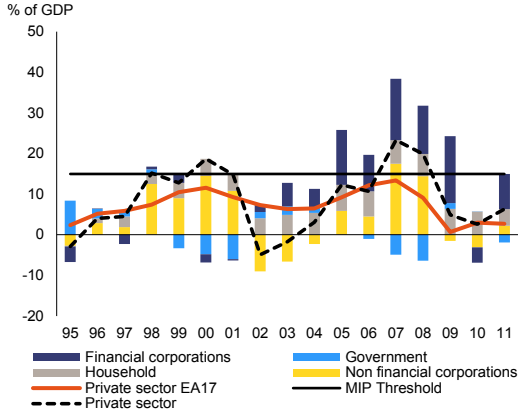
corporations, since liabilities of Swedish affiliates are typically matched by assets of foreign affiliates of the same group. In addition, intra-group loans from abroad are to some extent matched with intra-group loans to foreign affiliates, thus lowering the net debt figure. The overall indebtedness of the entire multinational companies would be a better indicator of the risks involved; however, such data are not available.

Graph 12: Decomposition of debt (% of GDP), consolidated



Source: Commission services

Graph 13: Credit developments (% of GDP)

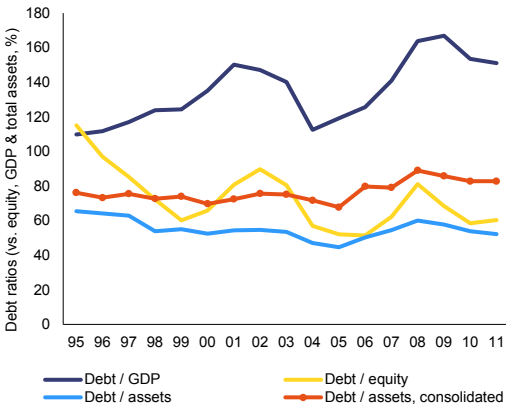


Source: Commission services

Various indicators of Swedish corporations' financial health do not point at any significant sustainability risks. The debt-to-equity ratio has declined from 115 to 58% between 1995 and 2010 and is currently below the average of old Member States (EU15). The debt-to-asset ratio was below the EU15 average both for consolidated (53%) and non-consolidated data (83%) in 2010 and has been broadly stable for both measures over the last 15 years. It should also be noted that there has been a significant downward adjustment in the corporate debt level over the past two years, with the debt-to-GDP ratio correcting by some 15-20 percentage points. Credit to non-financial corporations contracted in 2009 and 2010 after two years of annual increases of about 16% in 2007 and 2008.

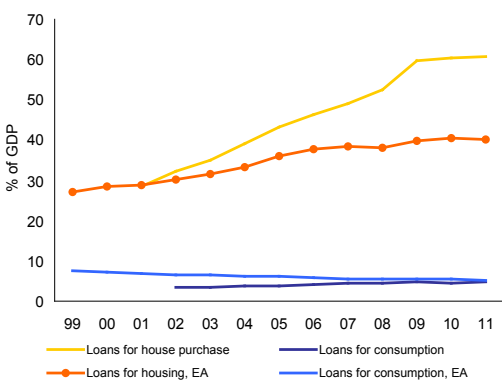
The parallel strong rise in gross household debt, which reached a new all-time high of 82% of GDP (or 170% of disposable income) in 2010, is dominated by the rapid expansion of mortgage debt. This, in turn, reflects the simultaneous rise in house prices (see next section on the housing market). After growing at a double-digit pace prior to the 2008/09 crisis, mortgage credit growth has subsequently slowed down. After a brief reacceleration in 2009-10, in response to aggressive rate-cutting by the Riksbank, the pace of mortgage expansion has fallen to an annual rate of around 5% in early 2012. This is a pace only slightly above what would stabilise the debt ratio. Slower house price growth, higher mortgage rates (partly as a result of wider spreads between the repo rate and the mortgage rate), heightened uncertainty about the economic outlook and, possibly, the introduction in October 2010 of a 85%-cap on the loan-to-value for new loans probably explain this marked slowdown in new mortgage issuance. However, it is also a measure of the strength of the underlying demand for new mortgages that the household debt ratio is barely stabilising, despite the confluence of all these inhibiting factors.

Graph 14: Leverage ratios, Non-financial corporations



Source: Commission service

Graph 15: MFI lending to households (% of GDP)



Source: Commission service, ECB

The build-up in household debt has been matched by a similar accumulation of assets, meaning that the net worth of households has not deteriorated. Mortgage debt has also mainly been incurred by those with higher incomes. Measures of affordability also show that mortgage servicing costs are manageable. While a high debt burden and extensive use of variable rates make households sensitive to changes in mortgage rates and disposable income, according to recent calculations by the Financial Supervisory Authority it seems that the vast majority of households would be able to honour their obligations to the bank also under various stress scenarios.

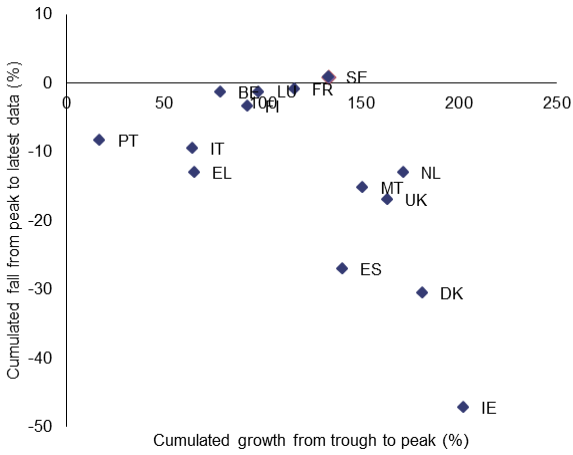
Notwithstanding the above-mentioned mitigating circumstances, the high level of private-sector debt warrants attention. In the case of household debt, in particular, the high debt level implies a somewhat heightened risk to macroeconomic stability by making households' net worth more sensitive to adverse developments, notably in the housing market. As most of household assets are made up of housing wealth, a fall in house prices has a bigger impact on households' balance sheets than similar fluctuations in the stock market. This means that households could start reining in their spending to rebuild their balance sheets also after fairly modest declines in house prices with negative effects on GDP growth and employment. In view of that risk, and the potential role of various policies in stimulating continued debt build-up, a closer look at private-sector debt seems warranted.

2.5. HOUSING MARKET DEVELOPMENTS

From the second half of the 1990s until the onset of the financial crisis, house prices in many countries, including Sweden, rose sharply. When the financial crisis hit, house prices started to fall, though their correction proved fairly muted and since 2009, house prices resumed their strong up-ward movement reaching a new all-time high in 2010. The strong rebound in house prices in 2009-10 explains why Sweden was the only member state, except for Finland, for which house price inflation exceeded the 6% threshold in the MIP scoreboard in 2010.

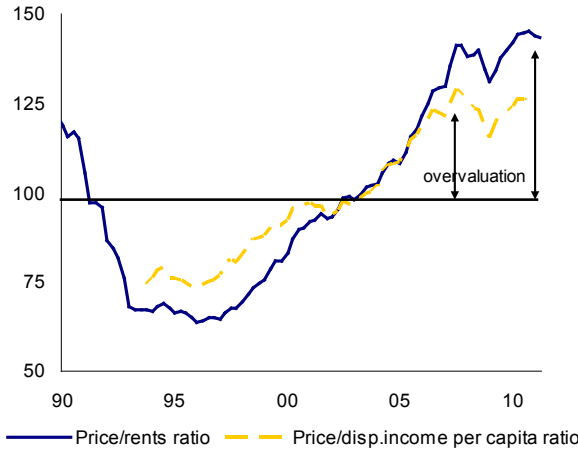
During 2011, however, house prices in Sweden have been rather stable, with some downward movement accelerating in the fourth quarter of 2011. Strong economic growth was not enough to offset higher mortgage rates, increasing uncertainty about the economic outlook and, possibly, the introduction, in the autumn of 2010, of a cap on the loan-to-value ratio. There are some tentative signs that prices may stabilise again in 2012, as mortgage rates have come down somewhat, the economic outlook has stabilised and household optimism about future house price developments has returned.

Graph 16: House price cycle, (% growth)



Source: Commission services, ECB, OECD, BIS

Graph 17: Price-to-disposable-income and price-to-rent ratio (sample average = 100)



Source: Sweden Statistics

There is no straightforward way of assessing whether house prices are now at a level in line with fundamentals. At least on some metrics, house prices now look richly valued (e.g. price-to-rent ratio, affordability ratios). The price-to-disposable-income-per-capita ratio is still some 25% above its mid-1990s level and close to its recent peaks. On the other hand, other indicators as well as econometric estimates suggest that the steady increase in house prices over the last 15 years may well be justified by fundamentals, such as strong disposable income growth and low interest rates coupled with limitations on the supply-side. Caution is however needed in interpreting these results, as fundamentals may change and past relationships may not hold.

Both demand and supply factors have contributed to the rise in house prices and their recent relative resilience. On the demand side, disposable income has risen strongly over the last decade and a half. The quick recovery from the 2008/09 recession, which was helped by significant monetary and fiscal stimuli, and a relatively resilient labour market explains why disposable income has continued to rise at a respectable pace also in the more recent period. Some specific tax measures favoring housing (such as significant decrease in property taxation and deduction schemes for home improvement services) have also added to demand for owner-occupied housing, as has rental regulation. The trend decline in mortgage rates, in combination with reduced amortization requirements, also fuelled demand over the last decade. On the supply side, a number of factors have contributed to a rather muted supply expansion over the same period. The effects from the crisis of the early 1990s and the 1991 tax reform lead to a sharp contraction of the construction sector, which has taken a long time to recover from. Poor competition and administrative uncertainty in relation to zoning and issuance of building permits may also have held back supply by raising costs. Thus, contrary to Spain and Ireland for instance, Sweden did not experience an overexpansion of the construction sector, as increased demand for housing mainly manifested itself in higher prices and less in increasing volumes.

Given the sharp increase in Swedish house prices since the mid-1990s and the many cases of booms turning to busts in other countries in recent years, it is worth looking closer at the Swedish housing market to assess the sustainability of current price levels. Although, some indicators point at a substantial overvaluation of house prices, others suggest Swedish house prices have developed in line with fundamentals. In addition, some policies and features in the Swedish housing market may well have contributed to the strong rise in house prices and their relative resilience in recent years. Some of these policies and institutional features may imply distortions or represent imperfections that carry an economic efficiency cost. Taken together, a further analysis of the Swedish housing market therefore seems warranted.

3. IN-DEPTH ANALYSIS OF SELECTED TOPICS

3.1. THE SWEDISH HOUSING MARKET

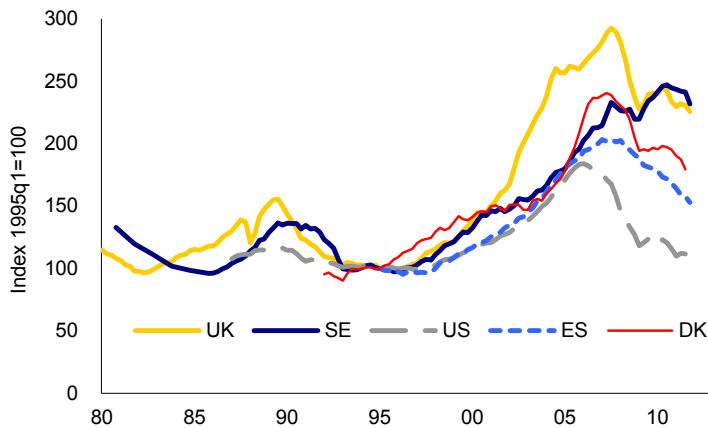
As noted in section 2a, the persistent high level of Swedish house prices may point to the existence of an imbalance implying risks for macroeconomic stability. Thus, this section provides a closer look at house prices developments and an analysis of their level and of factors that might explain it.

3.1.1. Development of Swedish house prices

During about a decade house prices in Sweden rose sharply. Between the trough of 1996 to the pre-crisis peak of 2007, Swedish house prices had climbed in real terms by almost 140% or by an average of 8% per year (Graph 18). When the financial crisis hit, house prices started to fall in most countries that previously had seen strong increases, including Sweden. In contrast to most of the other countries, however, the house price correction proved fairly muted in Sweden, with prices falling by only 6% from peak to trough in real terms. Moreover, after bottoming out in early 2009, house prices subsequently resumed their strong up-ward movement. By the third quarter of 2010 real house prices had risen by 12% to reach a new all-time high. This compares with much sharper corrections in countries such as Ireland, Denmark, Spain, the UK and the US, where only very recently real house prices in some cases have shown signs of bottoming out.

During 2011, real house prices in Sweden have trended slightly down in real terms with the fall accelerating in the fourth quarter of 2011. Strong economic growth, at least until the third quarter, was not enough to offset higher mortgage rates (both due to Riksbank tightening and wider spreads), increasing uncertainty about the economic outlook and, possibly, the introduction, in the autumn of 2010, of a cap on the loan-to-value ratio. House price expectations of households have been very volatile, swinging from strong optimism in the spring of 2011 to deep pessimism at the end of 2011, only to swing back to significant optimism in the spring of 2012¹⁰.

Graph 18: Real house prices



Source: Ecwin

¹⁰ In the December 2011 edition of the SEB/Demoskop poll, the share of households thinking house prices would fall over the coming year outnumbered those who thought they would rise by about 30 percentage points. Only in spring 2011, optimists had a comfortable lead of almost 40 percentage points. As the economic outlook has stabilised and the Riksbank has lowered the repo rate by 50 basis points since December 2011, the April 2012 edition showed that optimists were in the lead by 15 percentage points.

3.1.2. Are Swedish house prices over-valued?

Estimates of fundamental house prices in Sweden yield very different results depending on the assumptions made and methods used. On the crudest of measures, such as an unadjusted price-to-rent ratio, Swedish house prices now look significantly over-valued by 30-40% depending on the length of the data series used (see Graph 17)¹¹. Similarly, various measures of affordability, such as the ratio of house prices to disposable income, indicate that house prices are at relatively high levels in a historical perspective. The ratio of house prices to disposable income is currently at roughly the same level as in 1990, before house prices fell sharply. However, comparing with historical average values does not capture any possible structural shifts in the user cost of home ownership which could justify higher prices than the historical norm, such as a trend decline in mortgage rates and lower taxes on home ownership.

More sophisticated approaches attempt to control for structural changes. In a survey of risks in the Swedish housing market published by the *Swedish Riksbank*, both an econometric model and a general equilibrium model, estimated on Swedish data, are used to explain the strong rise in house prices and assess whether houses now are overvalued. The econometric model includes three explanatory variables (household real disposable income, an average after-tax real mortgage rate and household real financial wealth), which together explains very well the variations in house prices over the last 25 years. Since the mid-90s, the rapid rise in households' real disposable income explains about half the rise in house prices, with a further 35% explained by lower real mortgage rates¹². In the general equilibrium model, there are nine exogenous variables, which together explain 100% of the fluctuations around the long-term growth in house prices. It turns out that shocks to the demand for housing compared to other consumption explain 70% of all house price fluctuations, with another 20% explained by monetary policy shocks, i.e. changes to monetary policy not explained by a Taylor rule. According to the model, house prices are now 20% above its trend level. By definition, the model cannot explain why there has been this shift in preferences towards housing to relative other consumption. A study co-authored by the Chief economist of the *Financial Supervisory Authority*¹³ found no over-valuation, citing strong income growth, a structural decline in real interest rates on mortgages, easier access to mortgage finance due to lower down payment requirements, lower property taxation and subdued construction of new houses over the last decade as main explanatory factors.

To provide an indication of possible peaks and troughs in real house prices in 2011 and 2012, the *OECD* has estimated two separate probit models using data for 20 OECD countries. Although the OECD warns that these models can raise false alarms, they show that Sweden is the only country for which a peak in real house prices is predicted to occur in either 2011 or 2012 in both of the scenarios used in the exercise¹⁴.

According to Commission calculations, an adjusted price-to-rent ratio, taking into account the evolution of the user cost of home ownership¹⁵, would reduce the estimated overvaluation to practically zero in 2011. The estimates also suggest, however, that houses were overvalued by some 25% in 2007. The user cost of home ownership reflects the after-tax mortgage rate, the property tax, depreciation and expected capital gains/losses. If the user cost declines over time, as was the case in most countries due to a structural decrease in mortgage rates, this may imply a higher fundamental price-to-rent ratio. In the left-hand graph of Graph 19, the fundamental ratio is based on loans with a five-year maturity, whereas in the right-hand graph, all maturities are taken into account. In the latter case, the large share of variable rates is reflected in the high volatility of the fundamental price-to-rent ratio, as the user cost has changed in tandem with the large swings in interest rates observed in recent years.

¹¹ ECFIN calculations show that the price-to-rent ratio was about 40% above the long-term average at the end of 2011 and the price-to-income ratio some 25% above the long-term average. According to the OECD (2011), this overvaluation was 42% and 33%, respectively. The ECB (2009) calculated in 2009 that house prices were 40% above their long-term trend based on a price-to-rent ratio, whereas The Economist put that figure to 35% (23% when measured against income developments), "Downdraft", The Economist, 31 March 2012.

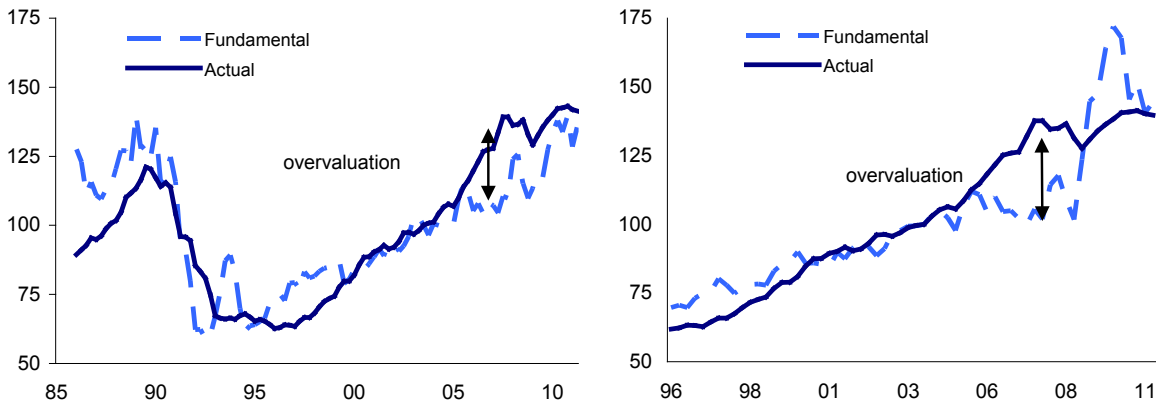
¹² A number of other variables were tested but performed poorly. These include unemployment, demographic variables, monetary policy expectations, housing investment and construction costs.

¹³ Frisell and Yazdi (2010)

¹⁴ OECD (2011).

¹⁵ For further details on the approach see Girouard, Kennedy, van den Noord and André (2006).

Graph 19: Price-to-rent ratios (actual vs. fundamental)



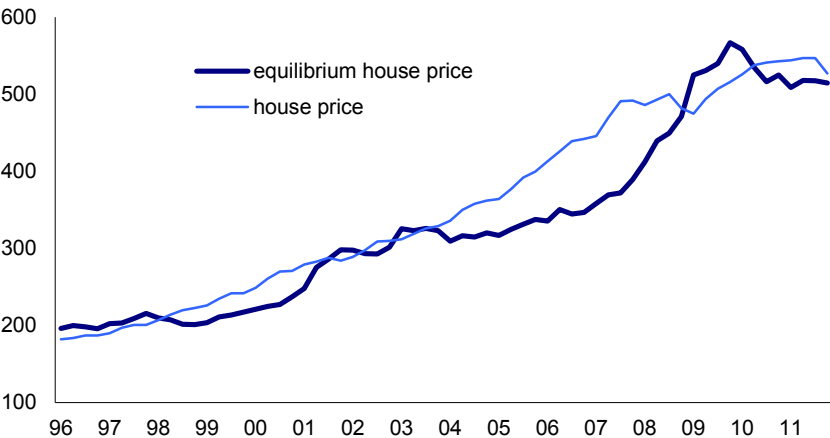
Source: Sweden Statistics, Ecwin, NIER, own calculations.

For tax issues, the analysis draws on Peter Englund, "Swedish house prices in an international perspective", Riksbank's inquiry into the risks in the Swedish housing market. The fundamental ratio is based on loans with a five-year maturity (left-hand panel) or on all maturities (right-hand panel).

Using **an econometric approach**, where an equilibrium house price is estimated on the basis of an equation which expresses the real house price as a function of disposable income per household and the real after-tax mortgage rate, **yields a similar result**, with actual house prices only deviating marginally from the estimated equilibrium price (Graph 20). Other possible determinants of house price developments, such as housing supply or population growth were not found to be significant.

Although various studies thus seem to indicate that current house prices are more or less at their fundamental values, caution is needed in interpreting these results. These calculations are based on assumptions that may not necessarily prove accurate, the studied period may not be statistically significant and historical relationships may not always hold. Moreover, the model results seem to emphasize the role of demand factors, whereas no supply factor was deemed significant to explain price developments in recent decades. As prices usually are thought of being the result of an interplay of supply and demand, this clearly points to some unresolved issues. In addition, and as was also pointed out by the Riksbank study, even if the current level of house prices seems warranted given strong fundamentals, maybe these same fundamental factors are not at reasonable levels. The exceptionally low levels of new construction and the very low real interest rates in recent years are factors that may not remain.

Graph 20: Actual vs. fundamental house prices (DOLS model)



Source: Sweden Statistics, Ecwin, own calculations

3.1.3. What explains Swedish house prices?

Specific demand and supply factors could explain why Sweden has not suffered the large house price corrections that have been observed in many other countries since 2007, despite similarly rapid house price inflation and credit expansion over the previous decade. They are fully compatible with the view that real disposable income and real interest rates are of major importance for the determination of house prices.

Demand factors

Although the Swedish economy was hard hit by the global downturn in 2008-09, with GDP falling by 5.2% in 2009, it subsequently experienced a **very quick recovery** with GDP growth reaching 5.6% in 2010 as global trade rebounded. It subsequently continued to grow strongly in the first three quarters of 2011. As the downturn never spread to the domestic side of the economy to any large extent, the labour-market reaction to the initial downturn in economic activity proved less adverse than expected at the beginning¹⁶. Therefore, consumer confidence returned fairly quickly. In addition, as the public sector was posting large surpluses before the crisis¹⁷, automatic stabilisers were allowed to work in the downturn without giving rise to discretionary consolidation measures or expectations thereof. In fact, fiscal policy became expansionary (see paragraph on tax measures below).

As noted, the incipient correction observed in Swedish house prices in the last quarter of 2008 was quickly interrupted, helped by a very substantial **monetary easing**. The Riksbank, which had hiked the repo rate to 4.75% as late as early September 2008, reversed course in the following months, bringing the repo rate down to 0.25% by summer 2009. This represented a larger decrease in the policy rate than was the case in the euro area, where the ECB brought down the policy rate from 4.25% to 1% during the same period. Perhaps more importantly, Swedish households tend to borrow at **variable rates** to a much larger extent than borrowers in other European countries and are therefore more sensitive to shifts in the repo rate. Related to this and partly thanks to policy intervention in the form of public guarantees covering bank deposits and bonds, the financial sector continued to perform its function in a normal way throughout the downturn. The pace of **mortgage credit growth**, which fell to a still high level of 9.1% by mid-2009 after averaging 14.4% in the four years preceding the Lehman crisis, reacted to the improving economic outlook and lower level of the repo rate and reached double-digit levels again in early 2010 and remained high throughout that year. (For a further discussion of this issue, see the section of private-debt.)

Tax policy changes undertaken in recent years have most likely given house prices a further lift. Most importantly, in 2008, **the property tax was lowered** from 1.2% of the cadastral value (the cadastral value amounts to 75% of the market value) to the lower of either 0.75% of the cadastral value or 6512 SEK (or roughly 700 EUR, a very low ceiling that would apply to the vast majority of houses), which drastically reduced the taxation of housing¹⁸. This reduction, which departs from the underlying principle of the 1991 tax reform of uniformity and neutrality between various investment alternatives, was undertaken to address its perceived poor legitimacy among voters, epitomised by cases of low-income liquidity-constrained pensioners being increasingly heavily taxed on their property that had risen in value. While the property tax was drastically curtailed, the deductibility of mortgage interest payments was left untouched, which tilted the incentive structure towards debt-financed investment in property. It is highly likely that at least part of this tax cut has been capitalised in house prices. In 2008, the government also introduced a **permanent deduction scheme for home improvement services**, whereby a house owner is allowed to deduct up to half of the labour cost for these services against income taxes (up to a maximum amount of SEK 50000, or about EUR 5500, per year). It is possible that this scheme, which proved much more popular than initially expected, could have contributed to driving up house prices by freeing part of the initial renovation budget to the purchase of the house itself or by enhancing the value of the stock of houses by quality-improving renovations.

In addition, during the 2007-10 period, **taxes on earned income were significantly reduced** (by roughly SEK 75 billion or 2.4% of GDP), mainly through four steps of the so called in-work tax credit scheme, but also through an increase of the threshold for paying state income tax. Although the stated objective of these tax cuts was to increase labour market participation and employment, in particular among groups with a loose connection to the labour market, it also provided a boost to household disposable income at a time of slower GDP growth¹⁹. As part of the fiscal response to the economic downturn in 2008-09, the government also undertook **other**

¹⁶ Special ad-hoc crisis agreements between the social partners within the export-oriented manufacturing industry, where working hours and salaries were simultaneously lowered for a limited period, probably also limited the number of redundancies.

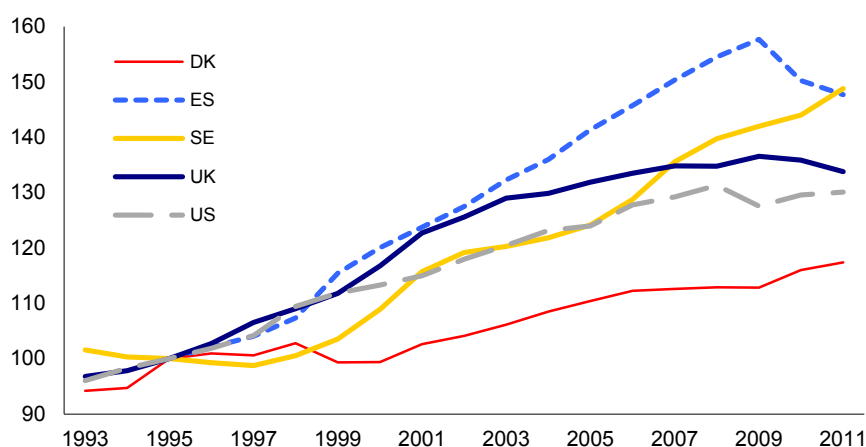
¹⁷ The general government showed a surplus of 3.6% and 2.2% of GDP in 2007 and 2008, respectively.

¹⁸ The original tax rate resulting from the comprehensive tax reform of 1991 was set at 1.5% of the cadastral value. To stem the upward movement of property taxes as market values rose, the government froze the cadastral values in 1997, before resetting them in 2000 while at the same time lowering the tax rate to 1.2%.

¹⁹ This is partly due to the fact that there is no phasing-out of the in-work tax credit with rising income.

stimulus measures with a clear supportive effect on household income, in particular extra state transfers to the municipalities. Hence, disposable income has held up well in recent years (Graph 21).

Graph 21: Evolution of real disposable income (1995=100)



Source: Commission services, Ecwin

Supply factors

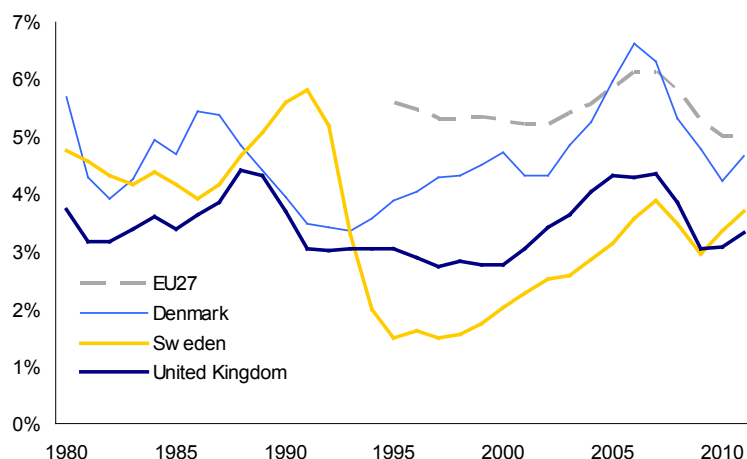
While a number of factors seem to have contributed to keeping housing demand at a high level in recent years, in theory this should only result in upward price pressure if supply is not able to match the increased demand. Although supply factors were not found to be statistically significant in some econometric studies in explaining the rise in house prices over the last decade or so, there are nevertheless reasons to suspect that supply and demand factors interact in the price formation process.

In a longer perspective, housing investment in Sweden has been on a downward path (Graph 22). Having just clawed its way back to its mid-80s level of 4% of GDP by 2007, the ensuing financial crisis hit construction activity hard and the share dropped below 3% of GDP in 2009. Although the subsequent economic recovery led to a turnaround also in building activity, the uncertainty triggered by the sovereign-debt crisis that erupted last year seems to have again dented the prospects for the sector. This suggests that building activity is very sensitive to financial conditions. In the second half of the 1980s, housing investment boomed in the wake of the financial deregulation of the mid 1980s, only to collapse as the real estate bubble burst in the early 1990s. The bursting of the bubble was exacerbated by the simultaneous implementation of a long-planned tax reform that raised real interest rates through less generous interest deductibility and broadened the VAT base, notably to cover the construction sector. In addition, an ill-timed pegging to the ecu in 1990 had to be abandoned in late 1992, further debilitating an already weakened banking sector, as the krona sank. This explains why construction activity declined in such a significant way in the early 90s and stayed in the doldrums for much of the 1990, before recovering more noticeably in the years preceding the global financial crisis.

Apart from the sensitivity to financial conditions, existing research suggest that Sweden has one of the most price sensitive construction sectors in the OECD²⁰, meaning that construction activity reacts relatively positively to changes in house prices. Indeed, the boom in house prices over the last decade has gone hand in hand with an expanding construction sector, but since absolute volumes were at such a very depressed level in the 1990s, it has taken time to come back to more normal production levels.

²⁰ This finding was made by the OECD (Andrews (2010)) and confirmed by National Housing Guarantee Board (2011).

Graph 22: Housing investment as a percentage of GDP



Source: Commission services

A headwind has been the relatively **unfavourable cost developments** in the construction sector over the last decade. Official cost data, however, include both the cost of land and profits, which makes it very sensitive to the business cycle²¹. If the sector is experiencing a boom, it is relatively easy for subcontractors and input providers to hike their prices and profits, which are then passed on as higher costs to the final buyer, which raises the issue of possibly **insufficient competition** in the sector. This contributes strongly to rapidly rising production costs. As has been proposed by the NHGB²², a more useful measure may be to look at the long-term evolution of the factor price index, which measures costs of inputs such as labour, materials, transports and machinery, to gauge the longer-term evolution of construction costs. According to their calculations, these costs rose by an average of 2.2% per year over the last decade, compared to an average of 1.3% per year during the preceding decade. The input factors that have seen the sharpest rise are transports and materials. For materials, insufficient competition could, again, be part of the explanation. In general, the Swedish Competition Authority has pointed to a lack of competition in the construction sector, with high entry barriers discouraging new entrants²³. According to both the OECD and the NHGB, Swedish housing investment is very sensitive not only to house prices, but also to production costs²⁴.

Construction activity may also be depressed due to administrative uncertainty in relation to **zoning** and issuance of building permits. Processes can be lengthy and involve far-reaching commitments by the developer to provide public infrastructure such as access roads, schools and even recurrent maintenance. This tends to create uncertainty as to the final costs and favour large established firms. In addition, the **local planning monopoly** may cause a suboptimal level of construction, as there is a free-rider problem in growth regions consisting of several municipalities, where each municipality wants to limit its own outlays for complementary infrastructural investments in relation to expanding housing construction, while at the same time benefitting from neighbouring municipalities' investments. Also for major infrastructure projects, the power of single municipalities to block, delay or force costly changes to projects of wider importance is significant. Although such interference in theory can be overridden by a national interest clause, it is not always politically feasible to apply it and it does not cover housing projects. It is also possible that zoning is restricted at the local level by the desire of insiders to maintain high values of their properties by limiting supply of new housing. This could also ensure that immigration to the municipality mainly consists of high-income earners²⁵.

An additional institutional factor that may impede a rational development of the housing stock and keep house prices at an elevated level is the **stringent rent regulation** in place in Sweden. Sweden has quite restrictive rent controls for apartments, which severely limits rents from responding to market signals. This is particularly the case in large urban areas such as Stockholm, where regulation distorts the market. The only legal option to get

²¹ The fact that construction costs also seem to be determined by house prices and not only vice versa may explain why construction costs did not turn out to be a reliable explanatory factor for rising house prices in econometric studies.

²² National Housing Guarantee Board (2011).

²³ See e.g. Swedish Competition Authority (2011).

²⁴ In fact, NHGB calculations seem to indicate that housing investment is twice as sensitive to production costs as to house prices, so the incentive-effect of a two-percent increase in house prices can be offset by a one-percent increase in costs.

²⁵ For an overview of these issues and other impediments to a well-functioning housing market, see Kalbro, Lind and Lundström (2009).

hold of a rental contract is to sign up for a waiting list to be allocated an apartment²⁶. These can be prohibitively long, which forces many people into buying a house or a tenant-owner's apartment²⁷, thereby pushing up the prices of these. This has also led to a wave of conversions of rental apartment houses into tenant-owner's apartments²⁸, with the latter expanding its share of the multi-family dwellings from less than a quarter to almost half in Stockholm over the last decade. As sub-letting of tenant-owner's apartments are subject to the approval of the other co-owners of the association, which cannot be taken for granted, it could result in a suboptimal supply of housing services. A recent government inquiry on how to make better use of the existing housing stock identified a number of factors restraining the willingness of residents of tenant-owner's apartments to sub-let the whole or part of their apartments and came up with a number of proposals to address them. These measures include a relaxation of the rules giving the association a right to deny a resident the permission to sub-let his or her apartment, more flexible rent-setting, shorter period of notice for the tenant and a strengthening of the right to reclaim the apartment from the tenant after the expiry of the rental contract (SOU 2012:25).

3.1.4. Is the Swedish housing market in an imbalanced situation?

Despite the strong increase in house prices since the mid-90s, Swedish house prices appear to be in line with the development of their determinants. Available econometric studies point to strong growth of real disposable income and a decline in real after-tax interest rates as the main explanatory factors behind the rise in house prices. There also seems to be reasonable explanations why Swedish house prices have avoided the steep correction seen in many other countries in recent years, notably a quick economic recovery supported by expansionary monetary and fiscal policies, tax changes favouring the housing sector and more liberal lending practices by the banks. This has coincided with rather sluggish construction activity, reflecting financial uncertainty and other obstacles to construction activity, such as restrictive zoning practices and insufficient competition.

It should, however, be noted that some of the factors which supported house prices now probably have run their course and may not be able to provide the same degree of support in the future. Developments over the last year seem to indicate that wider mortgage spreads and increased uncertainty about future income growth are adversely affecting house prices. Households reacted by reducing the rate of amortisation on new loans to cushion the effect on the household budget. With already low amortisation rates, this strategy may soon be exhausted. Price expectations have also been very volatile, indicating large uncertainties regarding the future path of house prices. Should house prices start to fall in a more significant way, the fact that households have record levels of debt could be problematic, as they are likely to cut back on consumption to restore their balance sheets. Conversely, should the economic outlook improve significantly, tighter monetary policy may limit the positive effect from rising income and reduced financial uncertainty. In a longer term perspective, should significant supply constraints remain, prices may however return to an upward trend, with adverse effects on indebtedness and mobility.

3.2. PRIVATE SECTOR DEBT

The high level of private debt in Sweden is a concern as debtors are vulnerable to shocks, e.g. interest rate increases, and any sudden forced deleveraging would negatively impact on growth. Thus, the following section analyses in more detail the nature of household and corporate debt and possible risks they might cause.

3.2.1. Household debt

As noted in section 2, household debt has increased strongly over the last decade and reached a new all-time high of 82% of GDP (or 170% of disposable income) in 2010. The bulk of household borrowing has taken the form of mortgage debt. This, in turn, reflects the simultaneous rise in house prices (see section on the housing market). After growing at a double-digit pace prior to the 2008/09 crisis, mortgage credit growth has subsequently slowed down, and after a brief reacceleration in 2009-10, the pace of mortgage expansion has

²⁶ Buying a rental contract is illegal. Swapping rental apartments is permitted, but would require both parties to see benefits in the swap, since no cash transfers are allowed in conjunction with the swap. It could be assumed that some swaps in practise are accompanied by illegal payments to the holder of the more attractive apartment. This is of course a risky strategy, not only from a legal point of view but also from a financial point of view, as there is no guarantee that you will get your money back when you leave the apartment.

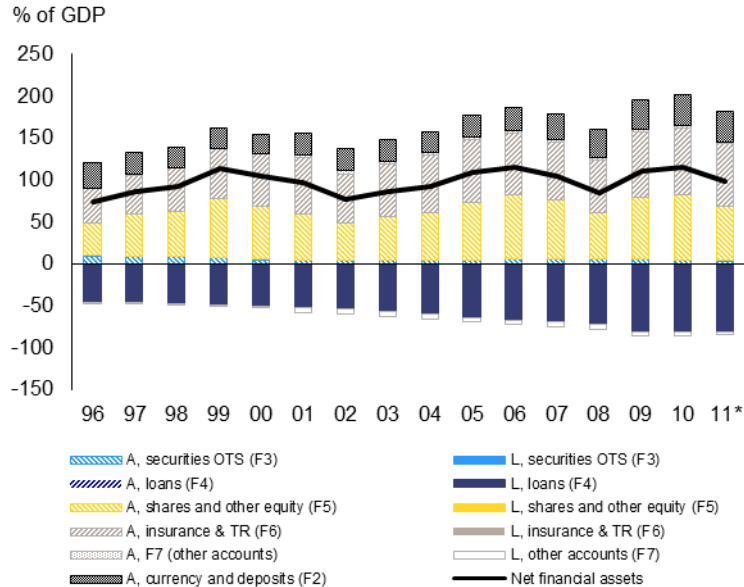
²⁷ Tenant-owner's apartments ("bostadsrätter") are apartments owned by an association, in which the respective residents own a share giving them the right to reside in a particular apartment. This means that you do not own a particular apartment and decisions regarding renovations and sub-letting of particular apartments (as well as decisions about major renovations affecting the collective parts of the property such as main ducts, stairways, entrance hall, garden etc) have to be taken at collective level.

²⁸ Often on very beneficial terms for the tenants that accept the conversion, as the market value of the newly created tenant-owner's apartment usually exceeds the initial investment required.

fallen to a year-on-year rate of around 5% in early 2012. Factors behind this marked slowdown in new mortgage issuance include slower house price growth, higher mortgage rates (partly as a result of wider spreads between the repo rate and the mortgage rate), heightened uncertainty about the economic outlook and, possibly, more restrictive lending practices by banks, partly reflecting the introduction in October 2010 of a 85%-cap on the loan-to-value for new loans. However, it is also a measure of the strength of the underlying demand for new mortgages that the household debt ratio is not retreating, despite the confluence of all these restraining factors.

There are a number of mitigating factors putting debt developments into perspective. The build-up in household debt has been matched by a similar accumulation of assets, meaning that the *net worth* of households has not deteriorated (see Graph 23). Households have around 3 times as much assets (including housing wealth but excluding collective insurance) as liabilities according to Riksbank data. Mortgage debt has also mainly been incurred by those with higher incomes. A full 60% of all mortgages are held by the highest-earning fifth of households, whereas the lowest-earning fifth only holds about 3% of total debt. *High-income earners* are usually at less risk of unemployment and should thus be more able to take on debt. Measures of affordability also show that *mortgage servicing costs* are manageable, with total interest expenditure as a share of disposable income currently at about the average level observed over the last decade (around 4%). A trend decline in mortgage rates has made it possible for households to service a growing debt stock without allocating a larger share of their budgets to debt servicing.

Graph 23: Household assets and liabilities (% of GDP)



Source: Commission services

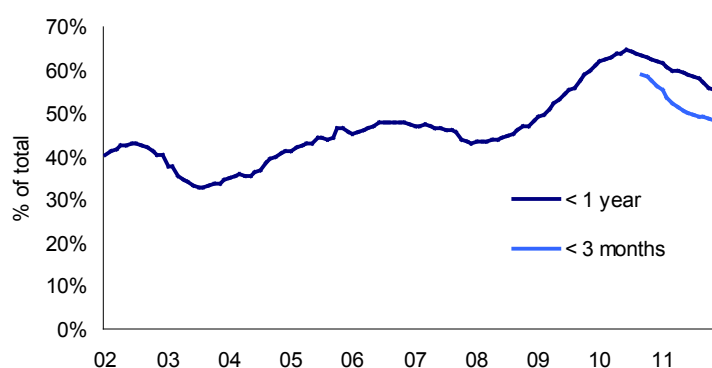
The increase in indebtedness however reflects also other less reassuring factors. There has been a trend towards a higher share of variable rates, which on average have been lower than fixed rates (see Graph 24), and towards ever longer amortisation periods, which have supported an increase in the leverage of households.

Together with the rising debt stock, the trend towards variable rates has made households increasingly sensitive to changes in mortgage rates and income prospects. However, according to stress tests conducted by the Swedish Financial Supervisory Authority, it seems that the vast majority of households would be able to honour their obligations to the lender also under various adverse scenarios²⁹. This is also the experience from the crisis of the early 1990s, when banks' credit losses were concentrated to commercial property with cases of households defaulting being rather rare. This could be due to the existence of an extensive unemployment insurance system, the prevalence of double-income households and strong creditors' rights. At the same time, the monetary policy stimulus is likely to be more effective in a downturn if many households have debts with variable rates³⁰.

²⁹ Swedish Financial Supervisory Authority (2012).

³⁰ This is only true if the transmission mechanism of monetary policy is not impaired, so that decreases in the repo rate are fully passed on to lower mortgage rates. In a situation of heightened financial stress, banks may instead widen their margins rather than passing on repo rate cuts in full. In an environment of low inflation or deflation, the ability of monetary policy to provide stimulus could also be limited by the zero-bound for nominal interest rates.

Graph 24: Share of mortgages with short maturities



Source: Sweden Statistics

Behind the rapid expansion of credit growth, there has also been a trend towards ever longer amortisation periods, with new mortgage loans typically including no or very limited amortisation. There is no comprehensive up-to-date data on amortisation rates, but official data from 2009 showed an amortisation rate of 0.8% for tenant-owner's apartments and 1.4% for houses. The Financial Supervisory Authority has recently conducted a survey among banks to gain further insights into this area. The results indicate that the average amortisation period for new loans has risen from 66 years in 2009 to 70 years in 2011 (with amortisation periods generally being shorter for houses and longer for tenant-owner's apartments). New amortisation-free loans have increased their share of total loans from 59% to 65% over the 2009-11 period. This could be due both to households being less able to amortise with the strong increase in interest payments seen over that period and to the fact that the loan-to-value cap has achieved its objective of lowering the number of households with a high loan-to-value ratio, thereby reducing the need to amortise.³¹ The lengthening of the amortisation periods constitutes a cultural shift compared to only a few decades ago, when most mortgages were paid back within 30-40 years. With debt-servicing consisting mainly of interest payments, this has enabled households to take on ever larger loans, especially as mortgage rates have trended down at the same time. Until the introduction of the 85% cap on loan-to-value on mortgages, it had also become common with the mortgage covering almost the full amount.

Notwithstanding mitigating circumstances, the already high level of household debt warrants the attention and preparedness to act on the part of policy makers to prevent a further build-up of debt. While households rarely default on mortgages and affordability ratios seem comforting, the high debt level nevertheless implies a heightened risk to macroeconomic stability by making households' net worth more sensitive to negative shocks, such as a fall in house prices, a prolonged period of low or negative economic growth or a real interest rate shock. As most household assets are mainly made up of housing wealth, a fall in house prices has a bigger impact on households' balance sheets than similar fluctuations in the stock market. This means that households could start reining in their spending to rebuild their balance sheets also after fairly modest declines in house prices, which could have negative effects on GDP growth and employment. This could create negative feed-back loops to house prices. Although banks appear well capitalised and should be able to withstand also a heightened level of defaults, any impairment of banks' own capital could potentially reduce their ability to lend as their capital ratios have to be restored. Unless they are able to raise new equity, either by issuing new shares on the capital market or by converting subordinated debt to equity³², banks could be forced to shrink their balance sheet, which could lead to a credit crunch.

There is also reason to assume that various policies in place may have contributed to the build-up of debt and the trend away from amortisation. Among the factors mentioned in the housing market section, the generous interest rate deductibility stands out as particularly conducive to debt accumulation. In Sweden, all capital income is 100% deductible against negative capital income (realised capital losses or interest payments on loans taken). If the latter are larger than the former, the remaining negative capital income is deductible against all other taxable income at a rate of 30% for sums up to about 11 000 euro (21% on sums there above). As nominal interest rates have trended down, the real subsidy implied by the deductibility scheme may have

³¹ Ibid

³² At least one of the big four Swedish banks (Swedbank) has indicated it will hold this type of hybrid capital (sometimes labelled "coco bonds").

become more significant³³. As noted in the section on house prices, the deductibility of mortgage interest payments was left untouched even as the property tax was drastically curtailed in 2008, which tilted the incentive structure towards debt-financed investment in property. With such a cheap source of finance readily available, it is not surprising that households increasingly save in other forms (such as investing in the stock market, which they hope will bring higher returns and provide increased diversification of their portfolio) rather than amortising on the mortgage. This could however lead to increasingly leveraged households.

Together with the generous rules for interest deductibility, the high costs related to switching from fixed to variable rates may also partly explain the increasing preference for variable rates. Many banks apply full interest rate compensation when a client wants to either switch from fixed to variable mortgage rates or change the pace of amortisation to benefit from lower rates on new loans. At least during the long period of falling nominal interest rates, this may have led households to choose variable rates in the first place to preserve the possibility to benefit from lower rates at some point. In turn, however, this exposes households to upward risks in terms of interest burden, should interest rates increase, a risk which may be underestimated at the moment of signing the mortgage contracts.

3.2.2. Corporate debt

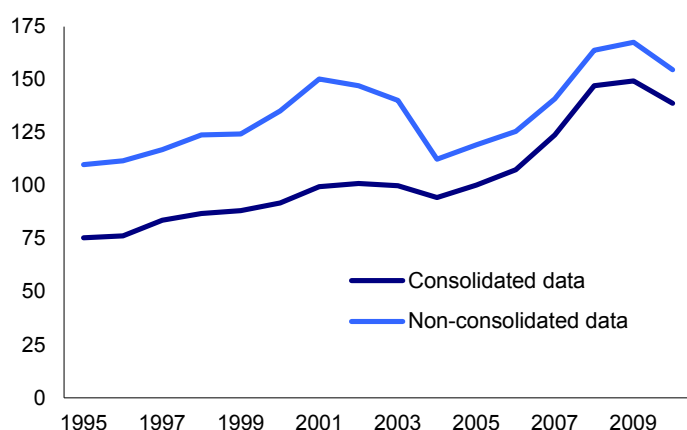
Corporate debt in Sweden is high and accounted for 155 % of GDP in 2010 according to non-consolidated data, which is far above the EU average of 100%. The debt-to-GDP ratio increased significantly in the period of large investments in the IT sector prior to 2001 when it reached 150% of GDP. The burst of the IT bubble was followed by a period of deleveraging when corporate debt dropped to 113% of GDP in 2004. The period between 2004 and 2008 saw a renewed surge in debt triggered by the low interest rate environment and further fuelled by the global boom and higher investment by Swedish companies both in Sweden and abroad. In response to the financial crisis of 2008-2009, corporations reduced their leverage drastically, resulting in a decrease in the debt-to-GDP ratio by 13 percentage points from 2009 to 2010 (or by almost 20% from its peak in mid-2009 to the end of 2011). This was one of the biggest cumulative corrections in the EU. These cyclical developments are also illustrated in the evolution of private credit, which grew briskly in 1998-2001 (by an average of 12% of GDP a year) and 2007-08 (by 16% of GDP a year), while contracting in 2004-06 and 2009-10.

However, due to several statistical issues, it appears more appropriate to assess the long-term evolution of Swedish corporate debt on the basis of consolidated data³⁴. These suggest a much smaller adjustment in 2001-2004 (by some 7 percentage points in the debt-to-GDP ratio). Also, they put the rapid debt accumulation since 2005 in a different light, suggesting an excessive debt accumulation supported by rapid credit growth. In the consolidated form, debt of Swedish non-financial corporations stood at 139% of GDP in 2010, compared to the average EU level of 69% (see Graph 25).

³³ For a household with a mortgage and only negligible capital income, this means that a decline from, say, 6% to 3% in the nominal mortgage rate accompanied by a decline in expected inflation from, say, 2.5% to 1.5% lowers the after-tax real mortgage rate from 1.7% to 0.6%, i.e. a sharper relative decline than for the nominal rate or the pre-tax real rate (-64% versus -50% and -57%, respectively). Obviously, the effect is sensitive to the inflation expectation assumption. This effect may also have contributed to a preference for the typically lower variable rates over fixed rates. ($R = (1+n)/(1+i)$ where R is the pre-tax real rate, n denotes the nominal rate and i the inflation rate. $R_{\text{tax}} = (1+(0.7*n))/(1+i)$, where R_{tax} is the after-tax real rate, n denotes the nominal rate and i the inflation rate, assuming no capital income and a deductibility rate of 30%.)

³⁴ First, a statistical revision of the financial accounts in 2004 led to a halving of intercompany loans within Sweden between 2003 and 2004 (both on the assets and liabilities side). As a result, the size of the adjustment in the debt-to-GDP ratio between 2001 and 2004 is probably largely overstated (by some 20 percentage points). Since consolidated debt is not influenced by movements in intercompany lending within Sweden, the revision also caused the narrowing of the gap between non-consolidated and consolidated debt as a percentage of GDP by some 20 percentage points. Second, the official Swedish statistics reports constant intercompany loans within Sweden since 2006. This being less plausible, a part of reality seems to be missing in the non-consolidated data.

Graph 25. Gross debt of non-financial corporations



Source: Eurostat

As mentioned in section 2, several arguments can be made to mitigate the concerns about corporate indebtedness in Sweden, as suggested by the high debt-to-GDP ratio. First, the strong presence of multinational companies makes this indicator less appropriate to measure corporate indebtedness for Sweden. The borrowing by multinationals is related to their global activities and their debt-servicing can be covered by income from global sales, not only from activities related to Swedish GDP. Therefore, the debt-to-GDP ratio clearly overstates the degree of indebtedness of Swedish companies.

Second, the debt to GDP ratio is inflated by a very large share of intercompany loans from abroad. Multinational companies tend to alter the overall level and composition of debt according to the tax structures and capital markets characteristics in the countries where they operate³⁵. This behaviour is particularly apparent in Sweden, which shows the highest share of intercompany loans from abroad (57% of GDP in 2010) among the EU countries after Ireland³⁶. Indeed, compared to other countries, the ratio of extra-group borrowing to assets is much lower in Sweden than the overall debt-to-assets ratio³⁷. The main factor behind this is the efficient tax minimisation by multinational companies, which borrow in countries with lower corporate profit taxation and at the same time exploit the generous tax deductibility of interest payments in Sweden. The higher share of cross-border intercompany lending in Sweden can also be explained by the effort of multinationals to balance currency risks and by the availability of cheaper credits abroad. It could also be driven by expectations of an appreciation of the Swedish currency vis-à-vis currencies in which the debt is denominated. The credit flows to Sweden are then often reallocated to affiliates in other countries without any additional costs (which gives the multinational affiliate cost advantages over local companies).

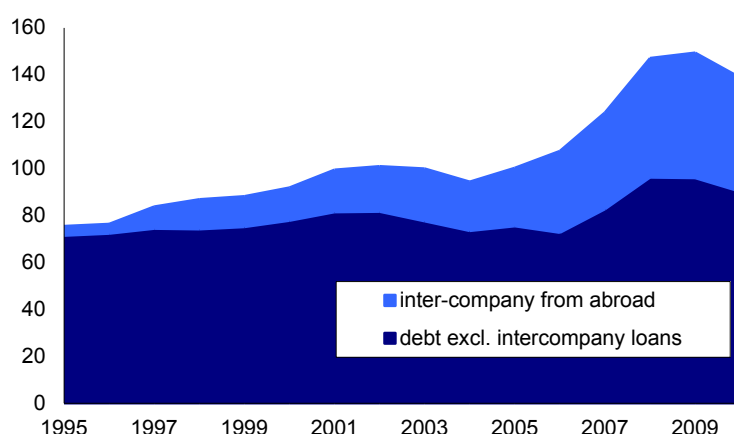
Borrowing from foreign affiliates of the same company group has more than doubled as a percentage of GDP since 2004 and thus explains more than a half of the total debt accumulation between 2004 and 2010 (see Graph 26). Out of the 45 percentage point increase in the debt-to-GDP ratio in this period, about two thirds are explained by the expansion of intercompany loans from abroad. Since these loans represent cross-border flows and positions, they do not cancel out in the consolidated data³⁸. Yet, from an economic point of view, it would make sense to take into account only net inter-company liabilities. The consolidation could go even further to fully consolidate debt and asset positions within multinational companies. The excess of intra-group lending to Sweden is likely compensated by other flows within the group, in other words, the net liabilities of the Swedish affiliates are matched by net assets in foreign affiliates of the same company groups. It can be expected that multinational companies cover net debts in one country by internal reallocation of resources. If inter-company loans are deducted, the super-consolidated debt would amount to less than 90% of GDP.

³⁵ According to empirical studies, intercompany debt is higher in countries with high corporate taxes, weak creditors' rights (leading to higher interest rates) and shallow capital markets. High corporate taxes typically encourage the use of debt rather than equity finance. 10 percent higher corporate tax rates are associated with 2.8 percent greater affiliate debt as a percentage of assets. See Desai, Foley and Hines (2003).

³⁶ Intercompany loans from abroad account for less than 20% of GDP in most EU Member States. Higher shares are reported in the Netherlands, Finland and the UK (around 30%) and Ireland (around 150% of GDP). See Desai (2003).

³⁸ In the case of Swedish multinationals, about 55% of the borrowing from foreign affiliates of the same company group was channelled as loans to other affiliates abroad in 2010 (the share stood at 90% at the beginning of the decade).

Graph 26: Non-financial corporations debt as % of GDP (consolidated data)



Source: Sweden Statistics

The much more favourable consolidated view of Swedish corporate debt is supported by other indicators of Swedish corporations' financial health which do not point at any significant sustainability risks. Swedish corporate debt has to be seen against their large assets. In 2010, the debt-to-asset ratio was below the average of old Member States (EU15) both for consolidated (53%) and non-consolidated data (83%). Both measures have been relatively stable over time, suggesting that the surge in Swedish corporate debt has been matched by a similar increase in assets. While the debt-to-asset ratio has somewhat declined in non-consolidated terms over the last 15 years (by 12 percentage points), consolidated data show a slight increase (by 7 percentage points), which occurred mainly in the 2004-08 period. The debt-to-equity ratio declined from 115% to 58% between 1995 and 2010, falling from above to below the average of old Member States³⁹. Profit margins of non-financial corporations have decreased over time, which can be explained by the shrinking of the cushion created by the depreciation that followed the floating of the currency in late 1992 and by increased interest payments related to tax planning by the multinationals since 2005. The default rate of non-financial corporations is close to the lowest point since 1985. The interest burden (7% of value added in 2011) is slightly higher than in the euro area but has come down significantly since the 1990s.

On the other hand, other indicators call for some caution. First, there may be a certain risk of a maturity mismatch between assets and liabilities. The share of volatile assets to total assets has risen from below 60% in the 1990s to around 75% since 2004 and is above the euro area average (67% in 2010). At the same time, almost the entire debt of Swedish non-financial corporations is long-term, while in the euro area long-term debt accounts on average for about 71% of total debt.

To conclude, although the debt-to-GDP ratio of Swedish non-financial corporations appears high *prima facie*, there are many considerations which make it difficult to establish that corporate debt in Sweden demonstrates a worrying underlying imbalance. The debt-to-GDP ratio is inflated by the strong presence of multinational companies in Sweden and their tax minimisation practices. Other indicators suggest that Swedish corporate debt is not deviate significantly from its long-term trend. Looking forward, it is not very likely that the pressure to reduce corporate indebtedness will remain intense following the strong deleveraging in 2009-10. With most forecasters expecting a return to growth in the coming years, future income growth expectations are likely to improve. Similarly, corporate assets are likely to grow in value rather than contract with a gradual recovery. These factors speak against any further reduction of the desired leverage level, rather the opposite. And finally, the pressure to reduce indebtedness is likely to be further cushioned by very low interest rates in Sweden (both short-term and long-term).

Despite all the mitigating factors, several features still make the case for vigilance and further analysis of the non-financial corporate debt in Sweden. The level of corporate debt remains high even if the inflating effect of intercompany loans is disregarded (100% of GDP in 2010). The rapid expansion of debt in 2005-2008 appears excessive on some metrics (e.g. deteriorating debt-to-assets and maturity mismatch). The strong deleveraging in 2009-10, also in the EU perspective, indicates that the level of debt probably exceeded the fundamental level in 2008, pushing for a return a more sustainable path. The large amounts involved in cross-

³⁹ The average debt-to-asset ratio among the old Member States was 64% for non-consolidated data and 89% for consolidated data in 2010. Debt-to-equity stood at 79%.

border intercompany lending raise the issue of currency risks, but also the risk of high debt-servicing costs in case a large bulk of intercompany loans originates from countries with currently high interest rates (e.g. Ireland).

4. POLICY CHALLENGES

The preceding analysis has shown that Sweden is experiencing macroeconomic imbalances, which are not excessive but need to be addressed. In particular, certain macroeconomic developments regarding private sector debt and the housing market deserve attention so as to reduce the risk of adverse effects on the functioning of the economy.

In 2011, Sweden received a recommendation to take preventive action in the field of housing market and household debt. The national authorities have so far adopted several measures in this respect, mainly the introduction of the 85% cap on the loan-to-value ratio in 2010 and extensive measures to strengthen the resilience of the banking sector, as well as a marginal relaxation of rent regulation. In its Spring Bill 2012 and the National Reform Programme 2012, the government proposes some measures to simplify sub-letting of apartments and to stimulate housing construction. These measures are certainly pertinent and seem to have already started bearing fruits in the slowdown in mortgage credit and declining house prices. Nevertheless, a number of features which contribute to the inherent instability of the housing and mortgage markets have not been touched. Given the potential risks, a more ambitious and determined policy response could seem warranted.

To reduce the risk of an unsustainable build-up of household debt and house prices in the long-term, several measures in the areas of taxation and financial regulations may be useful. First, the debt bias in housing taxation could be corrected by lifting back property taxation or, as a second best, by phasing-out the tax deductibility of interest payments. It would not only restore neutrality among investment alternatives, but also free up fiscal space to reduce taxes that are more harmful to growth, such as labour income taxes and corporate taxes. To prevent household indebtedness from continuing to build up, minimum amortisation requirements could be envisaged for new mortgage loans. The use of variable interest rates on mortgages could be limited by imposing restrictions on interest rate movements for a particular mortgage contract or by granting variable rates only to very low-risk households. In general, policies should aim at favouring longer-term planning and reducing households' exposure to rapid changes in financing conditions.

With a view to improving the functioning of the housing market and limiting upward pressures on house prices, **measures could foster flexibility of housing supply and reduce construction costs**, ranging from a more integrated approach to planning to streamlining the zoning processes and fostering competition in the construction sector. Measures tackling the rigidities in residential construction could also help spur investment and diminish the surplus on the current account. Within the rental market, further easing rent regulation and rules on sub-letting of tenant-owner's apartments would decrease demand for houses and tenant-owner's apartments, which are typically mortgage-financed. Incentives to develop the currently small market for rental houses would further boost the flexibility of the housing market in response to demand for housing.

The timing and composition of any measures in the housing sector have to be well considered so as to avoid unnecessary pro-cyclical effects by depressing house prices and household consumption in a context of slowing growth. Given the current decline in house prices and mortgage credit growth, a gradual approach would be warranted, starting with measures to improve the flexibility of the housing supply and preparatory works for measures requiring longer administrative or legislative procedures, or wider political support.

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