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**COMMISSION STAFF WORKING DOCUMENT**

**Country Report Sweden 2015  
Including an In-Depth Review on the prevention and correction of macroeconomic  
imbalances**

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## EXECUTIVE SUMMARY

**In 2014 and early 2015, GDP and employment growth in Sweden were supported by expanding domestic demand** relying on robust consumption and an expanding construction sector, while Sweden's export sector is struggling. As external demand gradually improves, investment and stronger exports will help Sweden's GDP growth to rise from 1.8% in 2014 to 2.3% in 2015.

**Household consumption grew dynamically** supported by low interest rates, growing disposable incomes and an expansionary fiscal policy in recent years. Government consumption expands due to higher spending on integration of migrants, education and elderly care.

**Sweden's level of investment is high compared to its peer countries.** Further investments in research and development and education could help to reverse the declining R&D investment trend and to boost the long-term competitiveness of the country. Investments in transport infrastructure to improve connectivity within and between urban areas could help to alleviate some of the constraints caused by the housing shortage.

**Employment recovered more quickly in Sweden than in other EU Member States after the financial crisis.** The employment rate of 79.8% is already close to pre-crisis levels and is the highest among EU Member States. Nevertheless, due to the dynamically rising labour force, unemployment has been stuck around 8% for several years and is particularly high among low-educated young people. The employment gap between those born in Sweden and non-EU migrants also remains large, especially for women.

**This Country Report assesses Sweden's economy against the background of the Commission's Annual Growth Survey** which recommends three main pillars for the EU's economic and social policy in 2015: investment, structural reforms, and fiscal responsibility. In line with the Investment Plan for Europe, it also explores ways to maximise the impact of public resources and unlock private investment. Finally, it assesses Sweden in the light of the findings of the 2015 Alert Mechanism Report, in which the Commission found it useful to examine further the persistence of imbalances or their unwinding. The main findings of the In-Depth Review contained in this Country Report are:

- **The high level of household indebtedness in Sweden has been identified as a remaining risk for macroeconomic stability.** Household debt, notably in the form of mortgages, remains at very high levels (roughly 160% of disposable income on average in 2013) and keeps expanding, with net credit flows outpacing nominal GDP growth. The challenge is particularly pronounced in metropolitan municipalities and in general negatively affects the ability of the real economy to withstand shocks.
- **Unlike in many other EU Member States, house prices have not gone through any major correction in Sweden.** On the contrary, they keep increasing, partly due to favourable fundamentals such as higher disposable income, low interest rates, strong demographics etc. Structural issues also contribute to house price growth in Sweden: the housing market is characterised by several market inefficiencies and weak competition. As a result, construction activity has been weak for many years, which has resulted in a housing shortage. Supply is further held back by an ineffective use of the existing housing stock due to rigidities on the rental market. However, the above-mentioned factors cannot alone explain the extent of price increases, which suggests that levels might be above their fundamental value.

The Country Report also analyses macroeconomic and structural issues and the main findings are:

- **In the short and medium term, Sweden faces no major risks in terms of fiscal sustainability.** Nevertheless, the budgetary impact of population ageing, in particular in the area of long-term care, is a risk element in terms of long-term fiscal sustainability. Swedish taxation is the fourth highest in the EU with a tax-to-GDP ratio (including social contributions) of 44.2% in 2012.
- **The Swedish labour market, to a large extent governed by negotiations between social partners at sectorial level,** is characterised by positive labour market outcomes, for instance, in terms of high employment rate. However, low-educated and low-skilled young people and non-EU nationals

face high unemployment, inter alia in the context of an overall deterioration of education outcomes.

- **School education results in Sweden have weakened** (for instance Sweden is now performing below both the EU and OECD averages according to PISA surveys) and equity in education has been declining. The system of integrating newly arrived migrant pupils shows a number of shortcomings.

**Overall, Sweden has made limited progress in addressing the 2014 country-specific recommendations.**

**As regards policies relevant to macroeconomic imbalances, steps have been taken to improve the efficiency of the housing market and to stem household indebtedness,** such as an increase in the risk weight floor on mortgages and the forthcoming compulsory amortisation on new mortgage loans. However, no action has been taken to reduce tax deductibility of mortgage interest or to reform the rental market. Some elements of the macroeconomic imbalance relevant recommendations have thus remained unaddressed and overall, limited progress was made in implementing them.

**As regards the recommendations to address other policy challenges, while this Country Report excludes an assessment of compliance with the Stability and Growth Pact, it can be noted that the Swedish government has a continued commitment to fiscal responsibility.** Some progress has also been made to address challenges linked to the Swedish labour market, in particular regarding widening the use of work-based learning and apprenticeships, and fully implementing the youth guarantee.

The Country Report reveals the policy challenges stemming from the analysis of macroeconomic imbalances:

- **The debt-bias in taxation still gives Swedish households incentives to take on debt.** More specifically, mortgage interest deductibility and recurrent property taxation can be important drivers in this context. Sweden has made no progress in these areas, which would require a

carefully sequenced implementation, minimising potential unease on the housing.

- **Housing market developments are intimately linked to structural inefficiencies.** Further efforts to streamline and simplify planning and building regulations, support public infrastructure investments and promote better competition in the construction sector could help increase new constructions. Reforming the rent setting procedure in order to allow wider divergence of rent levels could lead to a more effective use of the existing housing stock. Due to the municipalities' pivotal part in new constructions, any policy actions should also consider their role and revise their incentives to support new construction. Addressing the supply side constraints could smoothen house price dynamics and ease economic and social constraints.

Other challenges are:

- **Developing the human capital of the low-skilled could contribute to higher employment** of vulnerable groups and positively contribute to higher competitiveness. Ensuring that employment subsidies are adequately targeted is also important.
- **Municipalities' strengthened responsibility for young people who are neither in employment, education or training, paves the way for additional improvements** in outreach. A better developed partnership between the public employment service and various services and actors at the local level will be a key success factor.
- **Deteriorating school education outcomes risk putting pressure on Sweden's competitiveness and innovation capacity in the long run.** The quality of education resting on multiple pillars, a well-rounded and comprehensive approach appears important.

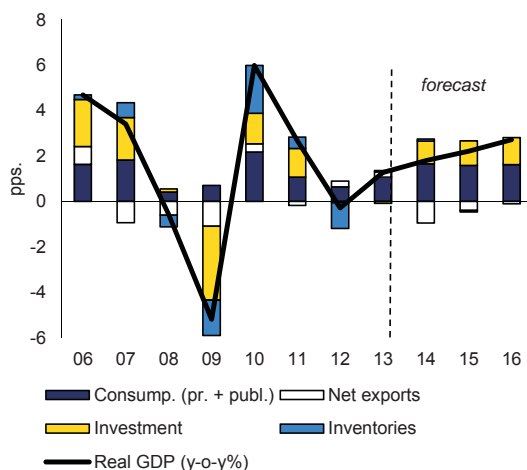


# 1. SCENE SETTER: ECONOMIC SITUATION AND OUTLOOK

## Overview

While domestic demand is growing at a healthy pace thanks to consumption and construction, Sweden's export sector is struggling. Consequently, export-oriented industrial sectors remain weak while service sectors are growing at a strong pace. As external demand gradually improves, investment and stronger exports will help Sweden's GDP growth to rise from an estimated 1.8% in 2014 to 2.3% in 2015 and 2.6% in 2016 (Graph 1.1 below).

Graph 1.1: External and domestic demand, contributions to growth - Sweden



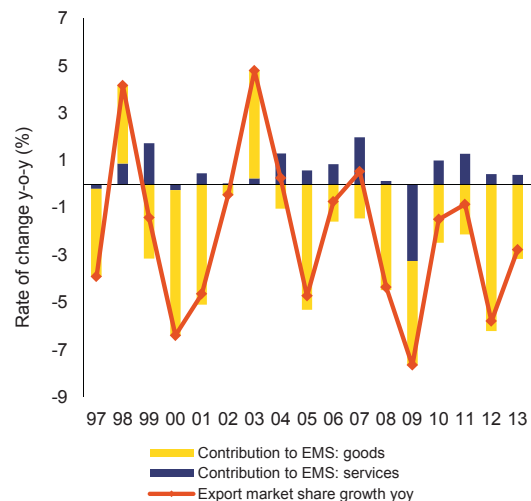
Source: European Commission

**Expansionary fiscal policy and low interest rates contributed to the strong domestic demand over recent years.** Although fiscal policy is expected to become neutral or slightly contractionary, household consumption growth will still find support from low interest rates, growing disposable incomes and steady employment growth in the coming years. Household saving is projected to have reached a new peak in 2014, and will only gradually decline in the coming years as economic uncertainties are waning and unemployment is starting to decrease. Government consumption is projected to expand at a strong pace due to higher spending on integration of migrants, education and elderly care.

## Trade developments

Despite being one of the most competitive economies in the EU, Sweden has been continuously losing export market shares since 2008. The cumulative export market shares loss of 17% between 2008 and 2013 is higher than of traditional peer countries', such as Germany's or the Netherlands' decline (which is approximately 9.2%), but comparable to Denmark, while outperforming Finland, which suffered almost 30% loss during the same period. The loss in Swedish export market share is concentrated in goods export, while services show moderate gains since 2010 as shown on Graph 1.2 below.

Graph 1.2: Export market share decomposition



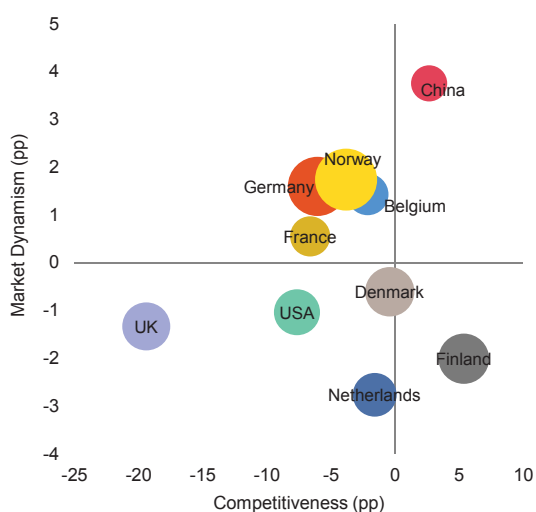
Source: European Commission

**Sluggish export performance can be attributed to several factors.** As regards geographical specialisation, Sweden's export performance has been negatively affected by the deteriorating market dynamism in several of its main trade destinations (such as the Netherlands or Finland) resulting in lower import growth in those countries. Swedish export is to a large extent dependant on EU countries: almost 70% of the Swedish export goes these countries, which have been suffering from sluggish growth. The Swedish export sector could not gain additional impetus from more dynamic Asian or South-American markets in comparison with, for instance, Germany.

Furthermore, machinery, chemicals and transport equipment represent a large fraction of Swedish exports, which were the least dynamic sectors between 2000 and 2013. As investments growth was weak in Sweden's main trading partners, demand for Swedish exports remained subdued. Looking at both the dynamism of destination markets and of product basket, Sweden - together with Finland and the Netherlands - had a less favourable export composition in 2013 compared with the other EU countries.

Finally, Sweden faced deteriorating competitiveness in most of its main trading partners. This witness both price competitiveness (a typically successful strategy when competing in markets of standardised goods or in lower-income markets) and non-price competitiveness (important when competing in higher-income destination countries or in differentiated products). Graph 1.3 below provides a summary in this respect. Market dynamism is a proxy for Sweden's destination markets that compares their import growth rates with world total import growth. Competitiveness indicator compares the growth of Sweden's exports with the growth of total world exports to these markets. The size of the bubbles indicate the countries' weight from Swedish export goods.

Graph 1.3: Dynamism and Competitiveness of Exports (goods) on top-10 country destinations (2012-2013)- Sweden

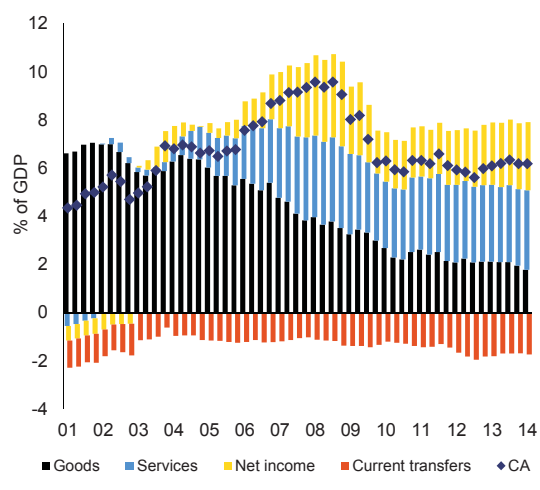


Source: European Commission, Comtrade

The Russian-Ukrainian crisis had so far limited direct impact on Swedish trade and growth as the direct trade exposure towards these countries is small. Russia constitutes less than 1.5% of Sweden's goods exports (most importantly automobiles, telecommunications equipment and chemicals) and approximately 1% of its services exports. While Russia constitutes 5% of Swedish imports, these are almost exclusively raw materials, in particular crude oil and coal (and there are no imports of natural gas) <sup>(1)</sup>.

Sweden's current account surplus gradually declined from its peak of 9.4% of GDP in 2008 to 5.8% in 2014. As demonstrated in Graph 1.4 below, while the contribution of services and net incomes to the current account balance have been slightly increasing, the trade surplus from goods export is diminishing resulting in declining current account surplus. As Swedish households' record high savings rate decrease and investments pick up, the adjustment of the current account surplus will likely continue.

Graph 1.4: Current account balance by component - Sweden



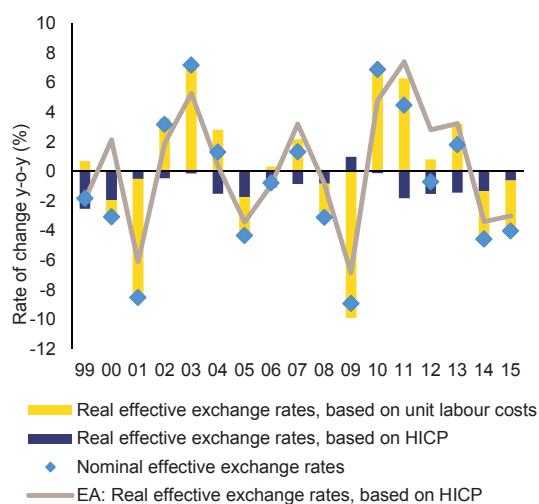
Source: European Commission

<sup>(1)</sup> Although Sweden's banking system had the third largest consolidated exposure to Russia among EU countries (after the Netherlands and France), this has been reduced significantly, from 2.7% of Sweden's GDP in December 2012 (when Sweden had the highest exposure among EU countries to Russia) to 1.6% of GDP by June 2014. Overall Swedish banks' exposure to Russia is around mere 0.4% of total bank assets.

Sweden displays a moderately negative net international investment position, which, however, has been improving in recent years. At -6.4% of GDP in 2013, the Swedish net international investment position is well within the MIP scoreboard threshold of -35% of GDP and thus presents no sustainability concerns. High current account surplus will contribute to slowly improve the net international investment position. Furthermore, if foreign direct investments are valued at market terms and not at book value, the NIIP has been in positive territory already since 2006<sup>(2)</sup>.

**Swedish cost developments against those of its trading partners do not indicate major challenges in terms of competitiveness.** While the real effective exchange rate has appreciated between 2010 and 2013, as shown in Graph 1.5 below, the weakening Swedish krona since 2014 could positively impact export performance. Unit labour costs have been growing in line with Sweden's main trading partners, but consumer price inflation, measured by the Harmonised Index of Consumer Prices has been growing more slowly (see also Section 2.3).

Graph 1.5: **Decomposition of real effective exchange rate**



Source: European Commission

<sup>(2)</sup> European Commission: Macroeconomic Imbalances Sweden 2014. Occasional Papers 186, March 2014.

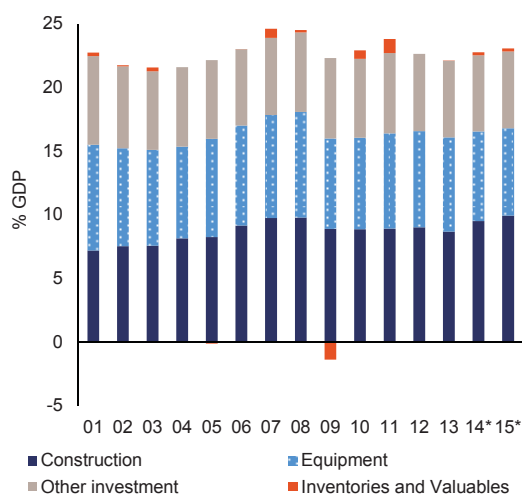
## Investments

**Overall investment levels in Sweden are higher than in comparable EU economies** (such as Germany, the Netherlands or Denmark). Investments have been weak in industry, but service sector and public sector investments have been rising. High public sector investment is driven by a major need for improvements in both local and central government infrastructure including housing. Residential housing investment has been particularly low for a long time despite dynamically rising house prices, but in light of the strong demographic developments, rising urbanisation and a housing shortage, there are major investment needs in the country. For instance, investments in transport infrastructure to improve connectivity within and between urban areas could help to alleviate some of the constraints caused by the housing shortage. Rising house prices together with supply side constraints hindering new constructions are considered as a macro-economic imbalance of the country and analysed in detail in Section 2.2.

**As a small, open economy where export constitutes to approximately 50% of GDP, external market development strongly affect Swedish manufacturing investments.** Weak Swedish export market performance was thus mirrored in sluggish industrial production and weak manufacturing investments. As a result, Swedish productivity growth also struggled to recover to pre-crisis levels, because the expanding service sector increased the share of the low-productivity jobs at the same time that manufacturing investments and jobs were shrinking. Besides the challenges related to Swedish export market destinations, product diversification coupled with deteriorating competitiveness discussed above, improving local business environment could also positively impact export performance and thus indirectly manufacturing investments. Compared with its main peer countries such as Germany or Denmark, Swedish SMEs fall behind in level of internationalisation in the form of foreign trade. should increase The proportion of high value added exports goods and services of Swedish companies could also increase. The Swedish government announced to launch a new export strategy in order to address these challenges.

**Following a contraction of 0.4% in 2013, Swedish investments have increased at a rate of 4.7% in 2014.** The acceleration was mainly driven by investments in housing, expanding at the range of 20%. While growth of housing investments is expected to slow down, other investments will catch up based on stronger external demand. Nevertheless, low capacity utilisation and fragile external developments will continue to mute manufacturing investments.

Graph 1.6: **Gross capital formation by type – Sweden**



Source: European Commission

### Employment

**Despite a relatively modest economic activity, employment growth has been particularly strong in recent years.** Employment recovered better in Sweden following the financial crisis than in other EU countries. The current employment rate is already close to pre-crisis levels and is the highest among EU countries. Nevertheless, due to the dynamically rising labour force, unemployment has been stuck around 8% for several years. The ongoing challenge for the Swedish labour market is to integrate the growing number of economically and socially vulnerable groups (see also Section 2.2).

### Inflation

**Inflation in Sweden has been around 0% since the end of 2012** because of low price increases for energy and services and because import prices

have been weak as a result of subdued international economic activity. In February 2015, the Swedish central bank cut its repo rate from 0% to -0.1% and announced the purchase of government bonds. In spite of growing consumption and employment, a negative output gap and a high unemployment rate suggest ample spare capacity in the economy, which would suppress price increases. Falling oil prices are also pushing inflation down. Policy discussions continue to take place in Sweden on the use and impact of further non-conventional monetary measures to fight deflationary pressures.

### Public finances

**In December 2014, the opposition parties' budget was voted by the Swedish Parliament, causing a political crisis in the country.** However, since both the opposition and the government budgets contain only fully-funded measures in line with the 'krona for krona' principle, this will not have a significant impact on the government balance. After the nadir in 2014, public finances are expected to improve, and the deficit to reduce to 1.6% in 2015 and 1.0% in 2016. Negative risks to the budget could come from a potentially worse macroeconomic outlook and higher costs for integrating the large inflow of migrants.

### Domestic debt

**Public debt stands at a relatively low level of around 41% of GDP in 2014,** below the 60% of GDP reference value stipulated in the Treaty (see also Section 2.1). As government budget deficit is expected to gradually improve, public debt will gradually decline in the coming years.

**Consolidated private indebtedness remains at 201% far above the MIP threshold of 133% of GDP.** The main concern is household debt, which is still dynamically increasing driven by favourable credit conditions and house price increases, and for which reason it is analysed in detail in Section 2.2.

Table 1.1: **Key economic, financial and social indicators**

	2008	2009	2010	2011	2012	2013	Forecast		
							2014	2015	2016
Real GDP (y-o-y)	-0,6	-5,2	6,0	2,7	-0,3	1,3	1,8	2,3	2,6
Private consumption (y-o-y)	0,2	0,4	3,9	1,9	0,8	1,9	2,5	2,6	2,6
Public consumption (y-o-y)	1,3	2,3	1,3	0,8	1,1	0,7	1,6	1,7	1,5
Gross fixed capital formation (y-o-y)	0,6	-13,4	6,0	5,7	-0,2	-0,4	4,7	4,4	4,5
Exports of goods and services (y-o-y)	2,0	-14,5	11,9	6,1	1,0	-0,2	2,4	3,7	4,8
Imports of goods and services (y-o-y)	3,8	-14,1	12,8	7,3	0,5	-0,7	5,1	4,9	5,3
Output gap	0,8	-5,6	-1,4	-0,1	-1,6	-1,8	-1,5	-1,0	-0,3
Contribution to GDP growth:									
Domestic demand (y-o-y)	0,6	-2,5	3,5	2,3	0,6	1,0	2,6	2,7	2,6
Inventories (y-o-y)	-0,5	-1,6	2,1	0,5	-1,1	0,1	0,1	-0,1	0,0
Net exports (y-o-y)	-0,6	-1,1	0,4	-0,2	0,3	0,2	-0,9	-0,3	0,0
Current account balance (% of GDP), balance of payments	8,6	5,9	6,0	5,8	5,8	7,3	.	.	.
Trade balance (% of GDP), balance of payments	6,5	5,5	5,3	5,1	5,1	5,7	.	.	.
Terms of trade of goods and services (y-o-y)	-0,4	0,9	-0,5	-0,8	0,1	0,4	0,0	0,3	0,3
Net international investment position (% of GDP)	-1,5	0,6	2,9	-9,2	-9,0	-10,8	.	.	.
Net external debt (% of GDP)	69,6*	76,4*	65,5*	65,4*	60,6*	56,6*	.	.	.
Gross external debt (% of GDP)	193,2	200,0	186,3	192,3	184,7	186,4	.	.	.
Export performance vs advanced countries (% change over 5 years)	5,1	-5,8	-5,5	-5,0	-10,2	-8,8	.	.	.
Export market share, goods and services (%)	1,3	1,2	1,2	1,2	1,1	1,1	.	.	.
Savings rate of households (net saving as percentage of net disposable income)	12,7	12,2	10,9	12,6	15,2	15,4	.	.	.
Private credit flow, consolidated, (% of GDP)	19,2	4,7	4,0	5,4	1,3	3,8	.	.	.
Private sector debt, consolidated (% of GDP)	200,0	212,6	200,8	200,3	202,3	200,1	.	.	.
Deflated house price index (y-o-y)	-1,9	0,8	6,4	0,8	0,0	4,7	.	.	.
Residential investment (% of GDP)	3,9	3,3	3,6	3,9	3,4	3,5	.	.	.
Total financial sector liabilities, non-consolidated (y-o-y)	6,4	1,5	6,3	4,8	2,4	8,3	.	.	.
Tier 1 ratio <sup>1</sup>	7,8	10,5	10,5	10,8	11,2	11,3	.	.	.
Overall solvency ratio <sup>2</sup>	10,5	12,7	12,2	11,8	12,1	12,3	.	.	.
Gross total doubtful and non-performing loans (% of total debt instruments and total loans and advances) <sup>2</sup>	.	.	.	.	.	.	.	.	.
Change in employment (number of people, y-o-y)	0,9	-2,4	1,0	2,1	0,7	1,0	1,5	1,3	1,3
Unemployment rate	6,2	8,3	8,6	7,8	8,0	8,0	7,8	7,7	7,5
Long-term unemployment rate (% of active population)	0,8	1,1	1,6	1,5	1,5	1,5	.	.	.
Youth unemployment rate (% of active population in the same age group)	20,2	25,0	24,8	22,8	23,7	23,6	22,9	.	.
Activity rate (15-64 year-olds)	79,3	78,9	79,1	79,9	80,3	81,1	.	.	.
Young people not in employment, education or training (%)	7,8	9,6	7,7	7,5	7,8	7,5	.	.	.
People at risk of poverty or social exclusion (% of total population)	14,9	15,9	15,0	16,1	15,6	16,4	.	.	.
At-risk-of-poverty rate (% of total population)	12,2	13,3	12,9	14,0	14,1	14,8	.	.	.
Severe material deprivation rate (% of total population)	1,4	1,6	1,3	1,2	1,3	1,4	.	.	.
Number of people living in households with very low work-intensity (% of total population aged below 60)	5,5	6,4	6,0	6,9	5,7	7,1	.	.	.
GDP deflator (y-o-y)	3,3	2,4	1,0	1,2	1,1	1,2	1,6	1,7	1,7
Harmonised index of consumer prices (HICP) (y-o-y)	3,3	1,9	1,9	1,4	0,9	0,4	0,2	0,5	1,0
Nominal compensation per employee (y-o-y)	3,7	2,7	2,2	3,2	3,1	1,6	2,6	2,7	2,8
Labour productivity (real, person employed, y-o-y)	-1,4	-2,8	5,0	0,5	-1,0	0,3	.	.	.
Unit labour costs (ULC) (whole economy, y-o-y)	5,2	5,7	-2,6	2,6	4,1	1,3	2,2	1,7	1,5
Real unit labour costs (y-o-y)	1,8	3,2	-3,6	1,4	3,0	0,2	0,7	0,0	-0,2
REER <sup>3</sup> (ULC, y-o-y)	-0,8	-6,8	4,8	7,4	2,8	3,3	-3,2	-4,7	0,4
REER <sup>3</sup> (HICP, y-o-y)	-3,1	-8,9	6,9	4,5	-0,7	1,8	-4,5	-6,2	-1,0
General government balance (% of GDP)	2,0	-0,7	0,0	-0,1	-0,9	-1,4	-2,2	-1,6	-1,0
Structural budget balance (% of GDP)	.	.	0,8	0,0	0,0	-0,3	-1,3	-1,0	-0,9
General government gross debt (% of GDP)	36,8	40,3	36,7	36,1	36,4	38,6	41,4	41,3	40,6

<sup>1</sup> Domestic banking groups and stand-alone banks.

<sup>2</sup> Domestic banking groups and stand-alone banks, foreign-controlled (EU and non-EU) subsidiaries and branches.

<sup>3</sup> Real effective exchange rate

(\*) Indicates BPM5 and/or ESA95

**Source:** European Commission, ECB

Table 1.2: **The MIP scoreboard**

			Thresholds	2008	2009	2010	2011	2012	2013
External imbalances and competitiveness	Current Account Balance (% of GDP)	3 year average	-4%/6%	8,6	7,8	6,8	5,9	5,9	6,1
		p.m.: level year	-	8,6	5,9	6,0	5,8	5,8	6,6
	Net international investment position (% of GDP)		-35%	-1,5	0,6	2,9	-9,2	-9,0	-10,8
	Real effective exchange rate (REER) (42 industrial countries - HICP deflator)	% change (3 years)	±5% & ±11%	-2,1	-8,5	-3,3	2,9	10,1	5,1
		p.m.: % y-o-y change	-	-2,2	-7,3	6,5	4,1	-0,8	1,7
	Export Market shares	% change (5 years)	-6%	-7,0	-13,7	-13,4	-13,2	-18,7	-15,0
		p.m.: % y-o-y change	-	-4,3	-7,6	-1,5	-0,9	-5,8	0,1
	Nominal unit labour costs (ULC)	% change (3 years)	9% & 12%	9,8	15,9	8,3	5,6	4,0	8,1
		p.m.: % y-o-y change	-	5,2	5,7	-2,6	2,6	4,1	1,1
	Internal imbalances	Deflated House Prices (% y-o-y change)		6%	-2,0	0,8	6,4	0,8	0,7
Private Sector Credit Flow as % of GDP, consolidated		14%	19,1	4,7	4,0	5,5	1,3	3,7	
Private Sector Debt as % of GDP, consolidated		133%	200,1	212,6	200,8	200,3	202,3	201,1	
General Government Sector Debt as % of GDP		60%	36,8	40,3	36,7	36,1	36,4	38,6	
Unemployment Rate		3-year average	10%	6,5	6,9	7,7	8,2	8,1	7,9
		p.m.: level year	-	6,2	8,3	8,6	7,8	8,0	8,0
Total Financial Sector Liabilities (% y-o-y change)		16.5%	11,7	3,0	2,6	3,2	4,6	9,1	

Figures highlighted are the ones falling outside the threshold established by EC Alert Mechanism Report. For REER and ULC, the second threshold concerns non-Euro Area Member States.

(1) Figures in italic are according to the old standards (ESA95/BPM5). (2) Export market shares data: the total world export is based on the 5th edition of the Balance of Payments Manual (BPM5).

**Source:** European Commission

### Box 1.1: Economic surveillance process

The Commission's Annual Growth Survey, adopted in November 2014, started the 2015 European Semester, proposing that the EU pursue an integrated approach to economic policy built around three main pillars: boosting investment, accelerating structural reforms and pursuing responsible growth-friendly fiscal consolidation. The Annual Growth Survey also presented the process of streamlining the European Semester to increase the effectiveness of economic policy coordination at the EU level through greater accountability and by encouraging greater ownership by all actors.

In line with streamlining efforts this Country Report includes an In-Depth Review — as per Article 5 of Regulation no. 1176/2011 — to determine whether macroeconomic imbalances still exist, as announced in the Commission's Alert Mechanism Report published on November 2014.

Based on the 2014 IDR for Sweden published in March 2014, the Commission concluded that Sweden was experiencing macroeconomic imbalances monitoring and policy action, in particular, developments in the areas of household debt, linked to the high levels of mortgage debt and structural characteristics of the housing market, as well as unfavourable developments in export market shares.

This Country Report includes an assessment of progress towards the implementation of the 2014 Country-Specific Recommendations adopted by the Council in July 2014. The Country-Specific Recommendations for Sweden concerned public finances, private indebtedness, housing market and labour market.

## 2. IMBALANCES, RISKS AND ADJUSTMENT

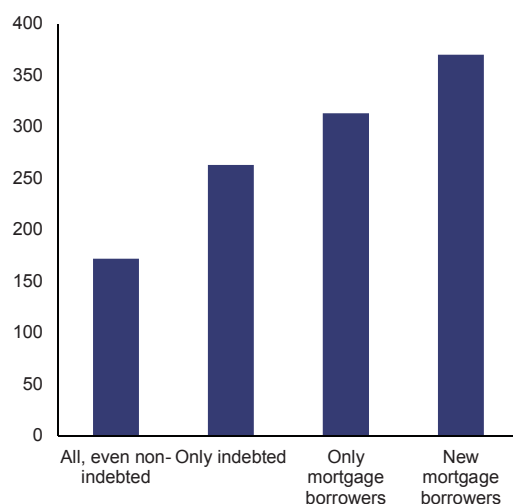
## 2.1. PRIVATE INDEBTEDNESS

### Households' indebtedness developments

*Households' debt in Sweden is high and growing faster than in the rest of the EU*

**The economy-wide debt to disposable income ratio was 160% in Sweden in 2013. However, for indebted individuals the ratio is substantially higher.** A recent study by the Riksbank <sup>(3)</sup> shows that the debt ratio reaches 313% for households that have a mortgage and even 370% for new mortgage borrowers <sup>(4)</sup> as reflected in Graph 2.1.1.

Graph 2.1.1: Debt ratio for different groups in 2013



Source: Riksbank

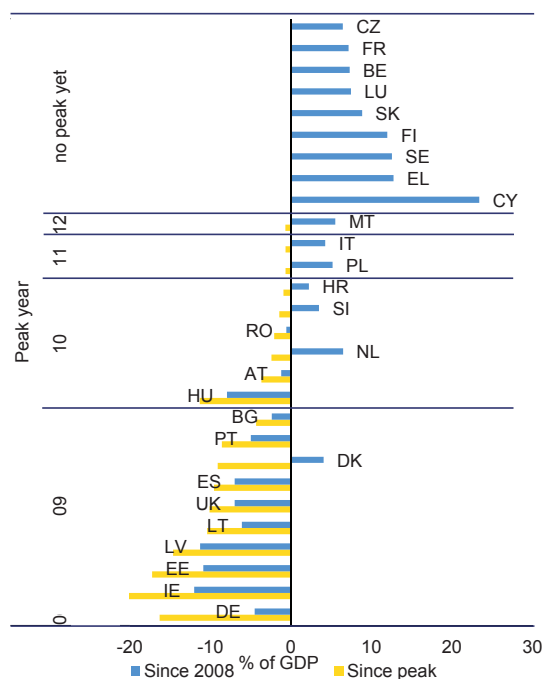
Moreover, for households with mortgages the debt ratio averages over 400% in the three metropolitan municipalities (Stockholm, Göteborg, Malmö).

**Households' indebtedness is still growing in Sweden while some deleveraging has already taken place in peer countries, i.e. the debt to GDP ratio has come down.** While most EU Member States' households reached a peak in indebtedness in the post-2008 period - for instance, Denmark and the UK peaked in 2009 and the Netherlands in 2010 - household debt in Sweden, as in Finland, is still growing (Graph 2.1.2).

<sup>(3)</sup> Winstrand, Jakob and Ölcer, Dilan (2014), *How indebted are the Swedish households?*, Economic Commentary no. 1, 2014. Sveriges Riksbank.

<sup>(4)</sup> Financial Supervisory Authority, *The Swedish Mortgage Market 2014*, 2014.

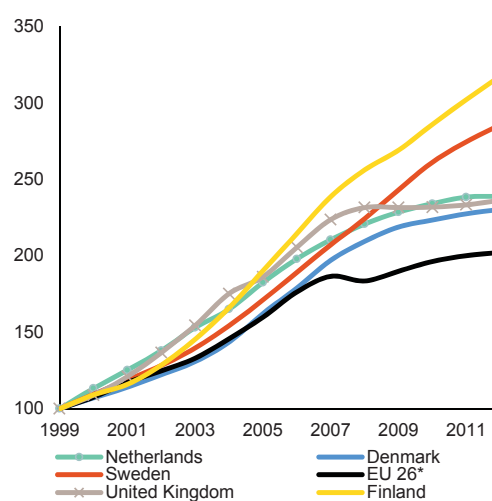
Graph 2.1.2: Change in household indebtedness since 2008 and since peak, %



Source: European Commission

**Moreover, household debt has been growing faster in Sweden than in the rest of the EU especially since 2007 (Graph 2.1.3).**

Graph 2.1.3: Household debt growth (1999=100)



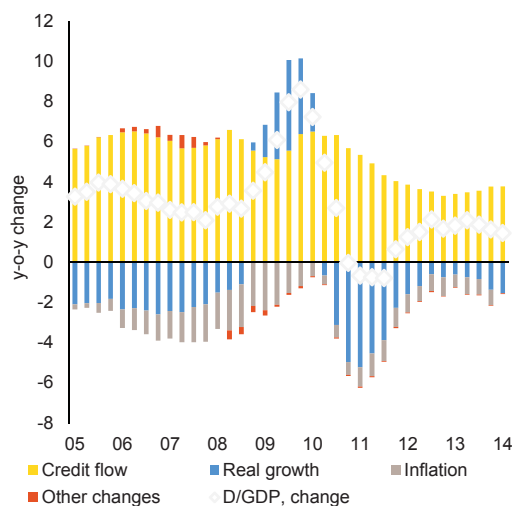
\* Excluding Luxembourg and Malta

Source: European Commission



**Households' debt to GDP is still increasing** mainly driven by net credit flows outpacing nominal GDP growth (Graph 2.1.4).

Graph 2.1.4: **Decomposition of y-o-y changes in debt-to-GDP ratio, quarterly data, %**



Source: European Commission

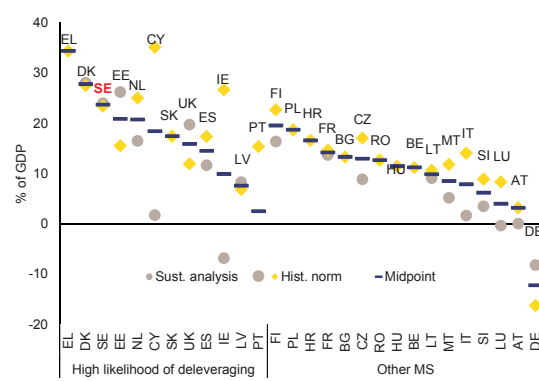
*Comparative analysis puts Sweden among the Member States with the highest need for deleveraging*

**Two methods are used for estimating the deleveraging needs:** one is based on a Commission analysis of debt sustainability<sup>(5)</sup>, the other on an analysis by the IMF<sup>(6)</sup> of historical boom and bust episodes. The first method defines a country-specific sustainable level of debt by inferring debt that is consistent with households' assets corrected for valuation effects (marked with a grey dot in Graph 2.1.5). The second method is based on the "typical" extent of deleveraging in past episodes, and is a function of the preceding debt increase, this is the historic method (marked with a yellow square). The midpoint line shows the average of the results provided by these methods.

(5) The method was developed by C. Cuerdo, Drumond, I., Lendvai, J., Pontuch, P., and Raciborski, R. (2014), *Private sector deleveraging in Europe*, Economic Modelling.  
 (6) Bornhorst, F. and M. Ruiz-Arranz (2013), *Indebtedness and Deleveraging in the euro area*, 2013 Article IV Consultation on euro area policies: Selected Issues Paper, Chapter 3, IMF Country Report 13/232.

**For Sweden deleveraging needs for households may be above 20% of GDP<sup>(7)</sup>.** This is also the case for Denmark and Greece. However, the implications of these deleveraging needs - in terms of pace, of mode of deleveraging and of the overall implications for economic activity- will largely depend on the state of credit demand and supply, which reflect the strength of the economy as well as the state of the financial sector (for the latter, see Section 2.3).

Graph 2.1.5: **Estimated range of potential deleveraging needs, %**

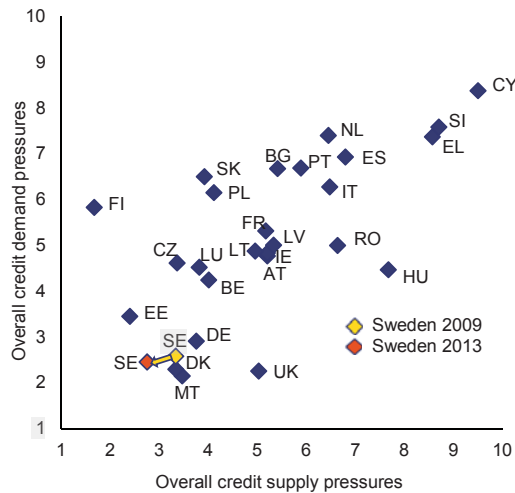


Source: European Commission, IMF

**In Sweden, credit demand and supply conditions are benign and have even improved since 2009.** Graph 2.1.6 combines two composite indicators to reflect the two sides of credit market conditions. For Sweden both supply and demand sides conditions improved since 2009 suggesting a potentially smooth and gradual adjustment of household debt. It could be mostly driven by nominal growth of the economy in the medium term if appropriate policy measures are taken to contain the growth pace of net credit flows.

(7) For more details regarding the sustainability analysis for Sweden, see *IDR Macroeconomic imbalances - Sweden 2014*, European Economy, Occasional Papers 186, March 2014.

Graph 2.1.6: Credit supply and demand deleveraging pressures, 2013



Source: European Commission

### Debt-containing measures and still effective debt-drivers

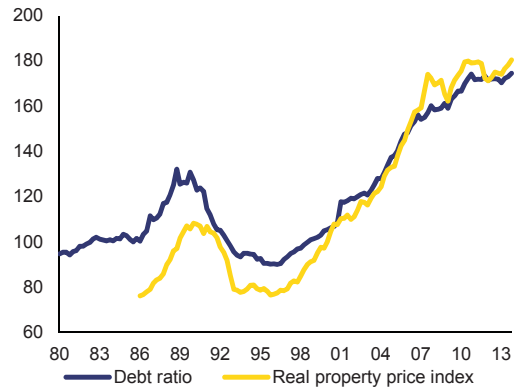
*Incentives to take on debt are still strong*

Measures taken by the Swedish authorities have not been sufficient so far to curb the progression of household debt to GDP. Even though net credit flows moderated since Q4 2010, they still amounted to 3.8% in 2013 and still outpace nominal GDP growth driving household debt to GDP further upward.

Several factors lie behind the continuous increase of household debt:

The continuous increase in housing prices - fuelled by housing supply constraints - over the past two decades has led to larger mortgage loans (Graph 2.1.7). Housing price developments have been even sharper for tenant-owned apartments (see Section 2.2).

Graph 2.1.7: Household debt and real property price index, (2000=100)



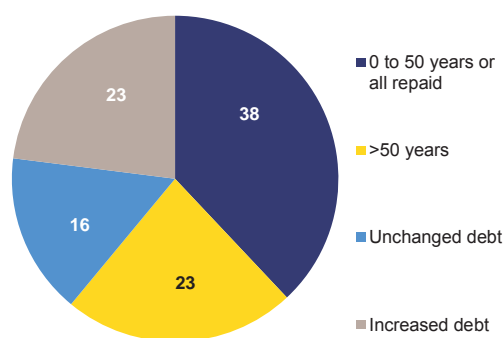
Source: Riksbank

Generous tax incentives on mortgage interest payments create an incentive towards homeownership via indebtedness.

Low interest rates and benign credit conditions make higher loan-to-value mortgages more affordable. Moreover, the possibility to take unsecured loans on top of the 85% loan-to-value cap increases the potential amounts borrowed.

- A weak amortisation culture translating into limited amortisation and long actual repayment periods favours a growing stock of debt. As illustrated on Graph 2.1.8 only 38% of mortgage borrowers amortise fully their mortgage loan in less than 50 years, 23% amortise over a longer period and 39% are not amortising.

Graph 2.1.8: **Proportion of mortgage borrowers who have increased, decreased or kept their debts unchanged between 2012 and 2013, %**



Source: Riksbank

*Policy responses so far have mainly focused on macro-prudential measures*

**Several measures, mainly macro-prudential, have been adopted to contain the demand for credit, promote amortisation and strengthen banks' resilience.** On the demand side for credit, an 85% loan-to-value cap was introduced by the Financial Supervisory Authority in 2010. Moreover, several measures have been introduced to promote a stronger amortisation culture. In March 2014, the Swedish Bankers' Association recommended that new mortgage loans be amortised down to 70% (instead of previously 75%) over 10 to 15 years. In November 2014, the Financial Supervisory Authority announced a forthcoming regulation: New loans will have to be repaid in two steps; mortgage holders with a loan-to-value ratio above 70% will repay at least 2% of their original loan each year. Once at 70% or below, households will repay at least 1% each year until the loan-to-value ratio reaches 50%. The regulation is still forthcoming and the definitions of "new loans" and of "temporary exceptions" (e.g. linked to sickness and unemployment) are to be determined.

**Furthermore, individual amortisation plans are being applied by banks since July 2014 following an initiative by the Financial Supervisory Authority and the Swedish Bankers' Association.** A discussion between the lender and the borrower about amortisation should

take place before the final amortisation plan is proposed. Also, this plan should be in the best long-term interest of the customer. The objective is to allow households to make a decision about amortisation by having banks clearly showing how amortisation affects a household's finances in the long-run. This measure together with the public debate on amortisation seems to have incentivised new borrowers to take on an amortisation plan<sup>(8)</sup>. However, for the moment, this plan can be interrupted and household can decide to repay interests only.

**A new government regulation on fairer rules for repayment of mortgages entered into force in July 2014.** This regulation aims at facilitating the possibility for the consumer to repay one's fixed rate mortgage or to switch banks, thus increasing competition in the market. It has two main components. First, the government proposes a new model for the calculation of interest rate compensation for the banks, corresponding to the actual costs for the bank. Second, the regulation limits the creditors' right to ask for the repayment of a mortgage when the value of the security for the loan has decreased as a result of a general downturn in the housing market. From a financial stability perspective, this measure restricts banks' option to transfer the risk of a general market fall to the household sector. This recent measure doesn't seem to have incentivised more repayments so far possibly because households might not be aware of it.

**Further measures have been implemented regarding banks' resilience (Section 2.3) and housing supply (Section 2.2).**

**No reform has been undertaken in Sweden to limit the generous tax deductibility on mortgage interest payment or increase recurrent property taxation to reduce households' incentives to take on debt.**

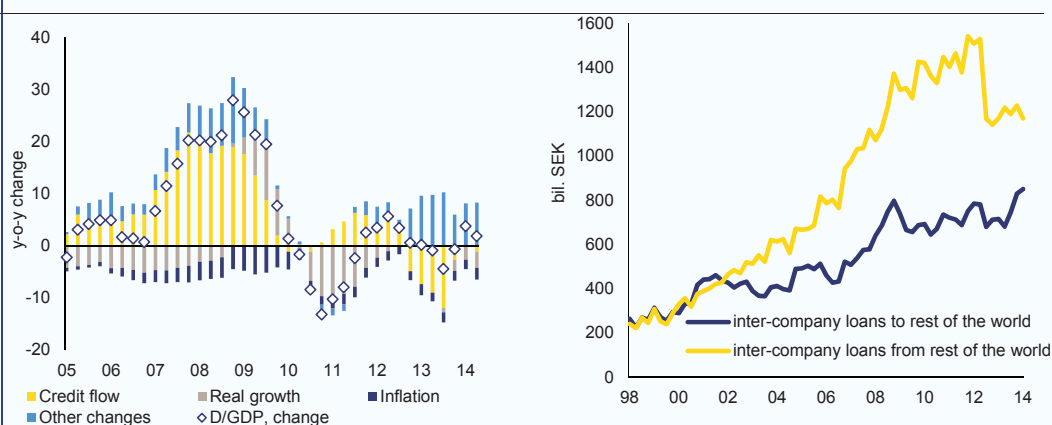
<sup>(8)</sup> FSA memorandum 2014-11-11.

### Box 2.1.1: Corporate indebtedness

**Consolidated corporate debt is slightly decreasing compared to 2012 and reached a level of 125% of GDP in 2013.** Since the peak in 2009, the leverage ratio fell by nearly 20% of GDP. This development is mainly driven by negative credit flows due to relatively weak economic growth. Considering the contribution of different underlying variables to deleveraging, 'other changes' contributed increasingly positively to the debt-to-GDP level in recent quarters including e.g. valuation changes due to foreign currency denominations, debt write-downs or other. The restructuring of firms' financing from abroad might have contributed to the deleveraging of firms.

**Restricted tax deductibility for intra-group interest expenses has reduced the attractiveness of intra-group loans while lower corporate tax rates should support a favourable business environment.** The new tax rules together with a reduction of the corporate income tax from 26.3 to 22% in 2013 showed considerable effect on intra-company loans as the annual growth rate of these loans plummeted by 20% in 2013. Sweden's corporate marginal tax rate of 22% is now slightly above EU average (21.3%) and lower than the tax rate in comparable countries.

Graph 1: Right picture: Contribution to deleveraging, Left picture: Inter-company loans



Source: European Commission, Statistics Sweden

**Non-financial corporations' balance-sheet indicators are healthy and interest payments are decreasing due to the low interest rate environment.** Gross saving as a per cent of gross value added is largely positive (average of 23.2%), indicating that profits are sufficiently high to avoid taking on liabilities. Gross debt-to-equity ratio is decreasing and reached 59% at the beginning 2014. Debt-to-financial-asset ratio is stable and slightly decreasing in the last two years <sup>(1)</sup>.

**Notwithstanding healthy balance sheets, some studies suggest the need for a further deleveraging (of a magnitude that can be accomplished by passive deleveraging).** The analysis takes different deleveraging indicators into account as well as different time periods <sup>(2)</sup>. This range of deleveraging values should only be taken as an indication. Cross-border lending might overstate the deleveraging need. Additionally, favourable credit demand and supply conditions in Sweden are expected to support a smooth "passive" deleveraging path where the debt-to-GDP ratio decreases while positive nominal credit flows are outpaced by nominal GDP growth.

<sup>(1)</sup> The debt-servicing ability of the corporate sector has improved with the low level of interest rates and the favourable economic predictions. This is shown by a declining default rate.

<sup>(2)</sup> The methodology has been described in the Quarterly Report on the euro area 4, December 2014.

**This contrasts with several Member States where taxation reforms concerning mortgage interest deductibility have been undertaken to curb households' demand for mortgage loans.**

For instance, Spain and Ireland removed interest relief entirely for new mortgages from 2013, while Denmark, Finland and the Netherlands are reducing it gradually<sup>(9)</sup>. The UK is also an example of a gradual and complete phase-out of the tax subsidy. These reforms have proven effective in reducing tax incentives to home-ownership via debt. As demonstrated in Table 2.1.1, after completely phasing out mortgage interest deductibility, the UK scores as "low" on tax incentives. Denmark went from "high" in 2011 to "medium" in 2013 after reducing the value of the deduction on mortgage interest payments. Sweden still scores high on tax incentives due to a very high score on mortgage interest deductibility.

<sup>(9)</sup> For Denmark, according to current legislation, the value of the deduction on mortgage interest payment will be reduced from 33½% to 25½% by 2019. For Finland, the deductible fraction of mortgage interest against positive capital income is 75% in 2014 (from 85% in 2012), and due to further decrease to 65% in tax year 2015. The deduction is also capped at € 1 400 per taxpayer, plus € 400 for one child and € 800 for two or more children. For the Netherlands, interest payments on loans for the purchase of owner-occupied dwellings taken out as of 1 January 2013 can be deducted only if they are fully repaid in the form of a linear or an annuity mortgage within a maximum of 30 years. Moreover, the maximum rate at which mortgage interest payments can be deducted from taxable labour income is being reduced by 0.5 points each year over a 28-year-period, from 51.5% to 38% by 2031.

Table 2.1.1: **Composite index of tax incentives for owner-occupied housing**

2011	Composite Tax Index	Incentives	2013	Composite Tax Index	Incentives
France	0	None	France	0	None
United Kingdom	0,4	Low	Greece	0	None
Cyprus	0,6	Low	Spain	0	None
Poland	0,6	Low	Cyprus	0,2	Low
Romania	0,6	Low	United Kingdom	0,2	Low
Belgium	0,8	Medium	Ireland	0,4	Low
Greece	0,8	Medium	Latvia	0,4	Low
Italy	0,8	Medium	Poland	0,6	Low
Latvia	0,8	Medium	Portugal	0,6	Low
Spain	0,8	Medium	Romania	0,6	Low
Austria	1	Medium	Belgium	0,8	Medium
Germany	1	Medium	Italy	0,8	Medium
Portugal	1	Medium	Slovenia	0,8	Medium
Hungary	1,2	Medium	Austria	1	Medium
Ireland	1,2	Medium	Germany	1	Medium
Luxembourg	1,2	Medium	Lithuania	1	Medium
Slovenia	1,2	Medium	Denmark	1,2	Medium
Lithuania	1,4	High	Hungary	1,2	Medium
Malta	1,4	High	Luxembourg	1,2	Medium
Slovakia	1,4	High	Czech Republic	1,4	High
Denmark	1,6	High	Finland	1,4	High
Netherlands	1,6	High	Malta	1,4	High
Bulgaria	1,8	High	Slovakia	1,4	High
Estonia	1,8	High	Bulgaria	1,8	High
Finland	1,8	High	Estonia	1,8	High
Czech Republic	2	High	Netherlands	2	High
Sweden	2	High	Sweden	2	High

**Source:** European Commission calculations

**To conclude, household debt in Sweden is high and still growing leading to households' deleveraging needs estimated at 20% of GDP.** Rising housing prices, substantial tax subsidies, a weak amortisation culture and historically low level of interest rates are fuelling the rise in indebtedness. Even if households' assets are high at aggregate level and disposable incomes have grown over the past years, the household sector in Sweden is more vulnerable than before as described in Section 2.4. Sweden currently benefits from benign credit market conditions which indicate that with appropriate policy measures, Swedish households could engage in a passive deleveraging mode. The Financial Supervisory Authority's announcement of a regulation to push amortisation down to 50% on new mortgage loans is a significant step to re-establish an amortisation culture. However, the debt-bias in taxation, particularly the tax deductibility of mortgage interests, has not been tackled so far.

## 2.2. HOUSING MARKET

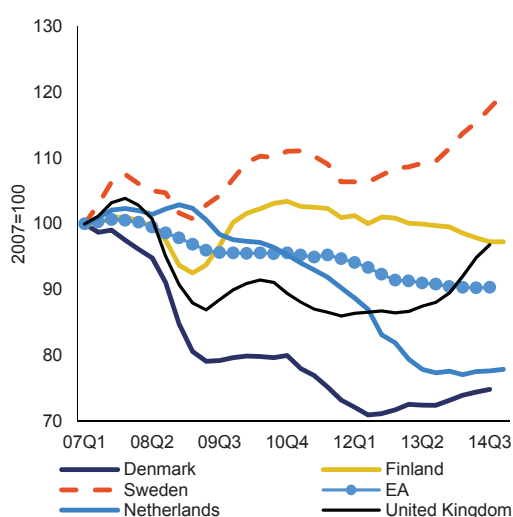
### Housing market developments

#### *Rebounding Swedish house prices*

**Swedish house prices grow again strongly since mid-2013.** While real house prices grew by 1.9% in 2012 and 2.8% in 2013, they accelerated to 7.4% in 2014. Such dynamic growth rates were last observed between the period of 1997 and 2007, when real house prices grew at a yearly average of 8% and real house prices doubled during this ten year period.

**On the EU level, house prices have been declining since 2007. Sweden, however, is characterised by growing house prices over the same period,** as shown in Graph 2.2.1 below. Among countries comparable to Sweden, Denmark and the Netherlands have gone through steep adjustments, with real house prices in 2014 close to 25% lower than in 2007. In Finland, house prices have remained broadly stable during this period. By contrast, Sweden is among the small group of EU countries, where house prices have not gone through a major correction, have not reached their peak yet and also show no signs of possible correction in the near term.

Graph 2.2.1: **Real house prices in the Nordic region, Index 2007=100**



Source: OECD

**After historically low levels in 2013, preliminary figures show that housing investment rebounded sharply in 2014 by 27 %,**

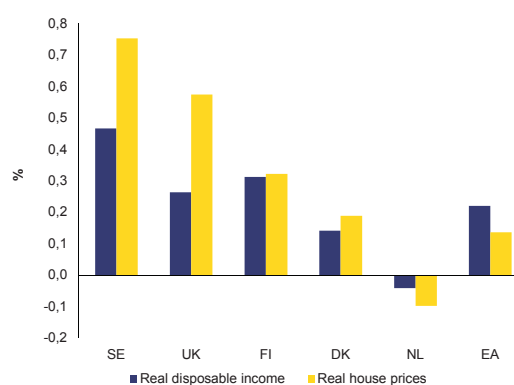
**or 38 500 units.** The construction of new housing could stay around this level in the coming years<sup>(10)</sup>. Nevertheless, even with this surge, Swedish investment in housing stays below the level of its peer countries or the EU average as percentage of GDP. Despite steadily growing demand for housing and rising house prices in Sweden, investment to new housing has been subdued now for a prolonged time now. Between 2000 and 2014, housing investment amounted to an average of 3.4% of GDP in Sweden, lower than in Finland or Denmark where these values reached 6% and 4.9% respectively, but comparable to the UK.

### House price developments

#### *Indicators point to overvaluation*

**Previous in-depth reviews have indicated that Swedish house prices appear to be above their fundamental values.** They also concluded that favourable fundamentals cannot fully explain the situation; other factors appear to contribute to elevated house prices. Real house prices have been growing at a higher pace than real disposable incomes similarly to the UK, but contrary to other European peer countries, as demonstrated in Graph 2.2.2 below.

Graph 2.2.2: **Average annual growth rates of real disposable income and real house prices between 2000 and 2014**



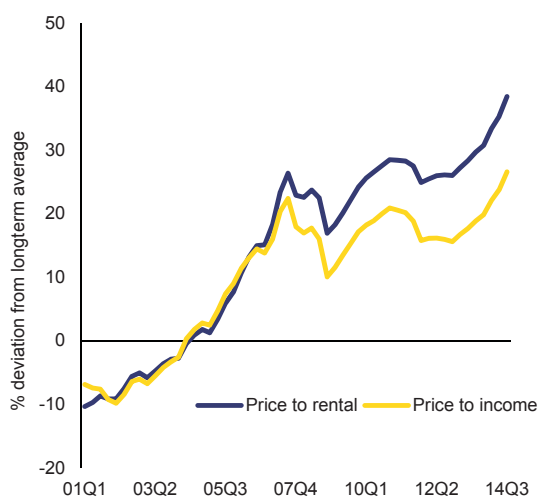
Source: OECD

<sup>(10)</sup> Swedish Construction Federation: ByggKonjunkturen of 22 October 2014 and 10 December 2014.

**House price increases have been particularly large in the urban areas of Sweden** driven by strong urbanisation trends and constraining housing supply factors.

**Traditional indicators show house prices above long-term average levels.** According to price to income (affordability) and price to rent (dividend) ratios Sweden's house prices point to an overvaluation territory of 25-40% compared to 15-30% of last year (see Graph 2.2.3 below). Even if such calculations have to be taken with caution, they corroborate the main trends: house prices are increasing with reinvigorated strength since mid-2013 from the already high levels.

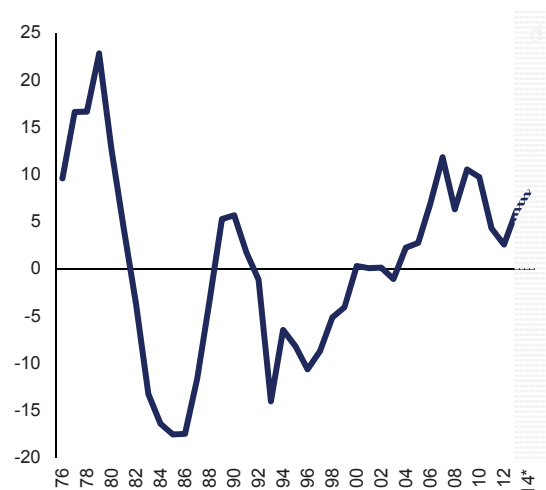
Graph 2.2.3: Price to rent and price to income



Source: European Commission, OECD, ECB, BIS and European Commission calculations

**Econometric models also suggest that house price cycles in Sweden cannot be explained only by fundamental factors.** Swedish house price have not gone through a bust period comparable to those observed during past cycles, as depicted on Graph 2.2.4 below. Rather they possibly entered into another boom period starting from 2012 indicating a growing potential overvaluation with respect to the main supply and demand fundamentals. Econometric models suggest that even small changes in the underlying drivers of the house prices (for instance when the interest rate is set too low or mortgage tax deductions too high) could have strong and sudden implications on stability.

Graph 2.2.4: Overvaluation gap with respect to main supply and demand fundamentals



(1) Data for 2014 is provisional

Source: European Commission calculations

### Demand side drivers

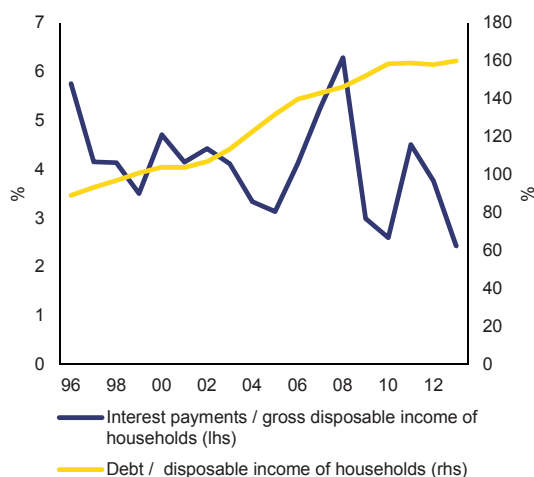
*Strong demand side incentives remain*

**Swedish house prices are driven by a strong structural demand:** Sweden has experienced a prolonged period of robust disposable incomes growth and the population of the country is growing dynamically also due to the high number of immigrants arriving (section 3.2). The fact that inhabitants per dwelling has been slightly increasing since 2009 is mitigating immanent demand <sup>(1)</sup>.

**Credit incentives have been particularly favourable.** Low inflation is translated into decreasing mortgage loan rates, which allow households to take higher loans while keeping their monthly payments at the same or decreasing level. The high share of variable mortgage is translating lower interest rates to lower monthly payments expanding households' perceived ability to borrow. As a result, although private indebtedness compared to disposable income has been growing steadily, the interest burden of households shows a declining trend (Graph 2.2.5 below).

<sup>(1)</sup> Boverket: Låst läge på bostadsmarknaden. Market report, May 2014.

Graph 2.2.5: Interest burden vs debt per gross disposable income



Source: European Commission

**Favourable credit conditions have been magnified by the availability of amortisation-free mortgage loans.**

The average actual repayment period could be even more than 140 years<sup>(12)</sup>. These types of loans started to increase substantially in Sweden from 2007 and have become dominant on the Swedish mortgage market<sup>(13)</sup>. The availability of these loans allows households to significantly expand their borrowing capabilities in particular with low interest rates<sup>(14)</sup>. Graph 2.2.6 below shows that house prices and private indebtedness have been growing in tandem until 2007. After 2007, although real house price growth moderated, private indebtedness grew at a higher pace, inter alia, on account of favourable mortgage conditions. Incentives for risky debt-taking in Sweden are one of the highest among EU countries, due not least to

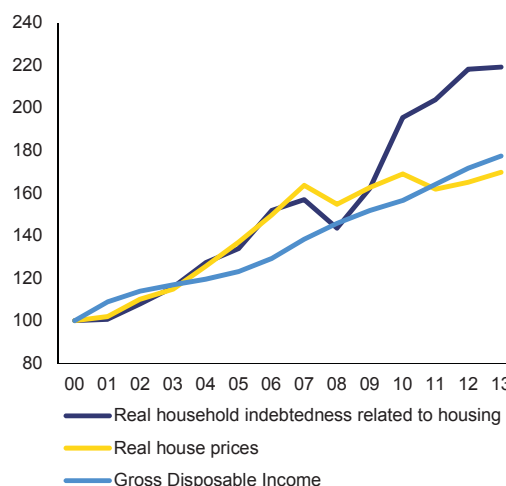
<sup>(12)</sup> IMF: Staff Report for the 2013 Article IV consultation, 2013 or Finansinspektionen: The Swedish Mortgage Market 2013, 7 March 2013.

<sup>(13)</sup> Sveriges Riksbank: How indebted are Swedish households? By Jakob Winstrand and Dilan Ölcer, 7 May 2014.

<sup>(14)</sup> Assuming the same amount of monthly interest payments, households can take a 20% higher mortgage loan if they opt for non-amortisation at mortgage interest rates of 6%. If mortgage interest rates fall to 3%, the available loan could increase by 66% and in case mortgage interest rates fall to 2%, they double. See also Johansson, S. Hegelund, E. and Karpestam, P.: Amorteringars effekter på bostadspriser och konsumtion. Rekommendationer för en europeisk marknad i förändring. Sieps, October 2014.

the high proportion of non-amortised loans and loans with variable interest rates.

Graph 2.2.6: Real housing prices, household debt and disposable income growth (2000=100)



Source: European Commission, Statistics Sweden, OECD

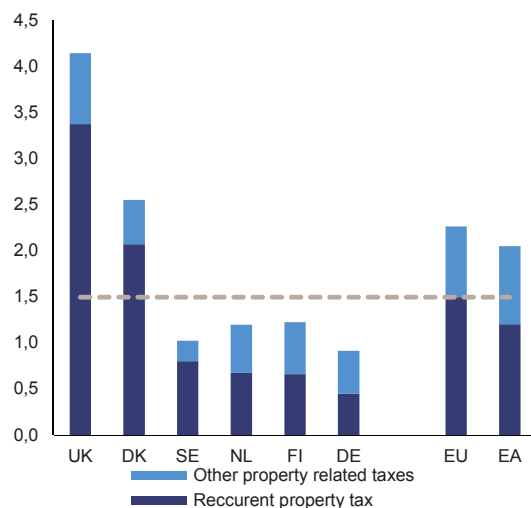
**The current taxation system in Sweden tends to push up house prices.**

Sweden (together with the Netherlands) applies the highest incentives in the tax system for home ownership. Taxation of properties in Sweden is below the EU average, producing revenues equivalent to 1% of GDP in 2012 as shown in Graph 2.2.7. In addition, the most generous tax subsidies to mortgage interest in the EU are recorded in the Netherlands, Sweden and Denmark, which further incentivise household to take debts<sup>(15)</sup>. While most countries made efforts to reduce tax incentives and to apply more neutral tax treatment to home ownership (also due to strong fiscal consolidation needs), these incentives have been unchanged in Sweden.

<sup>(15)</sup> European Commission: Tax Reforms in EU Member 2014 - Tax policy challenges for economic growth and fiscal sustainability, June 2014.



Graph 2.2.7: Revenues from property taxes (in % of GDP, 2012)



Source: European Commission

### Supply side drivers

*Supply sides constraints hamper new constructions and effective use of the existing housing stock*

**Structural issues also contribute to house price growth in Sweden: the housing market is characterised by several market inefficiencies on the supply side.** As a result, construction activity has been suppressed for many years and resulted in a widespread housing shortage all across Sweden. The housing shortage of between 90 000 and 160 000 thousand dwellings could exist currently in Sweden. At least the construction of 40-50 000 new apartments would be necessary to gradually eliminate this shortage on medium term<sup>(16)</sup>, which would not be reached if the current supply side constraints remain in place. Supply is further suppressed by ineffective use of the existing housing stock due to rigidities on the rental market.

### Regulation

**Municipalities have a central role in supporting new constructions:** they have the planning monopoly, plan and finance public infrastructure projects and own high proportion of land eligible

<sup>(16)</sup> Boverket: Bostadsbristen ur ett marknadsperspektiv, Rapport 2012:18.

for construction. Nevertheless, municipalities do not have sufficient (financial) incentives to support construction activities. Tax revenues increase, if at all, only moderately and in the mid-term, while increased residential construction will entail public infrastructure investments to be financed by them.

**Municipalities, having the planning monopoly, often impose different local standards and requirements which fragment the market.** Such fragmentation reduces efficiency, increases building costs and raises uncertainty for construction companies.

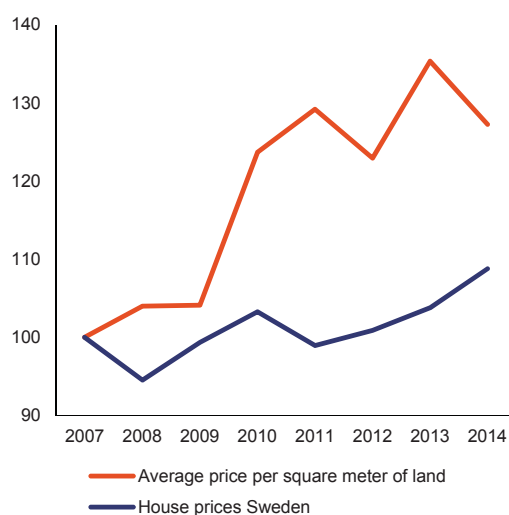
**Sweden's residential investment market is characterised by long and complex planning and zoning process that negatively impact supply responsiveness.** Swedish authorities' made some improvements to streamline and simplify planning regulation in recent years. As a result the amount of time needed for approval of new construction has been reduced to 5-6 years from 8-10 years, but is still long compared to the 3 years average of, for instance, Germany.

**Public infrastructure projects can positively impact housing supply in the medium term.** Investment in road, railways or metro line facilitates commuting to main urban areas. In Sweden, the County Administrative Boards are responsible to draw up and adopt a plan for regional transport infrastructure development. A good example is the plan to extend metro lines in Stockholm which could involve the construction of 78 000 additional homes until 2030. Nevertheless, municipalities enjoy relative independence in their public transport strategy including the funding. Considering wider regional perspective across municipalities would also allow to better incorporate housing aspects when designing infrastructure projects.

**Municipalities also retain extensive ownership of the land:** across the country roughly 60-70% of all housing starts takes place on municipal land that has been transferred to construction companies. In this context, the Swedish Competition Authority has found that the land allotment procedures are often inefficient and non-transparent in Sweden. Since the value of the land is increasing at a higher pace than the value of new housing (as shown in Graph 2.2.8), large construction companies can "wait-and-see" by

initiating only limited new constructions and rather capitalising on rising land prices <sup>(17)</sup>.

Graph 2.2.8: **Real land price and real house price growth (2007=100)**



Source: Statistics Sweden

Once building permits have been granted, municipalities do not have leverage on real estate developers to start constructions <sup>(18)</sup>.

**The Planning and Building Act was modified in 2014 to simplify the planning permission process in order to increase supply of housing.**

Effective as of July 2014, house owners are allowed to carry out certain modifications and additions to their property without having to acquire a building permit from the municipality. In principle, these are the construction of ancillary buildings (such as garages and storage), as well as small dwellings of a total of 25 m<sup>2</sup>. These buildings are popularly known as “*Attefall houses*”, after the previous Minister for Public Administration and Housing. It is too early to assess whether the measure is indeed playing a real role in addressing the housing shortage. Nevertheless, an evaluation of the first few months of implementation in the three most populated urban municipalities of Stockholm, Gothenburg and Malmö suggests that the uptake has been slow,

<sup>(17)</sup> Swedish Competition Authority: Competition in Sweden 2013. Rapport 2013:10.

<sup>(18)</sup> County Administrative Board: Outnyttjade detaljplaner för bostäder Lägesbild i 13 av länets kommuner i mars 2014, March 2014.

at least in the first period: most notifications in these areas (almost 60%) concern the extension of existing houses, while *Attefall* houses account for less than 6%.

*Competition*

**The Swedish construction sector is characterised by weak competition.**

The issue has repeatedly been addressed by the Swedish Competition Authority, which has identified challenges both regarding the construction of buildings as well as infrastructure such as roads, bridges, tunnels etc. While foreign companies are typically competing in infrastructure projects, housing constructions tenders are typically left to domestic companies. Entry barriers on the market are high deriving among other factors from the extensive ownership of land, exclusive contacts with local authorities, complex and diverging building requirements across the country. The lengthy and cumbersome planning and zoning procedures also mean that companies need to be knowledgeable of the local conditions and understand how to navigate the municipal planning monopoly<sup>(19)</sup>.

**Small and medium-sized enterprises (SMEs) in the construction sector face difficulties to access finance,**

which can be a large constraint in terms of launching new projects, even such ones that the firms themselves consider relatively low-risk and into which they are willing to invest their own capital <sup>(20)</sup>.

**The construction material sector is operating in a heavily regulated environment,**

due to various standards and norms and the need for very precise qualities as regards for instance durability, size, compatibility with other products etc. Both the production and the distribution of construction materials are in general characterised by large economies of scale. As a result, the construction sector is dominated by four large, vertically integrated companies, whereof the three biggest account for half of the turnover in the industry. These four companies also produce important

<sup>(19)</sup> Swedish Competition Authority: Competition in Sweden. Rapport 2013:10.

<sup>(20)</sup> Swedish Government Offices: Better competition for increased housing. Dir 2014:75.

input such as concrete and asphalt, giving them a competitive advantage over smaller and/or foreign companies that still largely face difficulties penetrating the market. Recently, there are signs that foreign actors are becoming more active in large-scale infrastructure projects, while their involvement still remains limited as regards housing and construction material.

**The Swedish government decided in 2014 to commission a public inquiry** on how to promote competitions. The results of the inquiry are due to be published in October 2015.

#### Rental market

**The Swedish rental market is characterised by growing structural imbalances, in particular, in dynamically growing urban areas.** Therefore it does not seem to fulfil its role in alleviating house price pressure or support mobility needs. Ineffectiveness can be witnessed in the long waiting queues and low turnover of rental units, a developing black market (for instance, sub-letting without the permission of the landlord and at rent levels higher than those of equivalent rental units or trade with rental contracts), suppressed construction of rental units and increased rate of transformation of existing rental apartments to owner-occupied dwellings, in particular in the main urban areas<sup>(21)</sup>. Sub-optimal use of the existing housing stock, in particular on the rental market, is one of the main reasons for the housing shortage in Sweden resulting in significant welfare loss.

**Market inefficiencies are primarily attributed to the high level of rent control.** Sweden is characterised by the highest levels of rent control among EU Member States<sup>(22)</sup>. Rent levels are negotiated between the Swedish Union of Tenants (*Hyresgästföreningen*) and the housing companies. Rental prices are based on a rent valuation model based on a set of characteristics defined as the so-called 'utility value' of any given dwelling. These characteristics include factors such as the standard, services offered and the condition of the dwelling,

<sup>(21)</sup> Boverket: Bostadsbristen och hyressättningssystemet - ett kunskapsunderlag, Market report, November 2013.

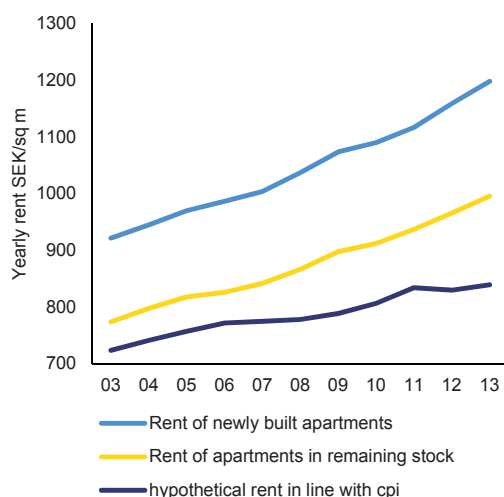
<sup>(22)</sup> Cuerpo Caballero, C., Demertzis, M., Fernández Vilaseca, L., Pontuch, P., Assessing the dynamics of house prices in the euro area, Quarterly Report of the Euro Area, 4/2012.

but location is only taken into account to a very limited extent.

**The current rent control, hence, does not allow more differentiated rental prices in the most attractive areas.** As a result a significant gap has opened up between actual rental prices and market prices in urban areas. The difference between those prices is apparent if rents on the existing stock are compared with newly constructed rental apartments (in which case rent levels can be set outside the utility value system for the first 15 years). As depicted in Graph 2.2.9, the rent for newly built apartments is considerably higher than for the existing stock.

**The growing difference between actual and market rents triggers excessive demand for rental units and creates a lock-in effect.** Existing tenants would not want to give up their favourable conditions for renting the apartment below market prices while new entrants cannot access rental apartments. Students, young and low-income households cannot access cheap, entry-level housing thereby negatively affecting labour mobility, as well as having important social implications.

Graph 2.2.9: Rent of newly built apartments vs existing stock



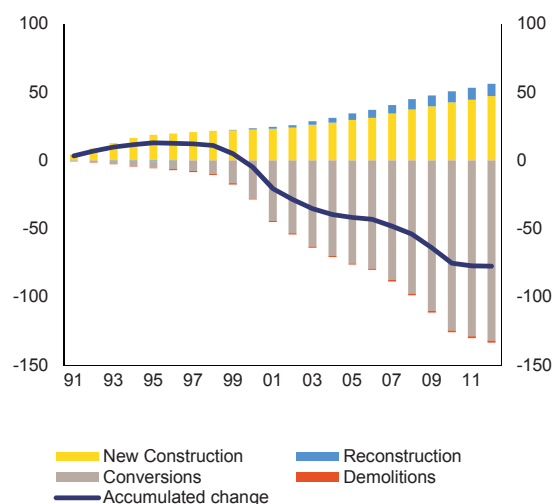
Source: Statistics Sweden

**Divergence between actual and market rents also incentivises conversion of rental units to owner occupied dwellings.** As a result the numbers of rental units have decreased by almost 20% in

Stockholm between 1997 and 2012, mainly due to the high conversion of existing rental dwellings as shown on Graph 2.2.10. By contrast, in areas where the gap between existing rental price and market prices have not opened so widely, the number of rental units have even increased and the incentives for conversions have been limited (for instance in Uppsala or in Örebro).

**The insufficient supply on the rental market creates a pressure on other type of housing;** most notably on tenant-owned apartments (which are the closest substitute in urban areas) further intensifying their price increase. Inefficient use of the existing rental units also contribute to the supply side constraints of housing and could result in significant welfare loss primarily in the urban areas and an undersupply of 40 000 rental units has been accumulated in the country - out of which 27 000 in Stockholm<sup>(23)</sup>.

Graph 2.2.10: **Change in the proportion of rental flats in blocks of flats in Greater Stockholm 1990-2012, in thousands**



Source: Boverket, Statistics Sweden

**Subletting rental units or tenant-owned apartments remains constrained.** Such a possibility is subject to the agreement of the building association owning the apartment, rental prices cannot be set freely and remain uncertain due to possible litigations. Reforming the rent

price setting procedure in order to allow wider divergence of rental prices, for instance by considering location and rental prices for private and/or newly built apartment rental prices would allow to close somewhat the gap between market prices and existing rental prices in urban areas and/or could allow cheaper rental prices in less attractive areas.

**Further challenges will emerge to address the housing needs of the big number of migrants in Sweden.** Elevated house prices, non-availability of social housing, high requirements (for example regarding income levels) or unavailability of rental apartments pose serious challenge for these people to integrate in the labour market.

**No new policy action has been taken in 2014 to tackle these shortcomings.** The Swedish authorities aim to evaluate first the impact of already implemented policy measures on the rental market.

**Housing market concerns are closely interlinked and reinforce each other.** For instance, unavailability of rental dwellings forces people to buy apartments, thereby fuelling house price growth. Inefficient use of existing dwellings suppresses existing housing supply thereby increasing pressure on new construction and rental market. Lack of infrastructure investments would put further upwards price pressure on house prices in core urban areas, which could further incentivise the conversion of rental dwellings. Therefore a coordinated policy approach could tackle these inefficiencies.

<sup>(23)</sup> Boverket: Bostadsbristen och hyressättningssystemet - ett kunskapsunderlag, Market report, November 2013.

## 2.3. BANKING SECTOR

**The increase in private indebtedness is fuelled by bank credit.** Lending for house purchases in Sweden is growing at a relatively high rate, despite a slow-down after 2010 (Graph 2.3.1). Mortgages are an ever growing part of banks' assets. The banking sector is not only contributing to the growth of household debt, but it is also exposed to related risks such as credit risk and funding risk, which are analysed in this section. Swedish banks might bear negative consequences should those risks materialise. More importantly, they could act as a transmission channel amplifying the impact of developments in the housing market on the economy. Hence, banks need robust capital and liquidity buffers to absorb such potential shocks.

### Recent developments and challenges

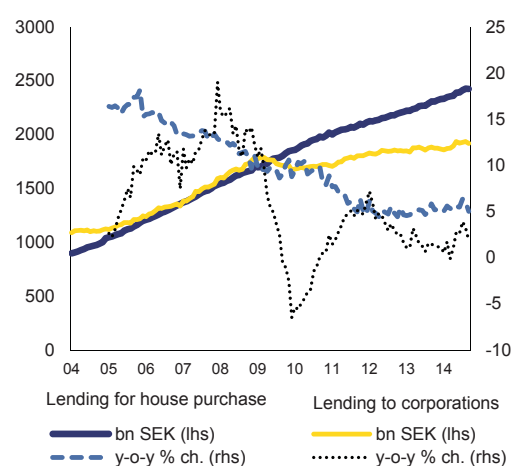
**Sweden has a large and internationally exposed banking sector.** At the end of 2013, total domestic and foreign assets accounted for 400% of GDP. Swedish assets constitute more than half of the total balance sheet. The domestic exposures have been increasing in recent years on the back of credit expansion. In 2014, the banks' foreign business has also picked up. The banking sector is dominated by four large groups: Nordea, Svenska Handelsbanken, SEB and Swedbank, which together have 83% market share in terms of total assets.

**Swedish banking groups have systemic importance in the Nordic-Baltic region.** Total foreign exposure of banks amounted to 168% of GDP in mid-2014, up from 160% in mid-2013. It was mainly directed towards Denmark, Finland, Germany, the US and the UK. Exposure to the Baltic countries corresponded to about 10% of GDP. While the Baltic business holds a relatively minor share on Swedish banks' balance sheets, the Swedish banks constitute the pillars of the Estonian, Latvian and Lithuanian financial sectors. In the wake of the crisis, Swedish banks have been passively deleveraging the Baltic markets and replacing their funding credit lines with local deposits.

**Loans constitute majority of the banking assets.** The structure of lending to the private sector becomes increasingly household-biased, reflecting the banks' search for safe assets (such as mortgage loans) and supporting the trend of growing private indebtedness (see Section 2.1). Mortgage loans

amount to 21% of the balance sheet, compared with 18% in 2004. In recent years this loan category grew at rates above 5% annually, which was double the rate of corporate loans (Graph 2.3.1). The latter account for 16% of the balance sheet, down from 22% ten years ago.

Graph 2.3.1: Lending to private sector



Source: ECB

**Swedish banking profitability is amongst the highest in Europe.** The average sector's return on equity (ROE) in 2014 stood at 12.5% and the return on assets (ROA) 0.6% (Table 2.3.1), putting Sweden above most other European markets. Profitability of the major groups is even higher, with ROE ranging between 14% and 21% in the third quarter of 2014. The high leverage, high cost efficiency and high asset quality are the key factors behind banks' profitability.

Table 2.3.1: Financial soundness indicators

(%)	2009	2010	2011	2012	2013	2014*
Non-performing loans	n.a.	n.a.	0,6	0,5	0,5	0,4
Coverage ratio	126,8	126,3	69,8	63,5	63,0	62,6
Capital adequacy ratio	12,7	12,2	11,8	12,1	12,3	22,0
Tier 1 ratio	10,6	10,7	10,9	11,3	11,5	19,2
Return on equity	5,4	10,2	10,6	11,3	11,1	12,5
Return on assets	0,2	0,5	0,4	0,5	0,5	0,6

\*Q2

Source: ECB

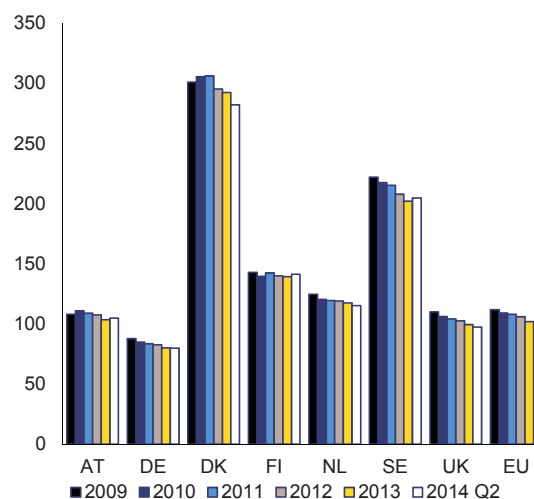
**Swedish banks benefit from high asset quality.** In recent years, the average non-performing loan ratio (NPL) stayed below one percent, which was one of the lowest levels in the EU (Table 2.3.1). Not only the disposable income of borrowers and their payment discipline contribute to this phenomenon. A substantial role is played by the

very efficient public framework for debt enforcement, based on the Swedish Enforcement Authority (Kronofogden). Most of impaired loans are resolved in less than twelve months and do not pile up in banks' book. The average coverage ratio of non-performing loans with loan loss provisions stands at 63%, above the EU average (46%).

**The average capital adequacy ratio is high but the leverage ratio remains low.** The average Tier 1 regulatory ratio for the Swedish banking sector amounted to 18% in mid-2014. However, in previous years the average Tier 1 ratio was consistently the lowest in the group of peer markets. The proxy leverage ratio, which relates banks' total accounting capital to their total assets, also reveals the relatively low level of capitalisation of the Swedish banking sector. At 6% it is one of the lowest in the EU. The particularities of the Swedish capital adequacy are analysed in the second part of this section.

**Financial markets play a major role in funding of Swedish banks.** Deposits account for 32% of the banking sector liabilities, equal to the share of debt securities issued by banks. Market funding is also partially covered by external liabilities (21%), as banks also borrow on foreign wholesale markets and accept foreign deposits. The low share of deposits is mirrored in the high loan-to-deposit ratio, second highest in the EU after Denmark (Graph 2.3.2). The maturity mismatch between assets (long term, often non-amortised loans) and liabilities (mainly short and medium term debt securities) is particularly marked in the Swedish banking sector. This funding structure stems partially from the cultural patterns, as Swedes tend to place their savings in investment funds, pension funds and insurance products. It is also incentivised by low funding costs for banks, owed to their high market ratings and ample liquidity in international markets.

Graph 2.3.2: Loans to deposits, %



Source: IMF

### Assessment of policy responses

**The Swedish Financial Supervisory Authority (FSA) is responsible for micro-prudential supervision and macro-prudential policy.** The Riksbank and the Ministry of Finance remain involved in the areas of their competencies, notably through participation, together with the National Debt Office, in the Financial Stability Committee.

#### *Credit risk*

**The high and increasing exposure to the household sector is the main credit risk of Swedish banks.** While the financial soundness indicators present a sound picture of the banking system, they are by their nature backward looking and do not fully capture all the risks. A slump in households' disposable income or an external economic shock could translate in deteriorating asset quality of the Swedish banks. The possible overpricing in the Swedish property market poses a risk to banks' balance sheets through a shrinking value of collateral of mortgage-backed loans. This would put some borrowers in a situation where the value of a loan exceeds the value of the house, which for banks could increase losses on foreclosures and also indirectly contribute to funding problems.

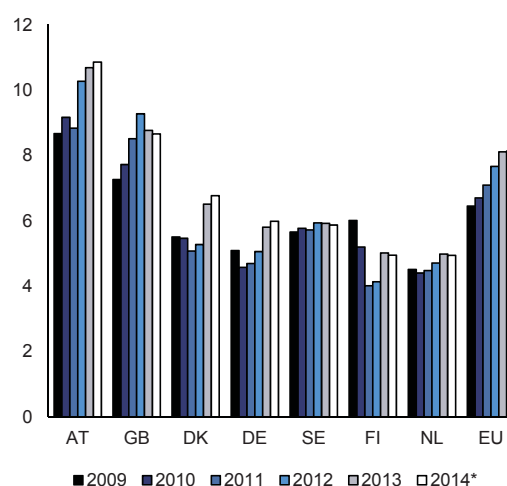
**Sweden has set higher capital requirements than imposed by EU regulations.** The four large

banks are required to hold minimum 13.5% of Common Equity Tier 1 capital as of 2015. The risk weight floors on mortgage exposures provide for an additional capital backstop. In order to address concerns about low risk weights used in banks' internal risk calculations, the Financial Supervisory Authority introduced a 15% floor on risk weights for mortgage exposures in May 2013, further increased to 25% in September 2014. The floor is applied in the framework of the supervisory review (the Pillar 2 process, where an individual assessment of financial soundness of each bank is carried out by the supervisor, leading to defining own fund requirements on top of the regulatory minimum) and translates into capital add-ons ranging from 0.7% to 4.8% of Common Equity Tier 1 for the four largest banks. According to Financial Supervisory Authority reports, in the third quarter of 2014 all banks complied with the new requirements.

**Compliance with new capital requirements was primarily achieved by the reduction of risk weighted assets.** In 2014, the risk-weighted asset density, a measure of the share of risk weighted assets in total assets, fell to a half of the end 2013 level in three large banking groups. The fall was caused by the banks' transition to advanced internal risk based models for calculation of capital requirements on corporate exposures, following the approval by the Financial Supervisory Authority. As a result, the increase of capital adequacy ratios of Swedish banks was driven by the denominator effect.

**Despite supervisory measures taken in recent years, the ratio of capital to total assets remained stable.** This proxy leverage ratio (not taking off-balance sheet exposure into account) (Graph 2.3.3) confirms that compliance with the higher capital requirements has been reached without substantially increasing the amount of capital in the banking system. At the same time, the global trend was to increase the share of capital in banks' balance sheets, as demonstrated by the evolution of the average leverage ratio for the EU. It increased from 6.5% to 8.1% between 2009 and 2014.

Graph 2.3.3: Leverage ratios (%)



\*October data

Source: ECB, European Commission calculations

#### Funding risk

**The Swedish banking sector is characterised by a high share of market funding in its liabilities,** complementing the deposit funding. Loan-to-deposit ratios of major banks have been gradually decreasing, but the funding structure remains market-oriented. It is linked with the high degree of the banking sector leverage and increases potential vulnerability to market shocks. The wholesale market funding of Swedish banks also entails currency risks as banks issue the bulk of their debt abroad. About 60% of the major banks market funding is denominated in foreign currencies, mainly US dollars (especially short-term securities) and euros, in quasi-equal shares. The foreign currency instruments are typically held by foreign investors<sup>(24)</sup>

**The average maturity of market funding instruments held by the banks increased in recent years.** This is likely a result of both the Swedish authorities' actions and the favourable market conditions for issuing long-term debt in the Nordic countries, which were regarded by international investors as a safe haven during the sovereign debt crisis in the euro area.

<sup>(24)</sup> Financial Supervisory Authority (2014) Stability in the financial system, 10 December 2014.

**Swedish banks benefit from low funding costs linked with low risk premia charged by investors.** It is related to high ratings and low credit default swap (CDS) spreads of the main Swedish banks, supported by the triple-A rating and low credit default swaps spreads of the sovereign. The low funding costs contribute to the banks' high profitability. However, market conditions are prone to change. It may be due to domestic factors (e.g. a drop in house prices) or come as external shocks, for example with background in the military conflict in Ukraine and its consequences such as trade restrictions, commodity prices or monetary policy of major global economies.

**Major banks have made some progress in reducing their structural liquidity risks.** Banks have started to adapt their funding structure in the wake of the 2008 financial crisis extending the average maturity of their funding instruments, but the process stalled in last couple of years. Per Riksbank's recommendation, the banks should approach the minimum level of 100 per cent in the Net Stable Funding Ratio (NSFR)<sup>(25)</sup>. In the third quarter of 2014, the NSFR, which is not binding until 2018, was at 89% or higher for the major banks. Since 2013, the Financial Supervisory Authority requires banks to abide by the minimum Liquidity Coverage Ratio (LCR)<sup>(26)</sup>. In 2014, all major banks complied with this requirement and their average LCR ranged between 120% and 140%.

**In 2012, the Riksbank decided on a 30% increase of its foreign exchange reserves.** An amount of SEK 100 billion (approximately EUR 10.4 billion) was added to the existing pool of SEK 314 billion (approximately EUR 32.7 billion). The motivation to increase the reserves was to provide a backstop for banks' growing demand for liquidity in foreign currencies. The government in

agreement with the Riksbank and the Financial Supervisory Authority put forward a proposal to charge the costs for maintaining the additional currency reserves to banks in proportion to the foreign currency exposures in their liabilities. The objective is to incentivise banks to reduce their currency risk. The consultation process on the draft law is underway.

**To summarize, the set of macro-prudential measures taken by the Swedish Financial Supervisory Authority in response to the growing private indebtedness is becoming close to complete.** They tackle both the credit demand side (i.e. loan-to-value cap, amortisation requirements) as well as the credit supply side (capital requirements, risk weigh floors). Yet, the effectiveness of these measures is limited as lending to households has been increasing on the back of strong demand, pushing up private sector indebtedness. Once the proposed requirements to amortise loans to 50% of their original value are implemented, the set of macro-prudential instruments applicable to banks will be more akin to the variety of tools applied by Sweden's EU peers (e.g. Denmark, the Netherlands).

**The low share of deposits and the high share of market funding constitute a structural risk of the Swedish banking sector.** An abrupt increase in funding cost due to market shocks would be largely transferred to borrowers, given the high share of variable interest rate loans. It would also impact negatively on banks' profitability through primary and secondary effects (growing losses from non-performing loans). The Basel III supervisory measures: the Liquid Coverage Ratio and the Net Stable Funding Ratio, will contribute to mitigate the refinancing risk of Swedish banks. However, given the banks' high dependence on (foreign) financial markets, this risk cannot be eradicated.

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<sup>(25)</sup> The Basel III Net Stable Funding Ratio (NSFR) seeks to calculate the proportion of long-term assets which are funded by long term, stable funding. Detailed features of the NSFR are still being calibrated: an EU consultation was launched in January 2014. The 100% minimum will be binding by 2019.

<sup>(26)</sup> The Basel III Liquidity Coverage Ratio (LCR) requires banks to hold liquid assets sufficient to cover cash outflows over a 30 day period. The minimum coverage is 100%. The Basel III / CRD4 foreseen enforcement deadline for the EU Member States is 2015.



## 2.4. ASSESSMENT OF INTER-LINKAGES AND POTENTIAL IMPACTS

As the level of household indebtedness, the evolution of the housing market and the stability of the financial sector are interconnected, this section jointly analyses the macroeconomic and financial stability risks stemming from the high indebtedness of Swedish households and the imbalances on the housing market.

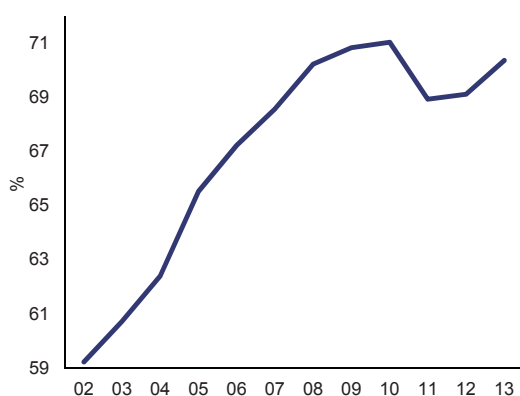
### Households' financial resilience

#### *Trends affecting households' resilience*

The sharp increase in mortgage lending over the last 20 years has gone hand in hand with several trends which can render households less financially resilient:

- **Between 2002 and 2010, the loan-to-value ratio of new mortgages has increased from 59% to 71%.** This trend was curbed after the introduction of an 85% loan-to-value cap in 2010 but rose again to 70% in 2013 <sup>(27)</sup> (Graph 2.4.1). In parallel, actual repayment periods as well as the share of unamortised loans have been growing.

Graph 2.4.1: **Loan-to-value ratios**



Source: Financial Supervisory Authority

- **Variable interest rate loans have become predominant, making households more sensitive to interest rate changes <sup>(28)</sup>.** In March 2014, 53% of the borrowers had a variable interest rate (in practice adjusted every

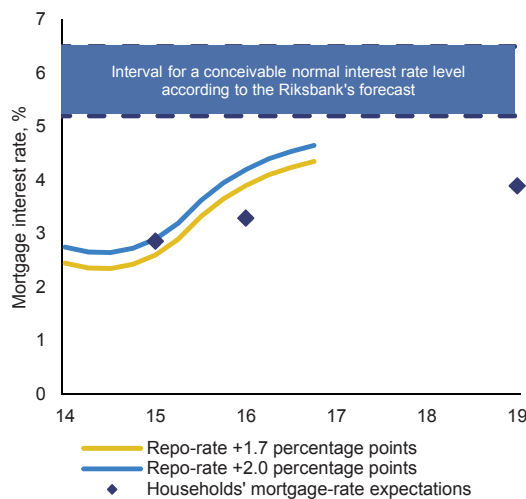
<sup>(27)</sup> Financial Supervisory Authority: Memorandum, 21/05/2013 and Swedish Mortgage Market 2014, 2014

<sup>(28)</sup> Sveriges Riksbank (2011): The Riksbank's inquiry into the risks in the Swedish housing market

three months) compared to 46% in March 2013. As 73% of the new mortgage loans taken in the autumn 2014 were subscribed at a variable rate, the share of household with such loans further increased to 57% <sup>(29)</sup>. Furthermore, households' interest expectations are currently misaligned with the Riksbank's projections (Graph 2.4.2). When the Riksbank starts increasing its interest rate in the medium-term, this could have a significant impact on households' budget and reduce their scope for consumption as their interest expenditure would increase.

- **Possible income loss due to unemployment or sickness has become more significant.** Since the 1990s the unemployment and sickness insurance schemes have changed and an increasing number of people are reaching the unemployment benefits ceiling, which has not been increased since 2002.

Graph 2.4.2: **Household expectations of the variable mortgage rate one, two and five years ahead**



Source: The National Institute of Economics Research, Riksbank

#### *Mitigating factors exist but need to be qualified*

Rising households' disposable income and substantial assets at aggregate level are often presented as mitigating factors for high household

<sup>(29)</sup> Riksbank (2014), *Financial Stability Report*, 2014:2

indebtedness. However, the strength of these buffers needs to be qualified.

**Households' disposable income has strongly increased in the past years** following the implementation of the in-work income tax credit in several steps. This growth in disposable income provides buffer for households but it has also fuelled home ownership via indebtedness. Moreover, housing prices have increased faster than disposable income.

**At aggregate level, households have substantial assets.** The value of assets has increased in line with rising housing and share prices and amounted to 600% of disposable income at the end of 2013 <sup>(30)</sup>.

**However, a large proportion of households' assets is illiquid.** For instance, pension savings can only be used at retirement. Also, a large part of households' assets rests in their house or apartment which might be difficult to sell, particularly in periods of economic or financial shocks. This means that the proportion of households' assets that can be quickly converted into liquidities is much less than the aggregate value of households' assets.

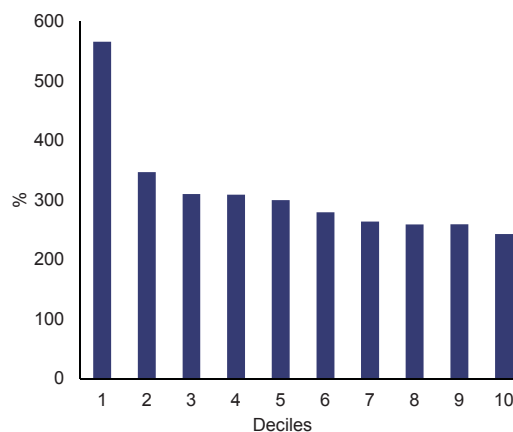
**Moreover, assets can vary substantially in value across time** as exemplified by the recent house price corrections in Denmark and in the Netherlands. In Denmark, it impacted both the financial resilience of some households and the economic growth despite large households' assets at aggregate level.

**Both assets and debts are unevenly distributed across households.** For households with mortgages, the debt ratios are highest among low-income earners (Graph 2.4.3) <sup>(31)</sup>. It is conceivable that households with a low income also have fewer assets to cushion difficult situations.

<sup>(30)</sup> Sverige Riksbank, *Financial Stability Report*, 2014:1

<sup>(31)</sup> Winstrand, Jakob and Ölcer, Dilan (2014), *How indebted are the Swedish households?*, Economic Commentary no. 1, 2014. Sveriges Riksbank.

Graph 2.4.3: Household debt ratio in different income groups (only mortgage borrowers), %

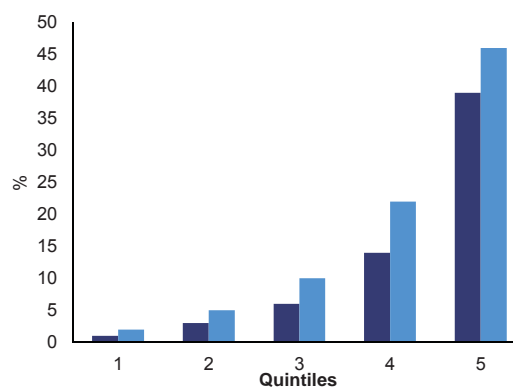


The results in decile 1 should be interpreted with a certain amount of caution, as this group includes households with varying types of incomes.

Source: Riksbank

Following the abolition of the wealth tax in 2007, there is a lack of recent statistics on the distribution of assets). However, statistics from 2007 confirm that the indebted households with the highest incomes owned the majority of real and financial assets and on the other hand, low-income earners owned only a small proportion of total assets (Graph 2.4.4).

Graph 2.4.4: Share of financial and real assets held by indebted households in different income groups, 2007, %



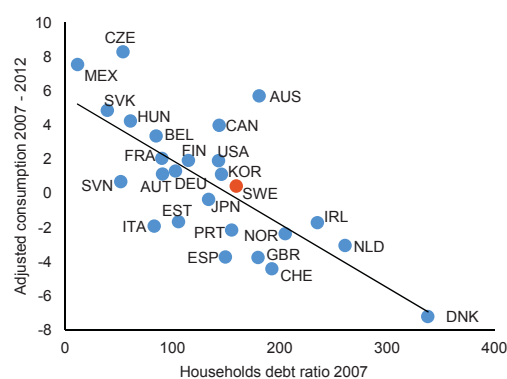
Source: Riksbank

#### Transmission channels

**A high level of indebtedness makes the real economy more sensitive to shocks.** If households are affected by a shock to their income, their

mortgage interests expenditure or the value of their housing, their consumption will likely fall.<sup>(32)</sup> Several studies show that during the financial crisis that broke out in 2007, consumption decreased more in countries with high household indebtedness than in countries with lower indebtedness<sup>(33)</sup>. Graph 2.4.5 illustrates this relationship between debt ratio and consumption growth. Moreover, as consumption growth decreases, this would also impact companies' production and investment which would lead to more defaults in the corporate portfolio of banks.

Graph 2.4.5: Relationship between debt ratio and consumption growth, 2007-2012, %



Adjusted consumption growth has been calculated as actual consumption growth minus contributions from growth in debt ratio, current account and consumption. For further information, see Flodén, Martin (2014) Did household debt matter in the great recession?

Source: OECD, Riksbank

**Should an adverse macroeconomic shock occur combined with increased loan losses for banks, confidence in the Swedish financial system could be affected** which would negatively impact banks' access to wholesale funding. The increased funding costs would be transmitted to higher

interest rates for borrowers. This would in turn aggravate the borrowers' situation and amplify the negative effects on consumption and economic growth. The high refinancing risk is a structural feature of the Swedish banking sector. The major banks have a large deposit gap and have to fund half of their loan book on the financial markets, mostly in foreign currencies. Supervisory measures taken by the Financial Supervisory Authority may mitigate but not substantially alter the risks related to dependence on foreign financial markets.

**The banking sector as such should be relatively resilient to a macroeconomic downturn.**

According to stress tests, banks' capital buffers are large enough to absorb losses under the adverse scenarios. Stress tests based on Q3 2014 financial statements by the Financial Supervisory Authority estimate the Common Equity Tier 1 capital ratio decline to range between 1.1 and 2.5 percentage points for the four major banks over a three year horizon. With the current capital requirement set as the threshold, two banks would fall below the line and the capital shortfall would dent their capital conservation buffers (Table 2.4.1). The ECB/EBA stress tests published in October feature similar results, with the Common Equity Tier 1 capital ratio drop at 1.6 – 1.9 percentage points for the same group of banks. In the EU exercise the threshold was set at a single and much lower level (5.5% Common Equity Tier 1 capital). Under these assumptions, no Swedish bank recorded capital shortfall. The capital buffers of Swedish banks are underpinned by their high profitability, owed to high cost efficiency and payment discipline of Swedish borrowers which translates into low levels of non-performing loans. The dominant share of variable interest rate loans limits the risk to banks' profitability in case of market interest rate increases.

<sup>(32)</sup> In its report, *Den Svenska Skulden*, the Center for Business and Policy Studies proposes to render mortgage loans more robust for the future by introducing some risk sharing mechanisms between the lenders and the borrowers in case of price drops. It is also proposed to reintroduce data collection on wealth, which was dropped in 2007, to better trace the distribution of assets.

<sup>(33)</sup> Flodén Martin (2014), *Did household debt matter in the great recession?*; Dynan, Karen (2012), *Is household debt overhang holding back consumption?* Brookings Papers on Economic Activity; Mian, Atif, Kamelesh Rao and Amir Sufi (2013), *Household balance sheets, consumption and the economic slump*, Quarterly Journal of Economics 128(4)

Table 2.4.1: **Stress test results: common equity Tier 1 ratio (CET1)**

(%)	Nordea	SEB	Swedbank	SHB
<b>EBA stress tests (October 2014)</b>				
Q4 2013	13,6	14,7	18,2	18,7
EBA adverse scenario	12,0	13,0	16,3	16,9
Threshold	5,5	5,5	5,5	5,5
Shortfall	0,0	0,0	0,0	0,0
<b>FSA stress test (December 2014)</b>				
Q3 2014	15,0	16,2	20,7	20,7
FSA stress test	12,8	14,7	19,5	18,2
Threshold	14,7	15,6	19,0	17,7
Shortfall	-1,9	-0,9	0,0	0,0

Source: European Banking Authority, Financial Supervisory Authority

### Macroeconomic risks linked to high household indebtedness and imbalances on the housing market

This part analyses the potential impact of a housing price decrease and an interest rate increase in the light of a model developed by the European Commission and stress tests developed by the Financial Supervisory Authority, the Riksbank and National Institute of Economic Research.

#### Impacts of a housing price shock

Table 2.4.2: **Estimated maximum impact of 10% decline of house prices**

	GDP	Consumption	Residential investment
Sweden	-1,4%	-2,0%	-27,1%
Finland	-2,9%	-2,8%	-5,9%
Norway	-0,3%	-0,5%	-8,1%
Denmark	-2,0%	-2,6%	-9,0%
Average	-1,6%	-2,0%	-12,5%

Source: European Commission

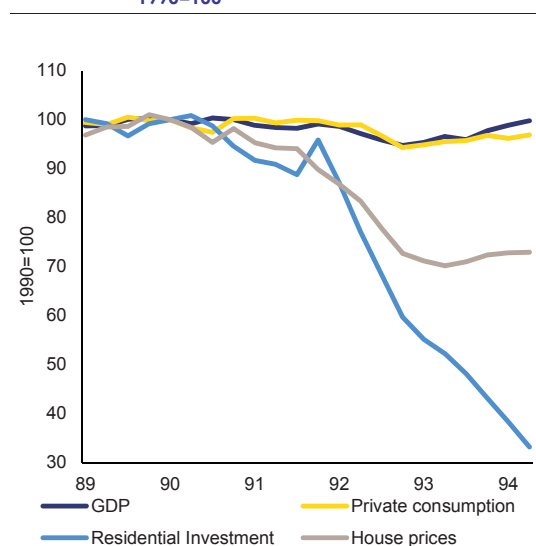
The European Commission model suggests that e.g. a 10% decrease in housing prices would cause a 1.4% decrease in GDP and 2% in private consumption. For both of these variables, the maximum effect of the shock is reached in the first year and it takes slightly more than 3 years to return to the long term trend. These estimates are in line with the average impact on GDP and private consumption observed in countries comparable to Sweden.

Residential investment is much more sensitive to house price movements, reaching an estimated maximum decrease of 27% in the second year with only minimal return to the trend. In this regard, Swedish residential investment seems to be more

vulnerable to house price shocks than in comparable countries. It should be noted, however, that this relatively larger elasticity of residential investment to downward or upward price changes is partly related to the relatively low level of residential investment in Sweden (if measured as a share of GDP) since the 1990s crisis.

The direction of these shocks is in accordance with expectations and the results are comparable to other models. Indeed, increasing house prices should contribute to increase consumption through wealth effects, incentivise further residential investment and increase GDP growth. The results obtained are comparable to the results of a topical IMF model<sup>(34)</sup> and show a more significant contraction in private consumption than a model developed by the National Institute of Economic Research where a twice as big fall in house prices over 4 quarters would produce a 1.8% fall in consumption<sup>(35)</sup>. However, the National Institute of Economic Research reaches similar conclusions regarding the large reductions in both residential investment and the negative effect on GDP growth.

Graph 2.4.6: **Swedish house price correction in 1990s, 1990=100**



Source: OECD, IHS Economics

<sup>(34)</sup> Nordic Regional Report (2013), IMF Country Report No. 13/275

<sup>(35)</sup> The Swedish Economy (August 2014), The National Institute of Economics Research

**Historic episodes of significant housing price corrections in Sweden and comparable countries also confirm the model's estimates.** In the 1990s, Sweden experienced a significant house price drop of almost 30% which was associated with a fall of more than 5% in GDP and of almost 6% in private consumption within the first two years. In response, residential investment fell by more than 70% within four years. Moreover the recent Danish house price correction also provides a comparison point. Since 2007, Danish house prices have fallen by almost 30% while the residential investment registered a comparable decline; by the end of 2013 the GDP was still 5% below its pre-crisis level <sup>(36)</sup>.

#### *Impacts of an interest rate shock*

**An increase in interest rates should lead to a decrease in consumption, residential investment and GDP.** Simulations from the model point to a decrease in consumption by 0.8% after 12 quarters without significant return to the trend. GDP also decreases by 0.9% and this maximum is reached around the same time as for consumption. The correction for residential investment is most significant with a 4% decrease.

Table 2.4.3: **Maximum impact of 1 pp. increase of interest rates**

	Consumption	Residential investment	House prices
Sweden	-0,8%	-4,1%	-2,6%
Finland	-0,6%	-2,0%	-1,3%
Norway	-0,6%	-2,7%	-1,2%
Denmark	-0,2%	-1,2%	-0,2%
Average	-0,6%	-2,5%	-1,3%

Source: European Commission

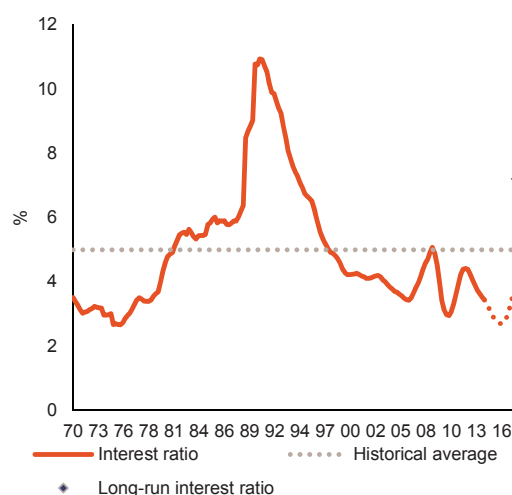
**In the current low-interest environment any sudden increase in interest rates could have a very significant impact** on macroeconomic variables whereas the impact of the same percentage point increase from a higher starting interest rate could be less pronounced.

**This rise in interest rates can increase the number of households with low or negative discretionary income** (the income net of housing

<sup>(36)</sup> *Multi-Country Report* (2015), IMF Country Report No. 15/1

costs and subsistence costs). This could quickly reduce households' scope for consumption. Moreover as interest rates increase, household interest expenditure would also increase, leading to a contraction in consumption. According to the Riksbank (Graph 2.4.7), interest expenditure currently represents less than 3.4% of household disposable income. This is below the historical average of 5% and the long term interest of 7.2%. According to the Financial Supervisory Authority (Graph 2.4.8), a 3 percentage points interest rate increase would raise the share of households with a negative discretionary income from 2% to 4%, and from 2% to 7% if the interest rate increases by 5 percentage points <sup>(37)</sup>. However, an interest rate rise by more than 5 percentage points could lead the share of indebted households with a negative discretionary income to exceed 21%<sup>(38)</sup>.

Graph 2.4.7: **Swedish households' interest expenditure, % of disposable income**



Source: Statistics Sweden and the Riksbank

**Both the Financial Supervisory Authority and the Riksbank point out that most households would be able to service their loans but many would have to reduce their consumption.** This is in line with the econometric model results which

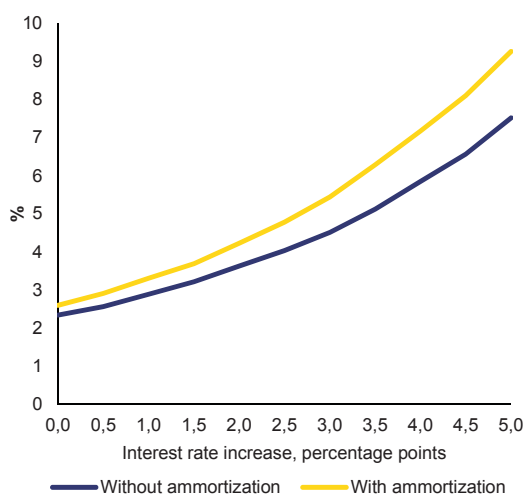
<sup>(37)</sup> Financial Supervisory Authority, *The Swedish Mortgage Market* 2014

<sup>(38)</sup> Alsterlind et al (2013), *Risks to the macroeconomy and financial stability from the development of household debt and housing prices*. Riksbank's analysis uses real consumption statistics whereas the Financial Supervisory Authority uses an average of banks' subsistence costs estimates.

show that the effect of an interest rate increase by 5 percentage points could lead to a 4.5% reduction in private consumption.

**An increase in interest would also negatively affect housing prices as the availability of loans and profitability of residential investment would be reduced.** Lower residential investment leads to lower GDP which along with subdued private consumption would both affect housing prices. The model estimates a 2.6% decrease in house prices as a response to a 1% increase in interest rate.

Graph 2.4.8: **Interest rate increase and share of households with a deficit, %**



Source: Financial Supervisory Authority

### 3. OTHER STRUCTURAL ISSUES

### 3.1. TAXATION, PUBLIC DEBT SUSTAINABILITY AND FISCAL FRAMEWORK

**The well-established fiscal framework in Sweden has contributed to provide the necessary margin for automatic stabilisers to play their role in a context of a weaker economic activity, even making room for discretionary fiscal stimulus in 2014.** As Sweden has used its available fiscal space to support the economy, the general government balance has deteriorated in the short-term. However, Sweden appears to face no major fiscal sustainability risks in the medium-term.

#### Taxation

**Swedish taxation is the fourth highest in the EU with a tax-to-GDP ratio** (including social contributions) of 44.2% in 2012. Sweden has a relatively high tax burden on labour.

**In 2014, Sweden was recommended to reduce the effects of the debt-bias in household taxation** by gradually limiting tax deductibility of interest payments on mortgages and/or by increasing recurrent property taxes. This relationship was discussed in Section 2.1. Two public inquiries have tabled proposals on tax reform. However, the proposed reforms that would be relevant for reducing the debt bias are limited to redefining the calculation of the tax base and they would not result in the necessary move away from debt bias in income taxation.

**Overall, there has been no significant progress in reducing the debt bias in taxation affecting housing.** The government has abstained from any reform of the taxation of immovable property on the basis of the argument that such measures could potentially be damaging to the efforts to restore growth. Measures to increase the pace of amortisation of mortgages and other non-tax measures related to mortgages have been deemed more suitable to reduce debt bias.

**Regarding corporate taxation, in 2009, tax provisions were introduced which reduced the tax deductibility of interest payments for intra-group loans related to the acquisition of shares from an affiliate.** New legislation in 2013 further extended the restrictions on interest deductibility to all types of loans, regardless of their purpose. Interest payments are tax deductible if the creditor is taxed on the interest at a rate of at least 10%, should the interest income be the only income for

the creditor (10% tax test), or if the debt has been taken on for 'sound commercial reasons'. These measures, combined with the corporate income tax rate cut from 26.3 to 22% at the beginning of 2013, aim to eliminate a large proportion of corporate debt that is solely driven by tax avoidance motives for which there is an increased risk in the case of cross-border intra-group lending. A corporate tax expert committee delivered a report in June 2014. The committee proposed further reductions of the tax-deductibility of financial costs. It is noted that this would result in an increased tax burden for companies with a high debt ratio. The committee also proposed that those measures could be accompanied by further reduced corporate tax rates. The measures recommended are aimed at further reducing debt bias in the corporate sector and to counter tax avoidance.

#### Public debt sustainability

**Sweden appears to face no major fiscal sustainability risks in the medium-term.** Government debt (41.4% of GDP in 2014 and expected to decrease to 40.6% by 2016) is currently below the 60% of GDP reference value in the Treaty. It is projected to remain broadly stable until 2025.

**The budgetary impact of population ageing poses some challenge to long-term fiscal sustainability in Sweden, in particular in the area of long-term care.** Risks would be lower in the event of the structural primary balance reverting to higher values observed in the past, such as the average for the period 2004-2013.

**The Swedish government has revised expenditure linked to migration upwards** in the coming years. In the longer term, the resulting net population growth should contribute to an expansion of the work force and GDP.<sup>(39)</sup> However, the long-term forecasts of the Swedish National Institute of Economic Research also links

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<sup>(39)</sup> "Invandringen och de offentliga finanserna", Rapport till expertgruppen för studier i offentlig ekonomi, Swedish Ministry of Finance, 2009.



migration to a marginally higher equilibrium unemployment rate and lower productivity. <sup>(40)</sup>

### Fiscal framework

**The Swedish fiscal framework, which is characterised by a cautious approach, has been stable over time.** In the past 20 years, Sweden's fiscal framework has put public finances on a strong footing at both the central and local level. The framework comprises three key components. First, a surplus target, encompassing the finances of both central and local governments and the pension system, stipulates that an overall budget surplus of 1% of GDP should be achieved over the business cycle. In March 2014, the government issued a legislative proposal to increase the accountability of the surplus target, by yearly follow-up with the parliament and a requirement to demonstrate how the target is to be reached in the event of a deviation between the target and forecast development. However, the legislative proposal does not clarify the calculation method for the surplus target. The achievement of the target is assessed against seven different indicators, largely forward-looking. The multitude of indicators without clear weights allocated to each impairs the clarity of the assessment and could lead to an opportunistic interpretation. Second, a three-year nominal expenditure ceiling for central government and the pension system controls budget overruns and forces government departments to prioritise. Third, the balanced-budget rule for local authorities forbids municipalities and counties to approve ex ante deficit budgets and requires them to compensate for any ex post deficits within three years. In 2013, new rules were adopted to allow municipalities and counties to balance revenues counter-cyclically over time through 'results-balancing reserves'.

**In addition to the budgetary rules, the Fiscal Policy Council (FPC) was established in 2007** with the task of providing an independent evaluation of the government's fiscal policy and compliance with the fiscal rules. Two aspects of the functioning of the FPC could be improved.

<sup>(40)</sup> "Ny befolkningsprognos påverkar sysselsättning och produktion på lång sikt", Swedish National Institute of Economic Research, June 2014.

First, to avoid 'opportunistic' behaviour, the right to access information from the Ministry of Finance could be guaranteed in the legislation. Second, as legislators perform critical accountability functions in budgetary processes, mechanisms could be put in place to ensure an appropriate level of accountability of the FPC to the parliament. In its current set-up, the FPC is a government agency that reports directly to the government, which has the final say on appointing its members.

**The Swedish budgetary framework complies with Council Directive 2011/85/EU on requirements for budgetary frameworks of the Member States but Sweden lacks a regular evaluation of the government's macroeconomic forecasts and budget forecasts,** as required by the Directive <sup>(41)</sup>. The inquiry therefore proposed to maintain the overall process and add a requirement for the government to regularly publish evaluations of the forecasts presented in the autumn and spring Budget Bills. The government acted upon these conclusions with a proposal in its 2014 autumn Budget Bill, which was adopted by the Riksdag on 18 December 2013. Moreover, another legislative proposal in March 2014 codified and extended the current practice on the expenditure side of the budget to the revenue side: bills affecting government revenues will have to be proposed as part of the legislative package during the autumn and spring Budget Bills. These packages would also include supplementary budgets detailing the impact of revenues or expenditures of these bills.

**The well-established fiscal framework has played a specific role in preventing strong tax revenue in good times from translating into pro-cyclical expenditure increases.** This has provided the necessary margin for automatic stabilisers to play their role in recessions, even making room for discretionary fiscal stimulus.

<sup>(41)</sup> SOU 2013:38, May 2013. The final report from parliamentary committee evaluating compliance was presented in October 2013 (SOU 2013:73).

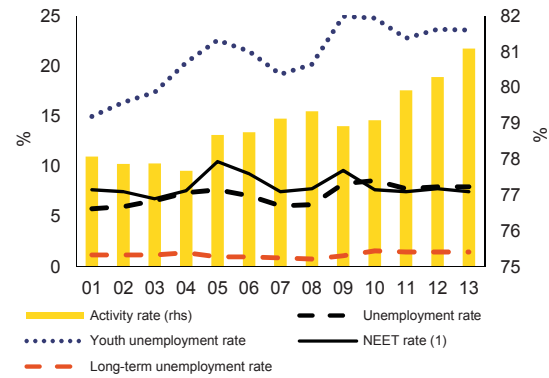
## 3.2. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

**The Swedish labour market is overall characterised by a high employment rate (79.8%).** However, the outcome is relatively poor for low-educated and low-skilled young people (with unemployment turning around 40%) and people (especially women) with a non-EU migrant background (56.2% of non-EU born women and 67.9% of non-EU born men are in employment). This should be seen in the light of strongly increasing migration into Sweden over the last few years. Moreover, basic skills attainment of young people has undergone a continuous decline which may impact their employability in the longer-run and pose wider challenges to competitiveness and innovation capacity in the future. As regards social policies, analysis shows that the at-risk of poverty rate of women above 65 years in Sweden has increased considerably.

### Labour market

**The Swedish labour market, to a large extent governed by negotiations between social partners at sectorial level, is characterised by positive labour market outcomes.** The employment rate was 79.8% in 2013 for those aged 20-64, the highest in the EU. Wage increases have been robust, averaging about 3% annually since 2005. Since the onset of the crisis, the unemployment rate has turned around 8%. The proportion of long-term unemployed is one of the lowest in the EU at 1.5% of the active population, which limits the risk that unemployment becomes entrenched, i.e. that people get further and further away from the labour market through long unemployment spells (Graph 3.2.1).

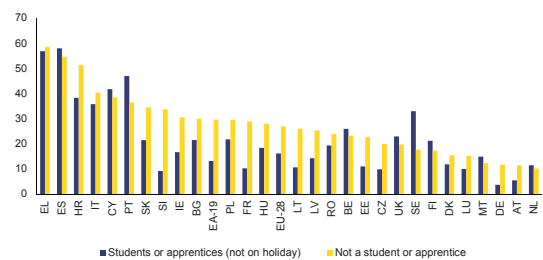
Graph 3.2.1: Labour market



(1) NEET refers to 'Not in education, employment or training'  
Source: European Commission

**Youth unemployment remains high (22.9% in 2014), in comparison to other Member States with strong overall labour market performance.** However, some 77 000 out of the 163 000 young unemployed were full-time students, with an additional 12 000 also in education but on leave (Graph 3.2.2). Moreover, the Swedish ratio of the unemployment rate for non-student young over total unemployment is similar to these other Member States, and unemployment spells are typically short (16 weeks) compared with that of adults (42 weeks for 25-54-year-olds in 2013).

Graph 3.2.2: Youth unemployment rate in EU Member States by educational status, 2013



Source: European Commission

**Insufficient educational attainment is an important explanatory factor behind youth unemployment.** Low-educated and low-skilled young people experience almost 40%<sup>(42)</sup> unemployment, whereas for young with completed tertiary education the rate is 14.9%. The share of

<sup>(42)</sup> Increase by 6.7 pp. since 2007. Further details available in Žáková (2013), *Sun spots on the Swedish labour market?*, ECFIN Country Focus. 1 May 2013.

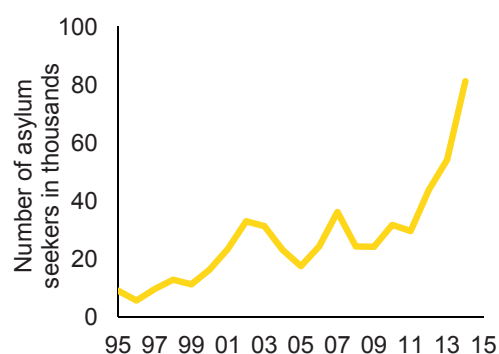
young persons not in employment, education or training is low compared with EU-28 (7.5% in 2013) <sup>(43)</sup>, but not in comparison to Member States with relatively good labour market outcomes. Although the early school leaving rate remains well below the EU average (7.1% compared to 12% in 2013) and the national and EU target of 10%, the share of young people who have not completed upper secondary education successfully at the age of 20 remained close to 25% and at a higher level than in the early 2000s.

**The transition from school to work remains a challenge.** Participation in vocational education and training is decreasing rapidly. While until 2009 the same share of students attended academic and vocational programmes at upper secondary level, in 2014 almost twice as many students opted for an academic programme. This shift coincides with the 2010 Education Act, which no longer grants basic eligibility to higher education to vocational programme students. Furthermore, apprenticeships have suffered from low take-up and high drop-out rates since the 2008 piloting phase. Although between 2013 and 2014, the number of apprentices increased from 6 000 to 7 300, it represents only 7.3% of all students in the vocational track, and it is still far lower than the 30 000 apprentices projected by the government for 2011-14. In addition, in the period 2008-11, 25% of apprentices dropped out already in the first year and only 44% completed the three-year programme compared to a 68% completion rate in a school-based vocational programme. <sup>(44)</sup> Vocational introduction employment (a type of collective agreements) is gaining in popularity and has the potential to become a new pathway to jobs for young people. However, it is mainly available for people who have completed upper secondary education.

**Over the last few years, migration into Sweden has increased substantially** (Graph 3.2.3) and in proportion to the number of inhabitants, Sweden receives a comparatively large number of refugees. Last year, more than 80 000 asylum seekers were registered in Sweden (i.e. roughly 1% of the total

population). The Swedish Migration Board estimates that the number of asylum seekers is likely to stay at high levels going forward and increase to 80 000-105 000 persons in 2015. The Swedish government is currently reviewing the legislation, among other things with the objective to make all municipalities contribute to the reception of asylum seekers (until now, the concentration of asylum seekers in a limited number of municipalities has been high, also linked to the fact that reception has been voluntary). At the same time, the economic and institutional framework of the municipalities will be strengthened in this regards.

Graph 3.2.3: **Number of asylum seekers coming to Sweden 1995-2014**



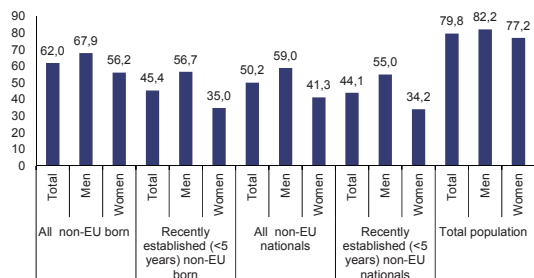
Source: Swedish Migration Board

**The increased migration results in an important challenge, namely the integration of migrants into the labour market.** The non-EU population still faces lower employment rates and higher unemployment rates. Non-EU born women are particularly affected by low employment rates (56.2% of non-EU born women are in employment, compared to 67.9% of non-EU born men and to 77.2% of women in Sweden in 2013). In particular, among the recently arrived non-EU born population, in 2013 only 57% of men and 35% of women were in employment (Graph 3.2.4).

<sup>(43)</sup> EU Labour Force Survey, 2012.

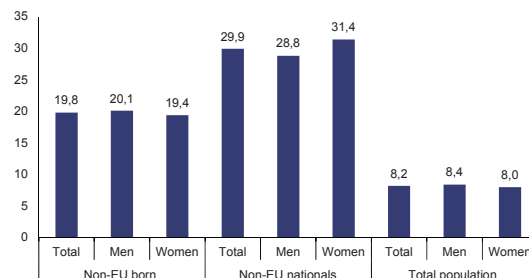
<sup>(44)</sup> Skolverket (2012) Gymnasial lärlingsutbildning de tre första åren 2008–2011. Deltagande, elevernas erfarenheter och studieresultat. Rapport 373.

Graph 3.2.4: **Employment rate (20-64) for non-EU born and non-EU nationals compared to total population in Sweden, 2013**



Source: European Commission

Graph 3.2.5: **Unemployment rate (15-64) for non-EU born and non-EU nationals compared to total population in Sweden, 2013**



Source: European Commission

Sweden has a high and currently increasing proportion of asylum seekers within the large number of recent migrants. These persons take longer to integrate in the labour market due to insufficient education and skills, including language and qualifications mismatches, and discrimination.<sup>(45)</sup> Sweden has larger differences between non-EU nationals and Swedish nationals in employment among 20-64 year old persons (50.2 vs. 81.3%), unemployment among 15-64 year old persons (29.9% vs. 7.4%) (Graph 3.2.5) and activity rates among 20-64 year old persons (70.4 vs. 86.7%) than other EU Member States, including those with a similarly large migrant population such as Austria, the Netherlands and the United Kingdom. There is also a large gap in the employment rate between migrant women and men (41% vs. 59%). The unemployment rate among young (15-24) third country nationals is very high, 46.8% compared to 33.9% for EU nationals and 22.6% for Swedish nationals. In addition, the share of workers with tertiary education being in low or medium-skilled jobs is much higher among third country nationals (42%) than on average in the EU (16%) and among Swedish nationals (15%).

<sup>(45)</sup> OECD International Migration Outlook 2014 table 2.1 page 68.

It seems that the challenge linked to the integration of migrants into the labour market is particularly pronounced in the short – medium/term (up to ten years). In the long-term, the situation is different 15 years after arrival more than 70% are employed, which is above the EU average, even if not as high as for Swedish-born. Since the entry into force of the Introduction Act in 2010, Sweden has focused on the objective to speed up the entry into employment by coordinating introduction measures through the Public Employment Service. The maximum length of the introduction plan is 24 months, after which unemployed migrants have access to the mainstream employment services. However, as the influx of migrants is currently increasing and their profile is changing, it remains to be seen whether the long-run absorption capacity of the Swedish labour market is affected in the next years. Presently, 26% of newly arrived migrants were either in work or education 90 days after having finished the introduction plan.

**Sweden has one of the lowest wage dispersions in the EU, with high entry wages and little wage progression.** The compression of wages may prevent them from reflecting the productivity differentials between individual workers or sectors, thereby limiting the employment prospects of vulnerable groups with lower productivity. Coupled with a relatively high level of overall employment, the low wage dispersion also has certain benefits, such as reducing the need for redistribution through the state, and contributing to higher incentives for taking up employment for low-skilled jobs. In this context, employment subsidies *de facto* reduce the binding nature of

high entry wages<sup>(46)</sup> by bringing down the overall labour cost.

**Employment subsidies can lead to deadweight loss and substitution rather than net job creation.** Ensuring that employment subsidies are adequately targeted is therefore important, so as to promote the employability and social inclusion of those furthest away from the labour market, in particular by taking into account criteria such as age, educational background and work experience. Wages that fully reflect productivity differentials and further efforts to improve human capital of the low skilled could also contribute to higher employment of vulnerable groups.

**There are signs of dualisation of the labour market,** i.e. a division between those with permanent contracts enjoying higher wages and more extended rights and job security than those with temporary contracts. The share of temporary workers of 16.3% is above the EU average of 13.7% in 2013, and their wages are much lower than those of their permanent counterparts<sup>(47)</sup>. The skills gap between temporary and permanent workers seems particularly large in Sweden<sup>(48)</sup>, which may make temporary workers less of a substitute to permanent workers. The relatively large gap between high protection for workers with regular contracts and relatively limited protection for those on temporary contracts may contribute to this skills gap, by making temporary workers much easier to replace than permanent workers, and reduce employers' incentives to provide training. While temporary workers are also offered on-the-job training, increasing it further could improve transitions to permanent employment and reduce the corresponding wage gap. Dualisation related concerns are nevertheless mitigated by the low long-term unemployment rate.

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<sup>(46)</sup> National Institute of Economic Research (2014), "Lönebildningsrapporten 2014" and IMF 2014 Article IV Consultation – Staff report.

<sup>(47)</sup> The wage premium of permanent workers was found to be almost 45%, while in the majority of countries; the premium was around 20 -25 per cent. (Boeri, T. (2011) "Institutional Reforms and Dualism in European Labor Markets", in Card, D. and O. Ashenfelter (eds.) *Handbook of Labor Economics*, Vol 4b.)

<sup>(48)</sup> OECD's Survey of Adult Skills : <http://www.oecd.org/site/piaac/surveyofadultskills.htm>

**New initiatives provide broader paths from school to work through vocational education and apprenticeships.** The legal framework to monitor transition, in place since 2010, will be further strengthened by a systematic tracking of graduates in vocational education and training. An "apprenticeship reform", included in the 2014 Spring Budget Bill, is being implemented. Furthermore, a new regulation entered into force on 1 July 2014, which made salaries for secondary school apprentices possible. A governmental inquiry is currently investigating the conditions for testing so called "industry apprenticeships" with greater influence of employers on programme content. In line with the Youth Guarantee, Sweden has worked on facilitating the transition from school to work, including widening the use of work-based learning and apprenticeships.

**As regards the Youth Guarantee for persons not in employment, education or training, the strengthening of municipalities' responsibility to monitor young persons under 20 who are not in education is an important change in handling youth at risk of exclusion.** Since 2015, municipalities are not only required to provide appropriate individual measures but also to keep record of the interventions. The main focus is on return to education rather than labour market activation. A functioning partnership between the public employment service and various services and actors at the local level is important for the strengthened municipal responsibility to have effect. Sweden also has considerable scope to improve the early intervention aspect in relation to persons not in employment, education or training.

**Youth labour demand measures are not optimally targeted.** Sweden has several wage subsidies in place to stimulate demand for young workers. However, studies have shown that previous general reductions of social contributions have not benefited those who have not completed education and are furthest away from the labour market<sup>(49)</sup>.

**A set of new measures targeted towards integrating newly arrived migrants into the**

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<sup>(49)</sup> "Do payroll tax cuts raise youth employment?" by Egebark and Kaunitz, The Institute for Evaluation of Labour Market and Education Policies (IFAU), 2013.

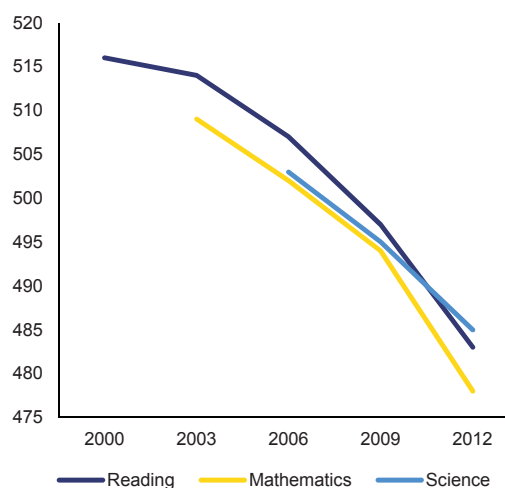
**labour market took effect in August 2014**, including the introduction of conditionality upon acceptance of a suitable job offer. The Swedish Council for Higher Education is also working on validation of foreign qualifications in order to shorten the transition to the right job. However, despite this reform and the measures of recent years, Sweden has not managed to significantly improve the employment situation of non-EU migrants, especially among women, or to address the fact that many migrants with tertiary education are in employment in low or medium-skilled jobs<sup>(50)</sup>. In February 2015, the Swedish government took the initiative to launch tripartite discussions with social partners in order to review the labour market integration of migrants and actively work to reduce discrimination at the work place.

### Education and skills

**School education outcomes in Sweden have deteriorated since the 1990s in terms of basic skills attainment.** The performance of 15 year-olds in the OECD's Programme for International Student Assessment (PISA) surveys (PISA is a triennial international survey to evaluate education systems worldwide) continuously declined between 2000 and 2012 in all three core subjects measured - mathematics, reading and science - with Sweden now performing below both the EU and OECD averages (Graph 3.2.6). The performance decline is particularly noticeable in mathematics, where the proportion of top performers has roughly halved over the past decade and one in four students does not reach the baseline level of performance.

<sup>(50)</sup> SOU 2012:69 The right to participate. Recently arrived women and family member immigrants in the labour market. Stockholm: Ministry of Labour.

Graph 3.2.6: **Deteriorating trend of education outcomes in Sweden**



Source: OECD PISA survey

**There is a declining trend throughout the school system, municipal and independent schools alike**, and among all groups of students, regardless of socioeconomic status or migrant background<sup>(51)</sup>. The performance gap is however large between native-born and foreign born.

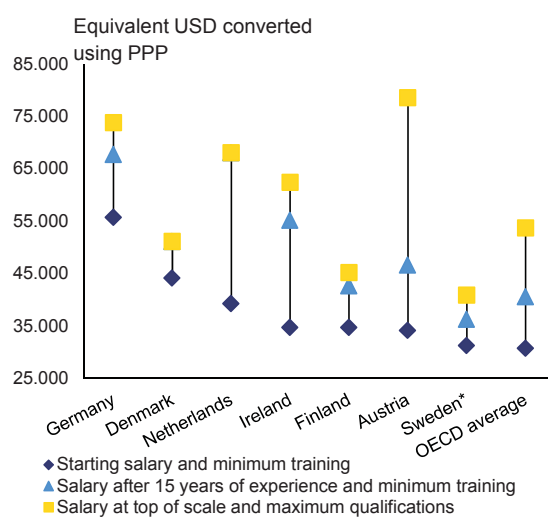
**The low attractiveness of the teaching profession is an important obstacle to increasing the quality of education.** Teachers perceive their status as extremely low,<sup>(52)</sup> with only 5% of teachers reporting that their profession is valued in society, compared to 60% in Finland or the EU average of 19%. Teacher recruitment and retention are also hindered by the perceived high workload and deteriorating working conditions. Teachers in Sweden spend a relatively longer working time on administration and feel to have less influence on their learning environment. Increased responsibilities have not been accompanied by higher salaries. Teachers' starting salaries are within the OECD average but the wage progression is very limited. The highest maximum wage levels are around 25% lower than the OECD average (Graph 3.2.7). Furthermore, teachers' salaries are on average 20% lower than the salaries

<sup>(51)</sup> OECD (2014): Resource, Policies and Practices in Sweden's Schooling System: an in-depth analysis of PISA 2012 results.

<sup>(52)</sup> <http://www.oecd.org/edu/school/talis.htm>.

of other professionals with comparable education levels.

Graph 3.2.7: Lower secondary teachers' salaries in some EU member states at different points in their career (2012)



\* Salaries at top of scale and minimum training, instead of maximum qualifications. Actual base salaries. Year of reference 2011.

Countries are ranked in descending order of starting salaries for lower secondary teachers with minimum training.

Source: OECD

**The teaching workforce is ageing and replacement rates are insufficient:** 15% of secondary school teachers in Sweden were over 60 years old in 2012, well above the OECD average of 8%. At the other end of the spectrum, the proportion of young teachers – those under 30 – is only 7% compared to the OECD average of 11%. The widening teacher shortage raises concerns: Statistics Sweden estimates that by 2020 the school system may lack over 40 000 qualified teachers and nine out of ten employers already signal a shortage of newly qualified teachers in mathematics and science at secondary level. In addition, only half of mathematics and science teachers have sufficient subject knowledge together with qualifications in pedagogy.

**Equity in education has been declining.** The selective use of the school choice system risks penalising students whose parents do not make an active choice and risks weakening students' right

to equal education<sup>(53)</sup>. Teachers in Sweden are less equitably distributed among schools than in most other OECD countries: schools with a large share of socio-economically disadvantaged students are more likely to suffer from teacher shortages. There is a rapid increase in the share of schools where over 20% of students do not obtain the necessary grades to continue their studies in an upper secondary programme preparing for university education. Moreover, Sweden does not have a comprehensive strategy to tackle early school leaving, although preventive measures are in place in the 2010 Education Act and the accompanying regulations.

**The system of integrating newly arrived migrant students shows a number of shortcomings:** poor mapping of students' previous knowledge, physical separation of newly arrived from the mainstream and a lack of individualised support.<sup>(54)</sup> Only 52% of students who migrated after the age of 7 qualify for a 'national upper secondary programme', compared to the national average close to 90%. The other half of all newly arrived students are offered one of the five upper secondary 'introductory programmes', launched in 2011 with the ultimate goal to prepare students for one of the national programmes.

**Past education reforms promoting decentralisation and school choice were not sufficiently accompanied by centralised quality assurance mechanisms.** Since the mid-1990s municipalities have been at the forefront of implementing nationally set goals and requirements. However, in particular smaller municipalities lacked local capacity to manage their new responsibilities and decentralisation took place without enough support from the central authorities.<sup>(55)</sup> Difficulties related to the shift have been signalled. The introduction of school choice paired with independent education providers was meant to create incentives for

<sup>(53)</sup> Skolverket (2013): An Assessment of the Situation in the Swedish School System.

<sup>(54)</sup> Skolinspektionen (2009) Utbildning för Nyanlända Elever. Rätten till en God Utbildning i en Trygg Miljö. Stockholm: Skolinspektionen and Bunar, N. (2010) Nyanlända och Lärande. Stockholm: Vetenskapsrådet.

<sup>(55)</sup> OECD (2014): Shifting Responsibilities - 20 Years of Education Devolution in Sweden: A Governing Complex Education Systems Case Study, Education Working Papers, No. 104.

schools to offer better quality. However, recent research finds no strong evidence of positive effects on the different student groups (<sup>56</sup>).

**There is no conclusive research to explain the declining basic skills attainment.** A new agency, the Institute for School Research, became operational on 1 January 2015 to strengthen the evidence-base of reforms and disseminate information on education research results. Furthermore, an independent school commission, to be established in spring 2015, is to propose long-term school reforms and national goals. The school commission is also meant to build its work on a forthcoming external, OECD in-depth analysis of the Swedish school system.

**The government is taking steps to improve school outcomes.** In addition to the strengthened municipal responsibility, targeted provisions (including summer schools and classroom assistants) remain in place for students who do not have the necessary grades to continue their studies at upper secondary level after the current nine years of compulsory schooling. Homework help is also expected to continue to be supported, although there is no evidence that this support has reached students most in need. Knowledge standards will be set in reading and an assessment tool will be developed in Swedish and mathematics for the first school year (age 7). Additionally, a knowledge requirement is to be set in literacy. The number of teaching hours has been increased in mathematics (up to 120 hours a year) in compulsory schools at the cost of EUR 55 million per year.

**Reforming the teaching profession is the government's top priority.** The government supports teacher in-service training through collaborative learning. In 2015-18 around 40 000 teachers will be able to participate in specific training. Moreover, the government allocates SEK 40 million every year for 'training schools' from 2014 until 2019. The first 15 specialised 'training schools' have started to accommodate future teachers. Following the career development reform, since autumn 2013 one in six teachers benefits from an increased salary and the career advancement steps created for so-called 'lead

<sup>(56)</sup> IFAU (2014): Sweden's school choice reform and equality of opportunity, Working paper 2014:16.

teachers' and 'senior lecturers'. From July 2015, only teachers with so called 'accreditation' will be allowed to grade students and be employed on a permanent contract. The measures do not address the overall unfavourable wage progression of teachers or the increasing teacher shortages. It will also take time before the current negative image of the profession can be reversed.

**The implementation of school reforms and resource allocation continue to differ widely among municipalities.** A limited number of municipalities have been using the legal possibility to reallocate resources to schools with low-performing and/or socially underprivileged students. Since 1 July 2014 they are obliged to consider socio-economic factors in school financing, however the law does not quantify any targets. Furthermore, the National Audit Office recently showed that state grants do not reach schools that need them the most (<sup>57</sup>).

**The government aims at improving the integration of newly arrived migrant students.** To this end, it announced in December 2014 a comprehensive proposal for reforming the reception of newly arrived students. An important element of the proposal is the assessment of students' prior knowledge and schooling background, although the framework and support structure for schools and municipalities are still to be elaborated. A government grant for increasing teaching hours for the newly arrived in compulsory school has been put in place. However, the impact of the upper secondary 'introductory programmes' is yet to be assessed. In February 2015, the government announced that municipalities will be given increased support to be able to provide newly arrived children and young people with a well-adapted child care and school education.

## Social policies

**Sweden generally has low levels of social exclusion and poverty in comparison with the EU average, although income inequality has increased substantially since the early**

<sup>(57)</sup> Riksrevisionen (2014): Specialdestinerade statsbidrag – Ett sätt att styra mot en mer likvärdig skola? (RiR 2014:25) [http://www.riksrevisionen.se/PageFiles/20896/RiR\\_2014\\_25\\_Statsbidrag%20skolan\\_anpassad.pdf](http://www.riksrevisionen.se/PageFiles/20896/RiR_2014_25_Statsbidrag%20skolan_anpassad.pdf)



**1990s. <sup>(58)</sup> Relative poverty <sup>(59)</sup> among women above 65 years has also increased considerably lately <sup>(60)</sup> and the gender gap has widened.** This at-risk-of poverty rate now stands at 22.3% for women vs. 9.2% for men. By contrast, the gender gap in exposure to severe material deprivation is insignificant at roughly 1.5% for both men and women above 65 years. The high at-risk of poverty rate among women above 65 and its rise seem caused by a combination of factors. First, the 2007 changes that lowered taxation of earned income but not of pensions has impacted on the poverty risk of pensioners with the lowest entitlements. Second, the effect of the 1999 pension reform introducing a defined contribution-based pension system has gradually materialised. Earnings-related contributions over the entire working career will increasingly determine the entitlements of new retirees. Gender differences in working hours, duration of working life and remuneration will therefore be increasingly much more reflected in the pension outcomes for men and women. Lastly, the poverty risk for retired women has also risen because the survivor's pension was abolished with the 1999 pension reform. In this context, it is worthwhile to note that Swedish pensioners have access to subsidised social services and personal care (such a meal distribution, personal hygiene, grocery shopping, cleaning services etc.), capping expenses irrespective of the extent of the needs of the individual, which to some extent compensate for this group's lower income. The possible wealth of individual households might also alleviate low income levels.

**Gender segregation in occupations and sectors and the high share of part-time employment amongst women (36.3% for 20-64 years old women in 2013 compared to 11.7% for men) both contribute to the gender pay gap of 15.9%.**

<sup>(58)</sup> OECD Income inequality data update: Sweden (January 2015).

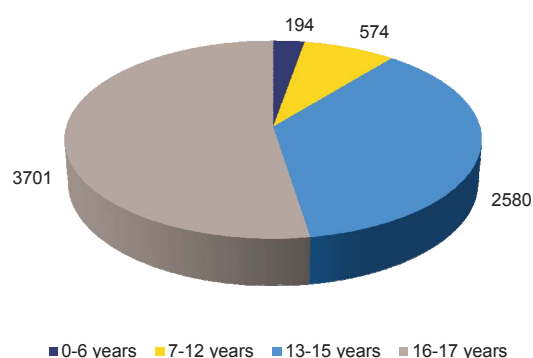
<sup>(59)</sup> The at-risk-of-poverty rate is the proportion of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. This indicator does not measure wealth or poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living.

<sup>(60)</sup> The at-risk-of-poverty rate was 12.7% in 2007, and after a peak in 2011 (24.7%), relative poverty decreased somewhat by 2013 (to 22.3%), mainly due to an increase of the housing allowance and some tax cuts for pensioners.

Moreover, while Sweden has one of the highest female employment rates in the EU, the intensity of women's labour market participation has remained significantly lower than men's, resulting in a total earnings gap of 29.9% <sup>(61)</sup>.

**The Swedish government's social policy is sharply focused on reducing social exclusion through labour market integration,** but progress in further reducing the gender earnings gap is proving to be slow and elusive. Moreover, efforts at promoting long-term gender equality in the labour market do not address the situation of today's female pensioners. Swedish authorities are reviewing the underlying mechanisms that may affect the at-risk of poverty for present and future generations of women.

Graph 3.2.8: Age distribution of asylum applications of unaccompanied children in 2014



Source: Swedish Migration Board

Source: Swedish Migration Board

**The strong migration means an increased pressure on social services provided by the municipalities.** Some municipalities face particular challenges in terms of caring for unaccompanied minors (of which 7 000 arrived in 2014). While the vast majority of asylum-seeking children not accompanied by a caretaker are almost adults on arrival in Sweden (Graph 3.2.8), the authorities are responsible for ensuring well-

<sup>(61)</sup> Employment and Social Development in Europe Review 2013, Chapter 3: The gender impact of the crisis and the gap in total hours worked and OECD, 2012, Closing the Gender Gap.

suited care in family conditions for the remaining, smaller children.

### 3.3. COMPETITIVENESS, INNOVATION, INFRASTRUCTURE AND ENVIRONMENT

**While Sweden may not be in a position to reach its Europe 2020 targets the country is still an innovation leader** on the EU level. Diminishing private funding is also partly compensated by public R&D investment. The business climate is overall favourable and Sweden is taking steps to invest further in renewable energy sources.

#### Business environment

Sweden is characterised by a favourable business environment, having consolidated its position as one of the EU's most competitive economies. The country benefits from strong institutions and minimum tolerance for corruption, as well as an overall efficient public administration.

Nevertheless, Sweden may be losing ground: according to the 2014/2015 Global Competitiveness Report of the World Economic Forum, Sweden fell by four steps to tenth place (after e.g. Finland, Germany, the United Kingdom and the Netherlands). While Sweden performs well in areas such as innovation capacity, ICT adoption, infrastructure and macroeconomic conditions, the World Economic Forum report notes that labour market regulations (Section 3.2) and potential distortions that a high tax rate system may create (Section 3.1), are two elements that are considered the two most problematic factors for doing business in Sweden and could also hamper investments.

In general, investment levels in Sweden are in line with those of comparable EU Member States (for instance the Netherlands or Denmark). Over the past years, however, investments in the traditional private sector have been held back by the gloomy economic situation in trading partner countries. Instead, the development has primarily been driven by the service sector and through public projects. Cost benefit analyses of Swedish public investment projects suggest limited added value, and hence that investment levels are not *per se* unduly low.<sup>(62)</sup> Nevertheless, in an international perspective housing investment has been particularly low since the crisis of the Swedish construction sector in the early 1990s.

<sup>(62)</sup> "Enkla regler, svåra tider – behöver stabiliseringspolitiken förändras?", SNS Konjunkturråds rapport 2012.

Investment in residential property finally picked up in 2014, but the built-up under-supply means that investment needs remain in this area, also in light of the strong demographic developments and rising urbanisation (Section 2.2). Infrastructure is another area where investments are needed (Section 3.3).

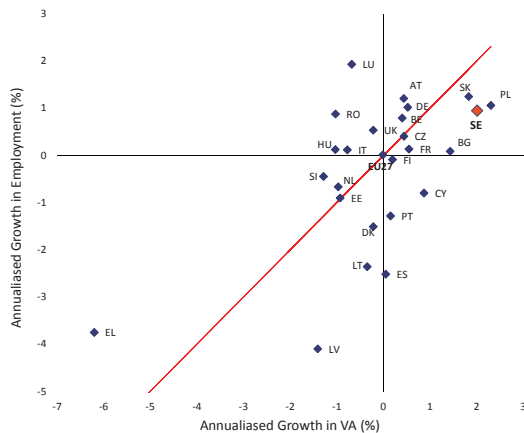
**Manufacturing remains an important generator of product innovation and export income in Sweden but the economy continues to move towards services** and greater integration of products and services. Currently, two thirds of GDP comes from the services sector in which over 60 % of all firms are active.

Sweden is one of Europa's leading countries in terms of digitisation of its economy.<sup>(63)</sup> However, coverage of very high speed broadband networks is low (71% of the population) compared to the needs of an advanced economy like Sweden's and delays in the deployment of this critical infrastructure could constitute a drag in the country's economic performance. Sweden recognises the importance of these investments and mobilises significant national and EU structural and investment funds to support the deployment of such infrastructure, where commercial conditions are missing.

**Sweden's export market share has been falling for a number of years**, although market share losses in goods are increasingly compensated by gains in services exports. In general, the productivity of the Swedish services market is rising, with both employment and value added growth figures in market services being among the top in the EU over 2008-12 (Graph 3.3.1).

<sup>(63)</sup> As regards the five main drivers of the digital economy, Sweden ranks 1<sup>st</sup> out of 28 Member States on use of internet services, 2<sup>nd</sup> on both human capital and integration of digital technologies, 3<sup>rd</sup> on connectivity and 5<sup>th</sup> on digital public services. Source: "Digital Economy and Society Index" developed by the European Commission.

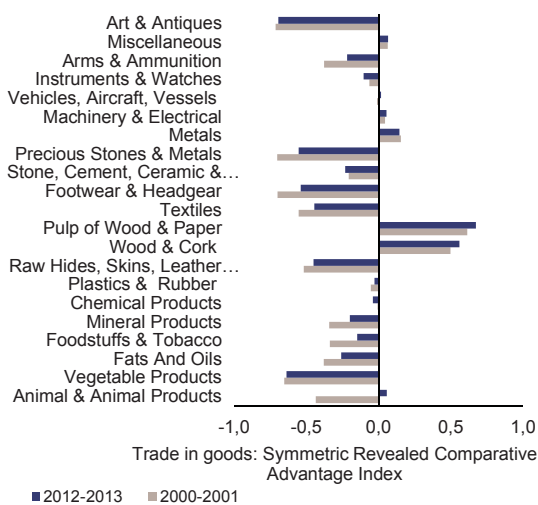
Graph 3.3.1: **Employment and value added growth in market services, 2008-12**



Source: European Commission

**Sweden still retains a strong comparative advantage in traditional export products** (Graph 3.3.2) such as pulp and paper, and wood products, although in particular machinery, metals and pharmaceuticals are also of big importance for Swedish export. The sluggish demand of the euro area, which traditionally receives roughly 40% of all exports, has of course affected exports, which however should be helped by the recent depreciation of the Swedish krona.

Graph 3.3.2: **Swedish goods sector: comparative advantage**



Source: European Commission

**Starting a business has so far taken more time in Sweden than on average in the EU, with the**

lead time until recently having been around two weeks, substantially longer than the agreed Small Business Act target of three days. In this regard, improvements have been announced which are likely to bring down the required time substantially, e.g. the development of an IT tool which can check company names before submission of the request, thus reducing start-up times.

**SMEs' access to finance remains good**, being problematic for only 9% of firms (as compared to the EU-average of 15%). Swedish SMEs rather identify finding customers as the largest challenge. In a recent survey commissioned by the European Commission, a high proportion of Swedish SMEs (70 %) received the financing they sought (EU: 65%) and only 8% of applicants were rejected (EU: 13%). Only 17% of surveyed applicants used their most recent loan for working capital purposes, which shows that the majority of companies have sufficient internal funds and/or are generating enough cash flow to finance their day-to-day business. Banks are generally considered to be slightly more willing to provide finance to SMEs than in previous years. 12% of SMEs have used equity financing, which is considerably higher than the EU average (5%). In general, risk capital has been accessible during the past decade but mainly for high-tech investments. It has been more challenging to obtain funding for clean-tech and life-science investments and demand for early-stage venture capital has generally been higher than supply. The situation looks promising as regards future access to finance. <sup>(64)</sup>

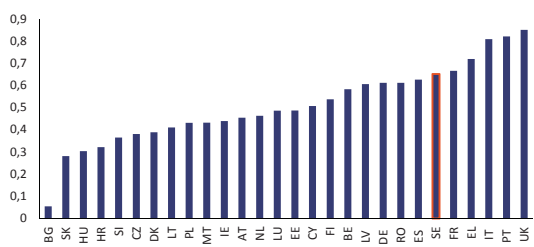
**In terms of policies aimed at promoting competitiveness, the new government has declared its commitment to the Swedish simplification programme for companies**, one of the objectives of which is to decrease and simplify reporting requirements. The 'once only' and 'easy submitting' principles aim to ensure that businesses need only supply information once, because the public agencies share data. The objective is also that data submission should be as easy as possible. By 2020, businesses should only be required to submit information once, and to one place, in most cases. The recently introduced so called 'investor's

<sup>(64)</sup> 2013 SMEs' Access to Finance Survey, Analytical Report, European Commission, 14/11/2013.

deductibility' allowing individuals acquiring shares in a new or expanding SME to deduct half of the purchase amount up to SEK 650 000 per person and year, should also facilitate the development of start-ups and innovative SMEs. Less than 1 per cent of Swedish SMEs are exporting to the growth markets China and India, compared to more than one fourth of large enterprises. Exporting behaviour is positively correlated with broadband internet usage. <sup>(65)</sup>

**The efficiency of the Swedish pre-insolvency framework is relatively high, although also quite costly.** Nevertheless, a well-functioning mechanism for preventive restructuring is important in a modern business environment.

Graph 3.3.3: Overall efficiency of pre-insolvency framework



Source: European Commission

**The share of contract award notices with proper price information published under EU public procurement rules by Swedish authorities and entities remains low and far below the EU average.** In 2013, only 8.7 % of the contract award notices contained any information on the value of contracts, which is to be compared with 74% on average in the EEA. Moreover, data over time reinforces the picture that the low quality of contract award notices is a recurrent issue in Sweden. The actual impact of the missing information is difficult to estimate, as it concerns reporting on contracts that have already been advertised as such. The likely impact for EU businesses interested in public contracts in Sweden is indirect, as they cannot verify the actual value of the opportunities that remain unreported. Consequently, when establishing strategies for future procurement, these businesses will not know

<sup>(65)</sup> "Helping Firms Grow", European Competitiveness Report 2014, European Commission.

whether they should lower their prices in tenders to be more competitive. Furthermore, as information on actual contract values is not accessible, it will be more difficult to verify that the contracts have not been modified or that the prices paid correspond to proper market prices. Insufficiently transparent public procurement procedures may risk discouraging in particular foreign firm and SMEs (Section 2.2 on the Swedish housing market), whereas a larger proportion of foreign firms that would be active on the Swedish public procurement market could shift the Swedish current account surplus (Section 1). In this context, the new authority for public procurement support that will become operational as from September 2015 will have an important role to play to share best practice.

### Research and development

**Sweden has the second highest level of R&D expenditure as a share of GDP in the EU (3.2% in 2013) and is considered to be an innovation leader according to the Innovation Union Scoreboard 2014.** High investments in R&D, a strong science base and a business-friendly environment represent key strengths of Sweden's R&I system. Up to 70 % of research, development and innovation can be attributed to the business sector. Most of the research, development and innovation outside of the business sector is carried out by the higher education sector.

**Nevertheless, the Swedish innovation environment seems to be losing its capacity to retain and attract business R&D investment.** First of all, Sweden's overall strong position in R&D is vulnerable due to its dependence on a few large multinational companies, which are increasingly relocating their R&D activities away from Sweden. Secondly, the performance of the country as regards both the commercialisation of innovative products and the interaction between academic sector and industry present additional challenges. Moreover, as some Swedish regions have a weak innovation performance, they risk permanently lagging behind also in terms of growth and employment, and it appears important that they make full use of research and innovation strategies for smart specialisation.

**In line with the principle of growth-friendly fiscal consolidation, Sweden has continued to**

**prioritise research and innovation public investment** in order to mitigate the negative effects of declining R&D business expenditure. The Research and Innovation bill adopted in 2012 in fact foresees that a growing share of funds, totalling roughly EUR 1 billion until 2016, is going to be allocated, to research and innovation activities. The overall aim of the bill, which sets out the policy priorities for 2012-16, is to increase the quality of research, and to strengthen the links between R&D investments and economic growth. Funding to research and post-graduate education has been increased. Institutional funding to universities is increasingly awarded on the basis of quality and performance indicators. To further enhance investments in R&D, employer contributions have been reduced by 10% as from 1 January 2014 for staff working in R&D. Additional measures have been launched to boost the innovation system (e.g. innovation voucher scheme or Innovation Projects in Companies programme) and to enhance its effectiveness through reinforced public-private collaboration.

**Several initiatives aimed at reinforcing public-private cooperation** are now fully operational. The industrial research institutes have been strengthened to act as an interface between academic research and product development in the business sector. Innovation offices at the universities and higher education institutions, as well as the innovation infrastructures, have received additional funding. At the same time, Swedish authorities have been working to modify the current legislation on patent rights and deductibility of donations to R&D.

**Maximum priority is assigned to R&D for the new programming period of the European Structural and Investment Funds**, both as reflected in the Partnership Agreement and in the 2014-2020 operational programmes. In fact, the government has decided to allocate 65.7% of Sweden's structural funds dedicated to R&D for technology transfer and improvement of cooperation networks.

**The implementation of the R&I bill seems to be on track** with efforts being made to restore the attractiveness of the business environment, to encourage young firms to develop new technologies and innovative solutions and to foster research and innovation partnerships between

business sector and universities. However, the pursuit of an active innovation policy and healthy investments in R&D need to remain a top priority for the Swedish government as there is a risk that Sweden may not achieve its Europe 2020 target of 4% of GDP R&D investments. In this respect, the objective also presupposes private initiatives that are willing and able to take on risk.

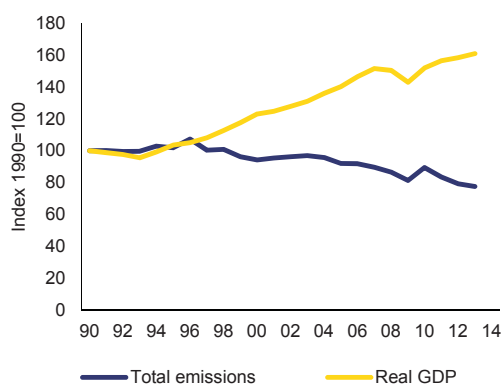
### **Environment, energy, infrastructure and transport**

**While Sweden is making good progress towards the achievement of its climate EU targets, emissions from transportation have only decreased marginally** since 2005 and remain a particular policy challenge. These emissions make up 25% of its total greenhouse gas emissions and 45% of emissions covered by Sweden's national EU target. Although average emissions from newly registered Swedish vehicles decreased by 15% between 2005 and 2010, the Swedish vehicle stock is still relatively inefficient compared to the EU average, with new vehicles emitting about 7% more than the EU average per kilometre driven in 2013. The average size of new cars in Sweden is significantly larger than the EU average, and mass and CO2 emissions are highly correlated. In the context of emissions targets, it is worth highlighting that Sweden has adopted a voluntary national target to reduce non-ETS emissions by 2020 by 40% compared to 1990 and by 33% compared to 2005, of which two thirds should be achieved domestically.

**In order to stimulate further emissions reductions in the transport sector, tax measures and pilot programmes promoting low-carbon emission vehicles and technologies are being promoted**, including for biofuels (that have become an important element in Swedish energy supply). A government inquiry on measures to reduce the transport sector's emissions and dependency on fossil fuels was published in December 2013, and was thereafter consulted with concerned stakeholders. However, the new government has not yet proposed any concrete measures in this regards. Sweden no longer has a registration tax for vehicles, which on the one hand represents foregone revenue for public finances but on the other hand may incentivise car owners to purchase relatively more environmentally-friendly cars.

Sweden was the first country to introduce a green tax shift in 1990, but revenues from environmentally-related taxes are not keeping pace with GDP growth. Partly this has been due to the behavioural impacts of taxes, and the fuel shifting within the domestic heating sector away from fossil fuels. On the other hand, this can be said to represent a success, as between 1990 and 2012 Sweden's total greenhouse gas emissions fell by 13% while GDP per capita increased by 42%. The decreasing emissions is a direct consequence of the decoupling of energy consumption and economic growth that Sweden has achieved in part through structural change towards the services sector and in part through improved energy efficiency (Graph 3.3.4). Finally, the economic recession has also affected the outcome. As regards Sweden's green tax shift, in 2012 environmental taxes generated revenue equivalent to 2.49% of GDP in Sweden, just above the EU average, but on a declining trend. Hence, there might be room for a possible further tax shift.

Graph 3.3.4: Greenhouse gas emissions and real GDP growth in Sweden



Source: OECD, Swedish Environmental Protection Agency (2013 data)

Sweden is not on track in meeting its national energy efficiency target (as defined in national measures implementing the Energy Efficiency Directive) for either final or primary energy consumption. In general, Sweden maintains a good mix of different types of energy-saving measures and both primary and final energy consumption decreased 2005 to 2012, but this trend has since then been reversed. This suggests that Sweden has to increase efforts to further improve energy efficiency, including as regards the existing

building stock. In this context, the government will allocate SEK 1 billion (roughly EUR 110 million) on improving the working environment and the energy efficiency in schools in the period 2015-18.

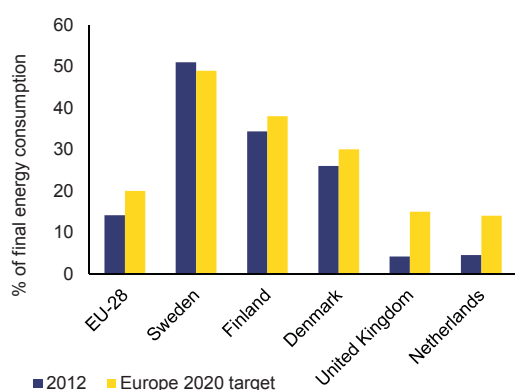
As regards energy infrastructure, there is significant congestion between the hydroelectric power plants of the north and the demand centres in southern Sweden, in spite of Sweden's very extensive electricity transmission network. Sweden is in general well interconnected with neighbouring countries. This, however, cannot be said about natural gas which on the other hand plays a relatively small role in the energy system and the gas infrastructure is not extensive. The current level of electricity interconnections (24% of generation capacity in 2011) will increase further once the electricity interconnection between Sweden and Lithuania (known as the project Nordbalt) becomes operational in early 2016. The investment has been co-financed by the European Energy Programme for Recovery and will contribute to further the integration electricity markets in northern Europe.

The new government has announced its wish to replace nuclear energy by renewable energy and energy efficiency. According to the government, Sweden shall have 100 per cent renewable energy in the longer-term. With a share of 51% in 2012, Sweden already reaches its Europe 2020 target of 49% renewable energy (Graph 3.3.5).

The efforts to boost renewable energy reliance will also generate substantial investment, as the government considers that at least 30 TWh of electricity from new renewable sources is to be ensured by 2020, among others through offshore wind and solar power. The recent announcements of the new government would imply a reversal of the former government's decision in 2010 to allow new nuclear reactors to replace old ones. The government announced however already in October 2014 that it will invite to discussions with the opposition and set up a dedicated energy commission to reach an energy agreement with cross-party support, sustainable in the longer term. The work of the announced energy commission is expected to start in 2015. A future agreement across parties is expected to give medium- to long-term certainty for investors as well and operators in the energy field. The uncertainties surrounding

the future of nuclear energy in Sweden has however already led the state owned electricity utility Vattenfall to put on hold its plans for new nuclear reactors. Given the importance of nuclear energy in the current electricity mix, a phase-out would lead to significant challenges to ensure generation adequacy through other energy sources.

Graph 3.3.5: **Share of renewables in gross final energy consumption, 2012 and Europe 2020 target**



Source: European Commission

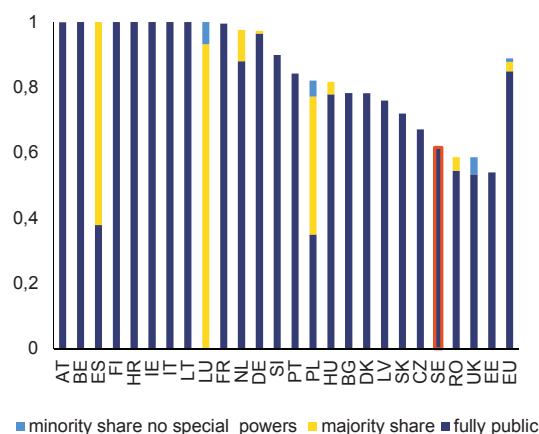
**Increased investments and continued attention is needed to improve the functioning of the Swedish rail system**, which to a sizeable extent (representing roughly 60% of the railway sector turnover) is governed by state-owned enterprises (to be compared with 83% on average in the EU) (Graph 3.3.6). The overall situation of the transport infrastructure network is not unsatisfactory. At the same time, analysis shows that traffic volumes have outpaced investments over the last decade.<sup>(66)</sup> The level of investment in the maintenance and upgrading of the Swedish rail system continues to be an area with limited progress, also in view of the severe weather conditions. In order to reduce delays and eliminate remaining bottlenecks (especially in urban areas, but affecting the entire network), particularly on cross-border rail traffic with continental Europe, investments are needed. The intensive use of the existing network results in recurring delays and problems have intensified over the latest decade.<sup>(67)</sup> According to recent estimates, railway

<sup>(66)</sup> "Nivån på infrastrukturinvesteringarna i Sverige", National Institute of Economic Research, March 2012.

<sup>(67)</sup> "Situationen i det svenska järnvägsnätet", TRV2011/10161A, Swedish Transport Administration, 2011.

investments need to continue to increase - at least at the same pace as GDP growth - to accommodate increased traffic levels. Ineffective connections risk negatively impacting foreign trade and the labour market. In December 2014, the government added additional instructions to the on-going inquiry regarding the organisation of the Swedish railway system, with the purpose of reviewing how the state can improve its coordination of rail maintenance.

Graph 3.3.6: **Share of SOEs turnover in total, railway 2012**



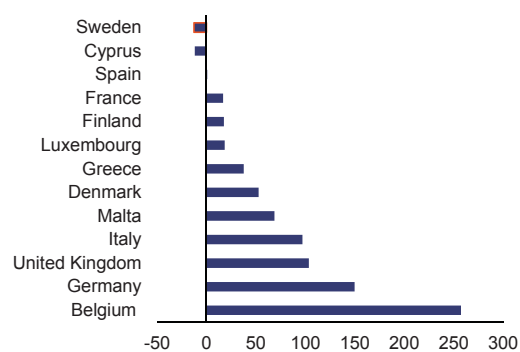
Source: European Commission

**Given its geographical situation, all transport modes are important for the future of Swedish export**, and potential capacity bottlenecks need careful consideration. In this context, **maritime transport continues to be a strong alternative** as a transport mode in its own right and as an essential part of the intermodal chain. In 2013, the government adopted an action plan for improved competitiveness of the Swedish shipping industry. It was meant to be followed by a new maritime strategy in 2014. The strategy is, however, still forthcoming and concrete measures are yet to be implemented. In this context, analysis shows that unlike most other EU/EEA Member States, Sweden has so far not introduced measures (in particular a so called tonnage tax system) to counteract the flagging out of Swedish vessels. The recent conclusions of a public inquiry commissioned by the government nevertheless expressed support for introducing tonnage tax in



Sweden.<sup>(68)</sup> The EU Member States that have introduced a tonnage tax have experienced strong fleet growth over the last decade, whereas the Swedish fleet has remained relatively flat or, recently, even negative (Graph 3.3.7). Given that the world fleet has also grown strongly over the last ten years, this means that the Swedish flagged share of the world fleet has fallen from 1.1% in 1980, to just 0.1% in 2012.<sup>(69)</sup>

Graph 3.3.7: **Evolution of the flagged fleets of some EU Member States, 2004-13 (% change in deadweight tonnage)**



**Source:** Oxford Economics, UNCTAD

<sup>(68)</sup> SOU 2015:4 "Ett svenskt tonnageskattesystem", Ministry of Finance, February 2015.

<sup>(69)</sup> Study by Oxford Economics 'The Economic Value of the EU Shipping Industry', 2014.

## ANNEX A

### Overview Table

Commitments	Summary assessment <sup>(70)</sup>
<b>2014 Country specific recommendations (CSRs)</b>	
<p><b>CSR 1:</b> Continue to pursue a growth-friendly fiscal policy and preserve a sound fiscal position, ensuring that the medium-term budgetary objective is adhered to throughout the period covered by the Convergence Programme,</p> <p>also with a view to the challenges posed on the long-term sustainability of public finances by an ageing population.</p>	<p>Sweden has made <b>some progress</b> in addressing CSR 1 of the Council recommendation (this overall assessment of CSR1 excludes an assessment of compliance with the Stability and Growth Pact):</p> <p>Limited progress in further enhancing the efficiency of public spending on long-term care linked to an ageing population.</p>
<p><b>CSR 2:</b> Moderate household sector credit growth and private indebtedness.</p> <p>To this end, reduce the effects of the debt bias in personal income taxation by gradually limiting tax deductibility of interest payments on mortgages and/or by increasing recurrent property taxes.</p> <p>Take further measures to increase the pace of amortisation of mortgages.</p>	<p>Sweden has made <b>limited progress</b> in addressing CSR 2 of the Council recommendation:</p> <p>No progress in reviewing the taxation of relevance to housing, i.e. the mortgage interest deductibility rules and property taxation.</p> <p>Some progress in promoting an amortisation culture, with the Financial Supervisory Authority announcing new rules regarding amortisation down to 50% for new mortgage loans. The measure remains to be fully defined and implemented.</p>
<p><b>CSR 3:</b> Further improve the efficiency of the housing market through continued reforms of the rent-setting system. In particular, allow more market-oriented rent levels by moving away from the utility value system and further liberalising certain segments of the rental market, and greater freedom of contract between individual tenants and landlords.</p> <p>Decrease the length and complexity of the planning and appeal processes, by reducing and merging administrative requirements, harmonising building requirements and standards across municipalities and increasing transparency for land allotment</p>	<p>Sweden has made <b>limited progress</b> in addressing CSR 3 of the Council recommendation:</p> <p>No progress in reviewing the rent-setting system or the freedom of contract on the rental market.</p> <p>Limited progress in rendering the zoning and planning processes more efficient. The full effect of some previously adopted measures (for example regarding a review of noise rules, amended procedures regarding appeals</p>

<sup>(70)</sup> The following categories are used to assess progress in implementing the 2014 CSRs of the Council Recommendation: **No progress:** The Member State has neither announced nor adopted any measures to address the CSR. This category also applies if a Member State has commissioned a study group to evaluate possible measures. **Limited progress:** The Member State has announced some measures to address the CSR, but these measures appear insufficient and/or their adoption/implementation is at risk. **Some progress:** The Member State has announced or adopted measures to address the CSR. These measures are promising, but not all of them have been implemented yet and implementation is not certain in all cases. **Substantial progress:** The Member State has adopted measures, most of which have been implemented. These measures go a long way in addressing the CSR. **Fully addressed:** The Member State has adopted and implemented measures that address the CSR appropriately.

<p>procedures.</p> <p>Encourage municipalities to make their own land available for new housing developments.</p>	<p>etc) is still to be seen and the rules regarding letting of private dwellings have been eased (although they are now to be reviewed by the new government). In addition, as from July 2014, homeowners may build a supplementary dwelling house on their plot of land without the need for a building licence.</p> <p>Limited progress regarding municipalities' incentives. A public inquiry has been set up to investigate regulations governing land use and planning and also propose measures that increase municipal planning for housing and the supply of land.</p>
<p><b>CSR 4:</b> Take appropriate measures to improve basic skills and facilitate the transition from education to the labour market, including through a wider use of work-based training and apprenticeships.</p> <p>Reinforce efforts to target labour market and education measures more effectively towards low-educated young people and people with a migrant background.</p> <p>Increase early intervention and outreach to young people who are unregistered with the public services.</p>	<p>Sweden has made <b>some progress</b> in addressing CSR 4 of the Council recommendation:</p> <p>Limited progress in taking measures to improve basic skills. Teaching hours in mathematics have been increased. The Institute for School Research started work on 1 January 2015 to strengthen the evidence-base of education reforms. An independent School Commission is still to be established to propose long-term school reforms and national goals.</p> <p>Some progress in facilitating the transition from education to the labour market, e.g. through the introduction of an upper secondary apprentice employment contract. Some take-up issues still remain to be addressed.</p> <p>Some progress on fully implementing the Youth Guarantee for persons not in employment, education or training (NEETs), but not yet ensuring that all categories of young people benefit from the national guarantee. A new youth policy framework includes continued efforts to develop activities for NEETs. Adequate coordination at local level still remains to be ensured.</p> <p>Limited progress in targeting labour market and education measures more effectively to the vulnerable groups. A set of new measures targeted towards newly arrived migrants was adopted in June 2014, which serves to tighten benefit conditions for migrants. A</p>

	comprehensive proposal regarding the education of newly arrived students was announced and expected to enter into force on 1 January 2016. The Education Act was amended in July 2014 to oblige municipalities to consider socio-economic factors when allocating school resources.
<b>Europe 2020 (national targets and progress)</b>	
Employment rate target set in the 2014 NRP: well over 80%.	Employment rate (%) in 2012: 79.4%, 2013 79.8%  The EU wide target was met already before the crisis in 2007-08. Achievement of a more ambitious national target was hindered by the 2008-09 crisis. Since then progress has picked up and Swedish labour market performance remains solid.
R&D target set in the 2013 NRP: 4% of GDP by 2020.	Gross domestic expenditure on R&D (in % of GDP): 3.28% in 2012 and 3.21% in 2013 (provisional).  No progress towards the target. Although public R&D intensity has grown yearly by 2.5% over the 2007-12 period, private expenditure on R&D as % of GDP has decreased by 1.4% per year over the same period. Sweden may still reach its R&D target for 2020 if the new policy of challenge-based innovation achieves to stimulate the development of high growth innovative enterprises and thus leverage R&D private investments.
Greenhouse gas emissions, base year 1990:  -17 % (compared to 2005 emissions; emissions under the EU Emissions Trading Scheme (ETS) are not covered by this national target).	According to the latest projections and taking into account existing measures, the target is expected to be achieved: -19% in 2020 compared to 2005 (with a margin of 2 percentage points).  Change in non-ETS greenhouse gas emissions between 2005 and 2013: -20% (preliminary data).
Renewable energy target set in the 2013 NRP:  Renewable energy target: 49 %  Share of renewable energy in the transport sector: 10	Share of renewable energy in gross final energy consumption 51.7% in 2013. Sweden has already reached its 2020 target for renewable energy of 49%.

%	
<p>Energy efficiency:</p> <p>Energy efficiency target: 20% reduction in energy intensity (vs. 2008)</p> <p>By 2020: level of 43.4 Mtoe primary consumption and 30.3 Mtoe final energy consumption</p>	<p>Energy intensity of the economy</p> <p>Although primary and final energy consumption have been decreasing in 2005-12, this trend has been reversed in the more recent years (2011-12), for both primary and final energy consumption. In addition, Sweden is not on track in meeting its national energy target for both final and primary energy consumption. 49.8 Mtoe primary energy consumption and 32.4 Mtoe final energy consumption in 2012 according to ESTAT..</p>
<p>Early school leaving target: 10%</p>	<p>Early leavers from education and training (Share of the population aged 18-24 with at most lower secondary education and not in further education or training) in 2012: 7.5%, 2013: 7.1%.</p> <p>The target has been achieved. Sweden also has other national definitions of early school leaving, see chapter 4.2.</p>
<p>Tertiary education target: 40-45%</p>	<p>Tertiary educational attainment (share of population 30-34 having successfully completed tertiary education): in 2012: 47.9%, 2013: 48.3%.</p> <p>The target has been achieved.</p>
<p>Target on the reduction of population at risk of poverty or social exclusion in number of persons:</p> <p>Reducing to well under 14 % the number of people aged 20-64 who are not in the labour force (except full-time students), long-term unemployed or on long-term sick leave.</p>	<p>People at-risk-of-poverty or social exclusion in 1 000 persons attainment in 2012: 13.1%, 2013: 12.7%.</p> <p>According to the 2014 national reform programme the proportion of the population covered by the target is estimated to be about 12.7% of the age group (2013), which would suggest that the target has been reached.</p>

Table B.1: Macroeconomic indicators

	1996-2000	2001-2005	2006-2010	2011	2012	2013	2014	2015	2016
<b>Core indicators</b>									
GDP growth rate	3,6	2,6	1,7	2,7	-0,3	1,3	1,8	2,3	2,6
Output gap <sup>1</sup>	-0,5	-0,4	-0,1	-0,1	-1,6	-1,8	-1,5	-1,0	-0,3
HICP (annual % change)	1,1	1,8	2,1	1,4	0,9	0,4	0,2	0,5	1,0
Domestic demand (annual % change) <sup>2</sup>	3,1	1,8	2,1	3,0	-0,6	1,1	2,9	2,7	2,7
Unemployment rate (% of labour force) <sup>3</sup>	8,0	6,7	7,3	7,8	8,0	8,0	7,8	7,7	7,5
Gross fixed capital formation (% of GDP)	20,8	21,8	23,2	22,7	22,6	22,1	22,7	23,2	23,5
Gross national saving (% of GDP)	25,6	28,1	31,0	29,7	28,9	28,9	28,8	28,9	29,0
<b>General government (% of GDP)</b>									
Net lending (+) or net borrowing (-)	0,0	0,2	1,3	-0,1	-0,9	-1,4	-2,2	-1,6	-1,0
Gross debt	63,6	49,4	39,0	36,1	36,4	38,6	41,4	41,3	40,6
Net financial assets	-17,3	1,5	19,4	19,8	22,8	26,0	n.a.	n.a.	n.a.
Total revenue	59,1	55,0	54,0	52,7	53,0	53,3	52,0	52,2	52,4
Total expenditure	59,0	54,8	52,7	52,8	54,0	54,7	54,2	53,8	53,4
of which: Interest	4,3	2,2	1,4	1,1	0,9	0,8	0,8	0,8	0,9
<b>Corporations (% of GDP)</b>									
Net lending (+) or net borrowing (-)	2,8	3,5	2,3	0,3	-0,4	0,2	0,2	-0,5	-1,1
Net financial assets; non-financial corporations	-132,1	-127,8	-167,3	-163,4	-178,8	-189,2	n.a.	n.a.	n.a.
Net financial assets; financial corporations	16,6	-11,3	-2,5	-4,2	-0,5	1,1	n.a.	n.a.	n.a.
Gross capital formation	15,0	15,2	15,8	16,4	15,5	15,1	15,6	15,9	16,1
Gross operating surplus	24,4	23,4	24,4	24,4	23,0	22,8	22,6	22,5	22,3
<b>Households and NPISH (% of GDP)</b>									
Net lending (+) or net borrowing (-)	0,8	2,1	3,7	5,3	7,4	7,6	7,5	7,3	7,2
Net financial assets	88,6	106,0	134,3	132,0	142,0	157,2	n.a.	n.a.	n.a.
Gross wages and salaries	38,7	38,7	38,8	39,4	40,5	40,5	40,8	40,7	40,6
Net property income	3,2	2,4	4,3	5,1	5,7	5,8	5,9	5,9	5,9
Current transfers received	23,7	22,5	20,7	19,9	20,7	21,1	20,9	20,6	20,3
Gross saving	2,8	4,9	7,0	8,4	10,0	10,1	10,2	10,1	10,0
<b>Rest of the world (% of GDP)</b>									
Net lending (+) or net borrowing (-)	3,8	6,1	7,6	5,7	6,2	6,5	5,6	5,3	5,1
Net financial assets	45,0	32,4	17,4	17,6	16,3	6,2	n.a.	n.a.	n.a.
Net exports of goods and services	6,3	6,7	6,4	4,7	4,9	5,0	4,2	3,9	3,9
Net primary income from the rest of the world	-0,7	0,8	3,1	2,9	3,1	3,6	3,5	3,4	3,3
Net capital transactions	-0,5	-0,1	-0,2	-0,2	-0,2	-0,2	-0,3	-0,3	-0,3
Tradable sector	43,4	42,5	41,5	41,0	40,3	39,5	n.a.	n.a.	n.a.
Non-tradable sector	44,7	45,7	46,6	47,1	48,0	48,9	n.a.	n.a.	n.a.
of which: Building and construction sector	4,1	4,7	5,3	5,1	4,9	4,8	n.a.	n.a.	n.a.

1 The output gap constitutes the gap between the actual and potential gross domestic product at 2010 market prices.

2 The indicator of domestic demand includes stocks.

3 Unemployed persons are all those who were not employed, had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed. The unemployment rate covers the age group 15-74.

Source: European Commission 2015 winter forecast; Commission calculations

Table B.2: **Financial market indicators**

	2009	2010	2011	2012	2013	2014
Total assets of the banking sector (% of GDP) <sup>1)</sup>	320.1	305.2	295.9	297.5	288.6	298.7
Share of assets of the five largest banks (% of total assets)	60.7	57.8	57.8	57.4	58.3	n.a.
Foreign ownership of banking system (% of total assets)	7.1	8.6	8.4	8.6	8.7	n.a.
Financial soundness indicators:						
- non-performing loans (% of total loans)	0.8	0.8	0.7	0.7	0.6	0.6
- capital adequacy ratio (%) <sup>2)</sup>	12.7	12.0	11.5	11.7	12.0	21.6
- return on equity (%) <sup>2)</sup>	8.0	14.1	14.9	15.3	16.7	8.0
Bank loans to the private sector (year-on-year % change) <sup>1)</sup>	3.3	7.3	5.5	3.6	3.0	5.2
Lending for house purchase (year-on-year % change) <sup>1)</sup>	10.4	8.7	5.6	4.7	5.4	6.2
Loan to deposit ratio <sup>1)</sup>	221.9	217.4	215.3	207.8	201.9	203.3
Central Bank liquidity as % of liabilities <sup>3)</sup>	3.9	0.0	0.0	0.0	0.0	0.0
Private debt (% of GDP)	212.6	200.8	200.3	202.3	200.1	n.a.
Gross external debt (% of GDP) <sup>4)</sup>						
- public	16.4	17.3	18.1	18.5	19.3	19.1
- private	83.2	73.3	66.6	62.6	57.0	58.0
Long-term interest rate spread versus Bund (basis points)*	2.8	15.0	-0.3	9.7	55.1	55.3
Credit default swap spreads for sovereign securities (5-year)*	70.2	31.2	35.7	36.2	14.3	9.9

1) Latest data November 2014.

2) Latest data Q2 2014. Four large banking groups.

3) Latest data Q3 2014. Four large banking groups.

4) Latest data June 2014. Monetary authorities, monetary and financial institutions are not included.

\* Measured in basis points.

**Source:** IMF (financial soundness indicators); European Commission (long-term interest rates); World Bank (gross external debt); ECB (all other indicators).

Table B.3: **Taxation indicators**

	2002	2006	2008	2010	2011	2012
<b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP)	47,5	48,3	46,4	45,4	44,4	44,2
<b>Breakdown by economic function</b> (% of GDP) <sup>1)</sup>						
Consumption	12,7	12,5	12,7	13,2	12,8	12,6
of which:						
- VAT	8,8	8,9	9,3	9,7	9,5	9,3
- excise duties on tobacco and alcohol	0,8	0,7	0,7	0,7	0,7	0,7
- energy	2,4	2,3	2,2	2,2	2,0	2,0
- other (residual)	0,6	0,6	0,6	0,6	0,6	0,6
Labour employed	25,7	24,1	24,0	22,3	22,4	22,7
Labour non-employed	4,0	4,3	3,7	3,4	3,1	3,2
Capital and business income	3,4	5,8	4,7	5,1	4,7	4,4
Stocks of capital/wealth	1,7	1,7	1,3	1,4	1,3	1,4
<i>p.m.</i> Environmental taxes <sup>2)</sup>	2,9	2,7	2,7	2,7	2,5	2,5
<b>VAT efficiency</b> <sup>3)</sup>						
Actual VAT revenues as % of theoretical revenues at standard rate	52,7	55,7	58,3	59,1	58,4	56,2

1. Tax revenues are broken down by economic function, i.e. according to whether taxes are raised on consumption, labour or capital. See European Commission (2014), Taxation trends in the European Union, for a more detailed explanation.

2. This category comprises taxes on energy, transport and pollution and resources included in taxes on consumption and capital.

3. VAT efficiency is measured via the VAT revenue ratio. It is defined as the ratio between the actual VAT revenue collected and the revenue that would be raised if VAT was applied at the standard rate to all final (domestic) consumption expenditures, which is an imperfect measure of the theoretical pure VAT base. A low ratio can indicate a reduction of the tax base due to large exemptions or the application of reduced rates to a wide range of goods and services ('policy gap') or a failure to collect all tax due to e.g. fraud ('collection gap'). It should be noted that the relative scale of cross-border shopping (including trade in financial services) compared to domestic consumption also influences the value of the ratio, notably for smaller economies. For a more detailed discussion, see European Commission (2012), Tax Reforms in EU Member States, and OECD (2014), Consumption tax trends.

**Source:** European Commission

Table B.4: Labour market and social indicators

	2008	2009	2010	2011	2012	2013	2014
Employment rate (% of population aged 20-64)	80,4	78,3	78,1	79,4	79,4	79,8	80,0
Employment growth (% change from previous year)	0,9	-2,4	1,0	2,1	0,7	1,0	1,4
Employment rate of women (% of female population aged 20-64)	77,2	75,7	75,0	76,5	76,8	77,2	77,7
Employment rate of men (% of male population aged 20-64)	83,5	80,9	81,1	82,1	81,9	82,2	82,2
Employment rate of older workers (% of population aged 55-64)	70,1	70,0	70,4	72,0	73,0	73,6	74,0
Part-time employment (% of total employment, age 15 years and over)	26,6	27,0	27,0	26,5	26,5	26,2	26,1
Part-time employment of women (% of women employment, age 15 years and over)	41,4	41,2	41,0	40,1	39,6	38,8	38,3
Part-time employment of men (% of men employment, age 15 years and over)	13,3	14,2	14,5	14,2	14,6	14,9	15,0
Fixed term employment (% of employees with a fixed term contract, age 15 years and over)	16,1	15,3	16,4	17,0	16,4	16,9	17,6
Transitions from temporary to permanent employment	45,9	34,5	43,9	41,6	n.a.	n.a.	n.a.
Unemployment rate <sup>1</sup> (% of labour force, age group 15-74)	6,2	8,3	8,6	7,8	8,0	8,0	7,9
Long-term unemployment rate <sup>2</sup> (% of labour force)	0,8	1,1	1,6	1,5	1,5	1,5	1,5
Youth unemployment rate (% of youth labour force aged 15-24)	20,2	25,0	24,8	22,8	23,7	23,6	22,9
Youth NEET rate (% of population aged 15-24)	7,8	9,6	7,7	7,5	7,8	7,5	n.a.
Early leavers from education and training (% of pop. aged 18-24 with at most lower sec. educ. and not in further education or training)	7,9	7,0	6,5	6,6	7,5	7,1	n.a.
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	42,0	43,9	45,3	46,8	47,9	48,3	n.a.
Formal childcare (from 1 to 29 hours; % over the population aged less than 3 years)	18,0	26,0	18,0	19,0	17,0	n.a.	n.a.
Formal childcare (30 hours or over; % over the population aged less than 3 years)	31,0	37,0	33,0	32,0	35,0	n.a.	n.a.
Labour productivity per person employed (annual % change)	-1,4	-2,8	5,0	0,5	-1,0	0,3	0,3
Hours worked per person employed (annual % change)	0,3	-0,5	1,6	-0,2	-0,9	-0,7	0,5
Labour productivity per hour worked (annual % change; constant prices)	-1,8	-2,4	3,3	0,7	-0,1	1,0	-0,2
Compensation per employee (annual % change; constant prices)	0,3	0,3	1,2	2,0	2,0	0,5	1,0
Nominal unit labour cost growth (annual % change)	3,1	4,4	-2,3	0,1	2,9	0,8	n.a.
Real unit labour cost growth (annual % change)	-0,1	2,3	-3,1	-1,2	1,9	-0,2	n.a.

1 Unemployed persons are all those who were not employed, but had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed. Data on the unemployment rate of 2014 includes the last release by Eurostat in early February 2015.

2 Long-term unemployed are persons who have been unemployed for at least 12 months.

Source: European Commission (EU Labour Force Survey and European National Accounts)



Table B.5: Expenditure on social protection benefits (% of GDP)

	2007	2008	2009	2010	2011	2012
Sickness/healthcare	7,5	7,5	7,9	7,4	7,5	7,6
Invalidity	4,4	4,4	4,6	4,1	3,9	3,9
Old age and survivors	11,6	12,0	13,2	12,7	12,4	12,8
Family/children	2,9	3,0	3,2	3,1	3,1	3,2
Unemployment	1,1	0,9	1,3	1,4	1,2	1,2
Housing and social exclusion n.e.c.	0,5	0,5	0,5	0,5	0,4	0,5
<b>Total</b>	<b>28,6</b>	<b>28,9</b>	<b>31,4</b>	<b>29,8</b>	<b>29,1</b>	<b>29,9</b>
of which: means-tested benefits	0,8	0,8	0,9	0,8	0,8	0,8

Social inclusion indicators	2008	2009	2010	2011	2012	2013
People at risk of poverty or social exclusion <sup>1</sup> (% of total population)	14,9	15,9	15,0	16,1	15,6	16,4
Children at risk of poverty or social exclusion (% of people aged 0-17)	14,6	15,1	14,5	15,9	15,4	16,2
Elderly at risk of poverty or social exclusion (% of people aged 65+)	15,5	18,0	15,9	18,6	17,9	16,5
At-risk-of-poverty rate <sup>2</sup> (% of total population)	12,2	13,3	12,9	14,0	14,1	14,8
Severe material deprivation rate <sup>3</sup> (% of total population)	1,4	1,6	1,3	1,2	1,3	1,4
Proportion of people living in low work intensity households <sup>4</sup> (% of people aged 0-59)	5,5	6,4	6,0	6,9	5,7	7,1
In-work at-risk-of-poverty rate (% of persons employed)	6,8	6,9	6,5	6,8	6,7	7,1
Impact of social transfers (excluding pensions) on reducing poverty	57,2	50,0	51,7	49,8	48,5	45,4
Poverty thresholds, expressed in national currency at constant prices <sup>5</sup>	112302,1	116660,8	117235,7	117980,0	121035,4	123514,6
Gross disposable income (households)	1595302,0	1661482,0	1713289,0	1796919,0	1879388,0	1941245,0
Relative median poverty risk gap (60% of median equivalised income, age: total)	18,0	20,3	19,7	18,5	18,9	19,8
Inequality of income distribution (S80/S20 income quintile share ratio)	3,5	3,7	3,5	3,6	3,7	3,7

1 People at risk of poverty or social exclusion (AROPE): individuals who are at risk of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in households with zero or very low work intensity (LWI).

2 At-risk-of-poverty rate (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.

3 Proportion of people who experience at least four of the following forms of deprivation: not being able to afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour TV, or ix) have a telephone.

4 People living in households with very low work intensity: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.

5 For EE, CY, MT, SI and SK, thresholds in nominal values in euros; harmonised index of consumer prices (HICP) = 100 in 2006 (2007 survey refers to 2006 incomes)

6 2014 data refer to the average of the first three quarters.

**Source:** For expenditure for social protection benefits ESSPROS; for social inclusion EU-SILC.

Table B.6: Product market performance and policy indicators

	2004-08	2009	2010	2011	2012	2013	2014
Labour productivity <sup>1</sup> in total economy (annual growth in %)	2,1	-3,4	5,2	0,8	-0,9	0,3	n.a.
Labour productivity <sup>1</sup> in manufacturing (annual growth in %)	5,3	-11,0	24,9	3,6	-5,5	2,1	n.a.
Labour productivity <sup>1</sup> in electricity, gas (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in the construction sector (annual growth in %)	-1,4	-9,0	1,4	-6,8	-7,6	-0,7	n.a.
Labour productivity <sup>1</sup> in the wholesale and retail sector (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in the information and communication sector (annual growth in %)	6,3	1,8	9,1	5,2	1,8	-0,8	n.a.
Patent intensity in manufacturing <sup>2</sup> (EPO patent applications divided by gross value added of the sector)	0,0	0,0	0,0	0,0	n.a.	n.a.	n.a.
<b>Policy indicators</b>	<b>2004-08</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Enforcing contracts <sup>3</sup> (days)	508	314	314	314	314	321	321
Time to start a business <sup>3</sup> (days)	16,0	16	16	16	16	16	16
R&D expenditure (% of GDP)	3,4	3,4	3,2	3,2	3,3	3,2	n.a.
Total public expenditure on education (% of GDP)	6,8	7,3	7,0	6,8	n.a.	n.a.	n.a.
(Index: 0=not regulated; 6=most regulated)	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Product market regulation <sup>4</sup> , overall	1,61	n.a.	n.a.	n.a.	n.a.	1,52	n.a.
Product market regulation <sup>4</sup> , retail	0,60	n.a.	n.a.	n.a.	n.a.	0,60	n.a.
Product market regulation <sup>4</sup> , professional services	0,55	n.a.	n.a.	n.a.	n.a.	0,55	n.a.
Product market regulation <sup>4</sup> , network industries <sup>5</sup>	2,20	2,12	1,93	1,93	1,93	1,87	n.a.

1 Labour productivity is defined as gross value added (in constant prices) divided by the number of persons employed.

2 Patent data refer to applications to the European Patent Office (EPO). They are counted according to the year in which they were filed at the EPO. They are broken down according to the inventor's place of residence, using fractional counting if multiple inventors or IPC classes are provided to avoid double counting.

3 The methodologies, including the assumptions, for this indicator are presented in detail here:

<http://www.doingbusiness.org/methodology>.

4 Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are presented in detail here: <http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm>

5 Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).

**Source:** European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators)

Table B.7: **Green growth**

<b>Green growth performance</b>		<b>2003-2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Macroeconomic</b>							
Energy intensity	kgoe / €	0,17	0,15	0,15	0,16	0,15	0,15
Carbon intensity	kg / €	0,23	0,20	0,19	0,20	0,18	0,17
Resource intensity (reciprocal of resource productivity)	kg / €	0,63	0,64	0,59	0,62	0,63	n.a.
Waste intensity	kg / €	n.a.	0,27	n.a.	0,36	n.a.	0,47
Energy balance of trade	% GDP	-1,6	-2,0	-1,3	-1,7	-1,9	-1,8
Energy weight in HICP	%	12,1	11,5	11,1	11,0	12,0	11,7
Difference between energy price change and inflation	%	4,7	6,5	-0,4	2,0	0,7	-3,9
Ratio of environmental taxes to labour taxes	ratio	9,7%	9,8%	10,4%	10,7%	9,9%	9,6%
Ratio of environmental taxes to total taxes	ratio	5,8%	5,8%	6,1%	6,0%	5,6%	5,6%
<b>Sectoral</b>							
Industry energy intensity	kgoe / €	0,21	0,20	0,21	0,19	0,18	0,18
Share of energy-intensive industries in the economy	% GDP	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Electricity prices for medium-sized industrial users**	€ / kWh	n.a.	0,07	0,07	0,08	0,09	0,08
Gas prices for medium-sized industrial users***	€ / kWh	n.a.	0,05	0,04	0,05	0,05	0,05
Public R&D for energy	% GDP	n.a.	0,03	0,04	0,04	0,04	0,04
Public R&D for the environment	% GDP	n.a.	0,01	0,02	0,02	0,02	0,02
Recycling rate of municipal waste	ratio	93,3%	96,1%	97,6%	97,9%	99,1%	99,2%
Share of GHG emissions covered by ETS*	%	n.a.	31,9	29,6	34,8	32,7	31,5
Transport energy intensity	kgoe / €	0,52	0,50	0,54	0,52	0,48	0,48
Transport carbon intensity	kg / €	1,29	1,21	1,31	1,27	1,15	1,09
<b>Security of energy supply</b>							
Energy import dependency	%	37,6	37,1	36,7	36,6	36,2	28,7
Diversification of oil import sources	HHI	0,22	0,21	0,22	0,24	0,24	0,21
Diversification of energy mix	HHI	n.a.	0,29	0,28	0,28	0,29	0,32
Renewable energy share of energy mix	%	27,8	31,7	34,8	33,5	33,3	37,2

Country-specific notes:

2013 is not included in the table due to lack of data.

General explanation of the table items:

All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2000 prices)

Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)

Carbon intensity: Greenhouse gas emissions (in kg CO<sub>2</sub> equivalents) divided by GDP (in EUR)

Resource intensity: Domestic material consumption (in kg) divided by GDP (in EUR)

Waste intensity: waste (in kg) divided by GDP (in EUR)

Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP

Energy weight in HICP: the proportion of "energy" items in the consumption basket used for the construction of the HICP

Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)

Environmental taxes over labour or total taxes: from DG TAXUD's database 'Taxation trends in the European Union'

Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2005 EUR)

Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP

Electricity and gas prices for medium-sized industrial users: consumption band 500–2000MWh and 10000–100000 GJ; figures excl. VAT.

Recycling rate of municipal waste: ratio of recycled municipal waste to total municipal waste

Public R&D for energy or for the environment: government spending on R&D (GBAORD) for these categories as % of GDP

Proportion of GHG emissions covered by ETS: based on greenhouse gas emissions (excl LULUCF) as reported by Member States to the European Environment Agency

Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2005 EUR)

Transport carbon intensity: greenhouse gas emissions in transport activity divided by gross value added of the transport sector

Energy import dependency: net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels

Diversification of oil import sources: Herfindahl index (HHI), calculated as the sum of the squared market shares of countries of origin

Diversification of the energy mix: Herfindahl index over natural gas, total petrol products, nuclear heat, renewable energies and solid fuels

Renewable energy share of energy mix: %-share of gross inland energy consumption, expressed in tonne oil equivalents

\* European Commission and European Environment Agency

\*\* For 2007 average of S1 & S2 for DE, HR, LU, NL, FI, SE & UK. Other countries only have S2.

\*\*\* For 2007 average of S1 & S2 for HR, IT, NL, FI, SE & UK. Other countries only have S2.

**Source:** European Commission unless indicated otherwise; European Commission elaborations indicated above