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Macroeconomic Imbalances Finland 2013

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Macroeconomic Imbalances – Finland 2013

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Results of in-depth reviews under Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances

FINLAND is *experiencing macroeconomic imbalances, which deserve monitoring and policy action.* In particular, the substantial deterioration in the current account position and the weak export performance, driven by industrial restructuring, as well as cost and non-cost competitiveness factors, deserve continued attention.

More specifically, the loss in competitiveness weakens the country's economic position and risks compromising future prosperity and living standards, especially as population ageing already poses a challenge in this regard. Finland has rapidly lost world market shares and the current account balance has been on a downward trend, and even turned into a deficit in 2011, which is forecast to widen. The decline of the current account balance seems mainly driven by deteriorating non-price competitiveness and delays in the necessary restructuring in some industries. In addition, cost-competitiveness suffers from significant increases in unit labour costs as a result of wage settlements that did not fully reflect the drop of productivity during the crisis and/or sectorial productivity developments. Finland is exporting intermediate and investment goods mainly to mature, slow growing economies and industry is vulnerable to energy price increases and the consequent deterioration in the terms of trade. In contrast, risks related to housing and household indebtedness appear relatively limited. The main concern in this respect relate to the financial position of Finnish households, with low savings rates and a net overall borrowing position.

Excerpt of country-specific findings on Finland, COM(2013) 199 final, 10.4.2013.

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EXECUTIVE SUMMARY AND CONCLUSIONS

In May 2012, the Commission concluded that Finland was experiencing macroeconomic imbalances, in particular as regards developments related to competitiveness. In the Alert Mechanism Report (AMR) published on 28 November 2012, The Commission found it useful, also taking into account the identification of an imbalance in May, to examine further the persistence of imbalances or their unwinding. To this end, this In-Depth Review (IDR) takes a broad view of the Finnish economy in line with the scope of the surveillance under the Macroeconomic Imbalance Procedure (MIP). The main observations and findings from the analysis are:

- **The loss in competitiveness is one of Finland's main policy challenges.** Over a decade, Finland's current account turned from a surplus into a deficit. The country experienced a loss of 23% in world export market shares over the past five years, and saw its unit labour cost increase significantly in 2008 and 2009. Unit labour costs continued to increase over the last few years as wage increases continued to outpace productivity growth.

- **The loss of export market shares is partly due to the on-going restructuring of the electronics and forestry industries.** In electronics, Nokia lost its dominant position and closed down all assembly factories in Finland, which affects both its own employees and its subcontractors. The forest industry is relocating its paper and pulp manufacturing business to Asia and Latin America, where demand is growing and resources are available. The other main industries (metals, machinery and minerals) were not able to make up for the loss in exports from the electronics and forestry industries. These developments demonstrate Finland's vulnerability to structural shocks in the specific product markets in which its exports are concentrated.

- **High energy dependence will continue to affect Finland's current account balance through oil and gas price movements.** Energy imports, mostly crude oil, accounted for as much as 20% of Finland's total imports 2011, partly on the back of the increased oil price. The overall high energy intensity stems from the dominance of energy-intensive industries in Finland. Improved energy efficiency would help to reduce costs and energy imports.

- **Finland's declining competitiveness is also related to a relatively low translation of R&D into marketable products.** Despite high R&D spending and a well-educated workforce, the forestry and electronics industry still account for a large part of the business structure and the number of high-growth companies remains low.

- **The loss in cost competitiveness is another factor at play.** The wage increases over the past five years have been excessive and have tarnished Finland's competitive position, especially compared to Germany and Sweden, Finland's main benchmarks. The employers see the need for minimal wage growth for 2013 and 2014 whereas the employee organizations see solutions in additional public investments into workforce training and active labour market policy measures. At the same time, the non-tradable sectors, whose goods and services are partly used as inputs for the tradable sector, experienced lower productivity growth than the tradable sectors.

- **Debt levels have increased over the last decade.** The private sector, excluding the financial sector, has been accumulating debt up to 179% of GDP in 2011 (non-consolidated). While exceeding the scoreboard threshold of 160% of GDP, it remains lower than in other Nordic countries. Non-financial corporations account for almost two-thirds of this private debt, the remainder being held by households. Public debt remains modest, despite having increased over the last decade, and is expected to stay below the 60% ceiling, at least until 2014.

- **The level of household debt is a source for concern, although no sudden deleveraging or instability of the financial sector is in sight.** Household debt grew steadily from 65% of disposable income to 118%, and is now close to the European Union average. Household debt (both as a share of

disposable income and as a share of GDP) remains, however, far below the unsustainable levels observed in some other European countries. Based on the current health of the financial sector and on the still rather low housing cost overburden rates for households, ([1]) no sudden deleveraging is expected in the near future.

- **The year-on-year growth of the non-consolidated financial liabilities of the financial sector stood at 30.8% in 2011, far above the threshold of 16.5%.** To a large extent, this high growth resulted from the market movements reflected in the value of Nordea's derivatives portfolio, the safe-haven effect leading to inflows of foreign MFI deposits and the double counting of MFI deposits at the central bank. While these developments do not constitute a direct threat to financial stability, they warrant close monitoring going forward. Other potential risks for the Finnish financial sector stem from the high concentration and the funding structure. Heavy concentration in the banking sector implies contagion risk from the main systemic bank; the reliance on foreign sources and wholesale markets implies risks for bank financing.

The IDR also discusses the policy challenges stemming from these developments and possible policy responses. A number of elements can be considered:

- Measures aimed at fuelling innovation, rising product quality and facilitating existing firms and products to grow and export would be highly beneficial to the Finnish economy, leveraging the country's high R&D intensity. This would help diversify the business structure and soften the impact of the on-going restructuring in the electronics and forest industries. Wage agreements could explicitly take productivity growth into account, in order to curb labour cost growth. In addition, productivity increases could be achieved through the enhancement of competition in product and service markets, and measures to achieve efficiency gains in public services such as healthcare and education. In order to counter the decline in the working age population due to ageing, the activation of young people, the long-term unemployed and older workers, as well as an increase of the effective and statutory retirement age could be envisaged.

- Measures to curb household debt growth would soften the risks with regards to the financial position of households. Such measures could include a cap on loan-to-value ratios for mortgage loans and the abolition of tax deductibility for mortgage interest payments.

([1]) The housing cost overburden rate is the percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances).

1. INTRODUCTION

On 28 November 2012, the European Commission presented its second Alert Mechanism Report (AMR), prepared in accordance with Article 3 of Regulation (EU) No. 1176/2011 on the prevention and correction of macroeconomic imbalances. The AMR serves as an initial screening device helping to identify Member States that warrant further in-depth analysis to determine whether imbalances exist or risk emerging. According to Article 5 of Regulation No. 1176/2011, these country-specific "in-depth reviews" (IDR) should examine the nature, origin and severity of macroeconomic developments in the Member State concerned, which constitute, or could lead to, imbalances. On the basis of this analysis, the Commission will establish whether it considers that an imbalance exists and what type of follow-up it will recommend to the Council.

This is the second IDR for Finland. The previous IDR, published on 30 May 2012, led the Commission to conclude that Finland was experiencing macroeconomic imbalances, in particular as regards developments related to competitiveness. Overall, in the AMR the Commission found it useful, also taking into account the identification of an imbalance in May, to examine further the persistence of imbalances or their unwinding. To this end this IDR takes a broad view of the Finnish economy in line with the scope of the surveillance under the Macroeconomic Imbalance Procedure (MIP).

2. MACROECONOMIC SITUATION AND POTENTIAL IMBALANCES

2.1. MACROECONOMIC SCENE SETTER

Finland's economy proved highly sensitive to the collapse in global demand in 2009, with GDP falling by an unprecedented 8.5% in that year. In the following two years GDP rebounded, growing by 3.3% in 2010 and 2.8% in 2011, driven by domestic demand, but declined again slightly by -0.2% in 2012. Slow growth is expected for 2013 and 2014, with exports only gradually picking up as the world economy recovers. Sensitivity to the global environment is connected to the export structure; 80% of exports consist of capital goods and intermediate goods for which demand is typically more volatile and influenced by the business cycle.

The Finnish economy faces strong headwinds from the ageing population. The working-age population has started to shrink. Productivity and living standards rank high among the developed countries, but erstwhile strong industries such as electronics and forestry are in difficulty and, in general, the share of manufacturing in GDP is declining. Although Finnish labour productivity has traditionally been high in manufacturing, this is less the case in the services sector.

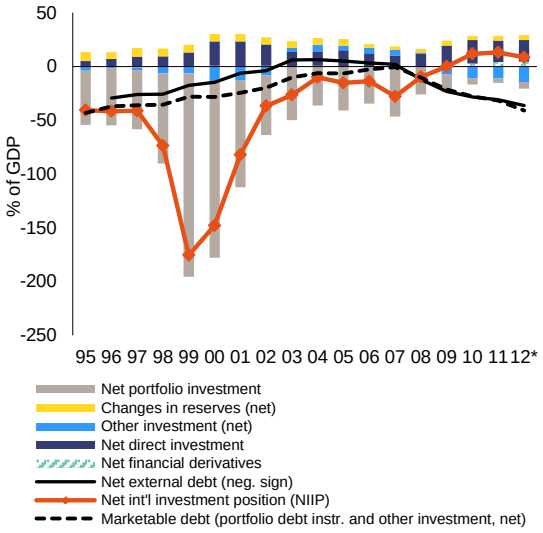
Public finances have been managed prudently and the current account was in steady surplus over the last decade. However, unit labour costs increased strongly and the current account surplus continuously fell since 2007 and turned into a deficit in 2011, the first time in nearly two decades. Simultaneously, the private sector became increasingly indebted. This raises the question as to whether external imbalances are building up and if the increasing private sector debt burden is sustainable.

2.2. SUSTAINABILITY OF EXTERNAL POSITIONS

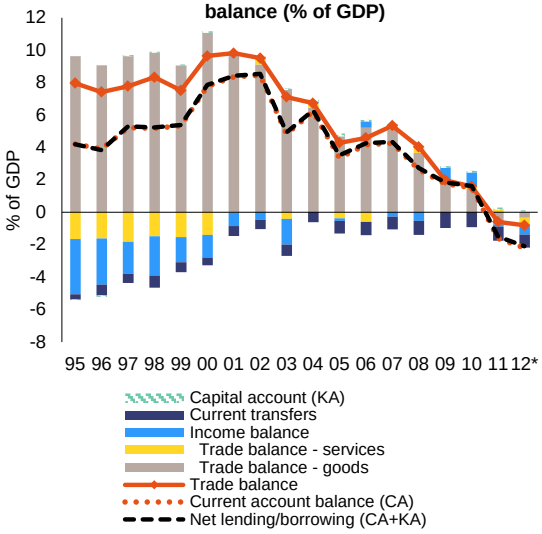
Finland's Net International Investment position has undergone substantial changes in recent years. The country's net international investment position (NIIP) experienced a huge drop in the late nineties, recovered in the early 2000s to its previous levels and remained fluctuating below zero up to 2008, as shown in Graph 2.1a. As of 2009, Finland's NIIP became slightly positive. Net external debt, on the contrary, increased from a close-to-zero position in 2008 to a more significant negative position in subsequent years. The main component driving the changes in the NIIP is net portfolio investments. As described in the previous in-depth review, Nokia's share price evolution had a large influence on Finland's NIIP through these net portfolio investments. With about 75% of Nokia shares held by foreigners and its total market capitalization being sizeable compared to Finland's GDP, valuation effects triggered large swings in Finland's net international investment position. The recent decline of Nokia's market capitalization dampened its influence on Finland's NIIP, allowing for other factors to gain importance again. Especially net direct investments remained positive throughout the years; Finland thus attracts more inward investment than its residents and corporations invest abroad through foreign direct investments.

Finland's trade performance has weakened over the past years. The current account balance declined steadily from an 8% of GDP surplus in 2002 to a 1% deficit in 2011. The current account is forecast to remain in deficit in the coming years. Graph 2.1b depicts how the declining trade balance of goods, itself turning into deficit as well in 2011, is the main driver of this evolution. The declining trade balance of goods is caused by a restructuring of the electronics and forestry industries and by a loss of competitiveness. These developments have resulted in a 23% loss of world export market share over the past five years. Finland's weak trade performance can be partly explained by wage developments, with nominal unit labour costs increasing sharply during the crisis years. Although the current wage agreements set lower wage increases for 2012 and 2013, wage growth still exceeds productivity growth. Another factor at play is the decline in the 2000s of Finland's electronics exports. A third element is the relocation of the pulp and paper industry to Asia and Latin America. Given that exports are forecast to grow slower than imports in 2013 and 2014, causing a deficit in the trade balance of goods, these developments warrant an in-depth analysis.

Graph 2.1a: **Composition of Net IIP (% of GDP)**



Graph 2.1b: **Trade balance and current account balance (% of GDP)**



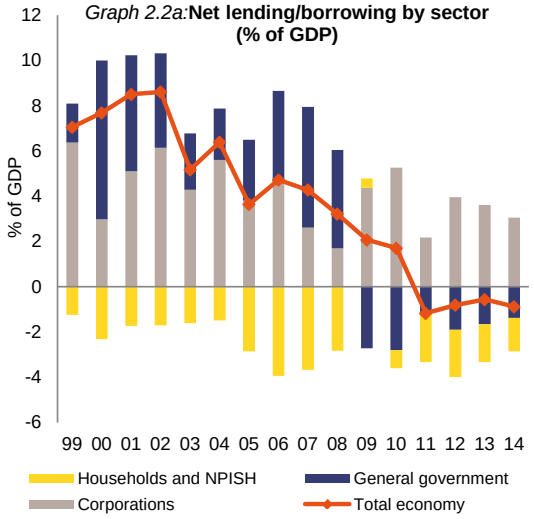
Source: Commission services

The transition towards a current account deficit weakens Finland's economic position. Current account deficits and surpluses are not necessarily macroeconomic imbalances, as they can be seen as a natural consequence of economic interactions between countries. Nevertheless, countries with a rapidly ageing population may find it opportune to save today (i.e. run surpluses) to smooth consumption over time (European Commission, 2012b). At the moment the current account deficit is still small, as is the level of external debt. While Finland's external sustainability is still strong, it is weakening. Instead of building up reserves, Finland is now gradually eating up its reserves from the past, while in the light of the ageing population, the country would be better off by further building up reserves for the future.

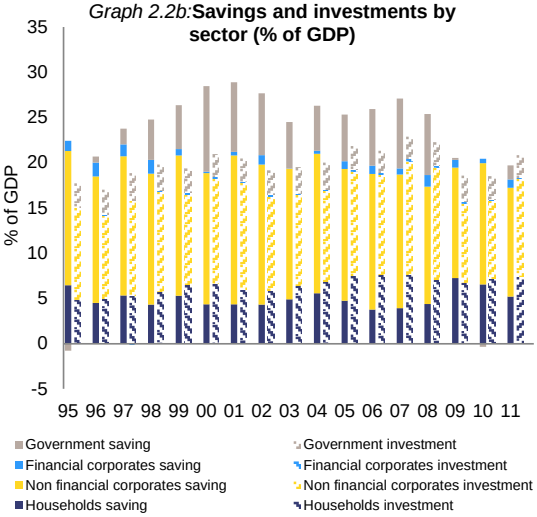
2.3. THE ANATOMY OF SECTORIAL BALANCE SHEETS

Net lending/borrowing of the total economy deteriorated, moving from a sizeable net lending to a net borrowing position of 1% of GDP in 2011. This decline, shown in Graph 2.2a,, limits the domestically-available means which forces the country to borrow externally to cover

Graph 2.2a: **Net lending/borrowing by sector (% of GDP)**



Graph 2.2b: **Savings and investments by sector (% of GDP)**



Source: Commission services

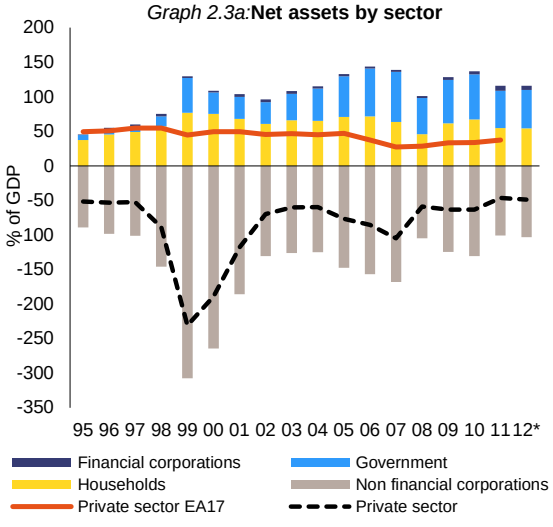
investments. As the net lending/borrowing position of an economy reflects the saving and investment decisions of the domestic institutional sectors, Graph 2.2b splits these out by sector. Most of the decline in savings is due to the drop in government saving since 2009, induced by the crisis through decreases in tax revenues and increases in expenditure through automatic stabilizers; as well as increases in discretionary spending to mitigate the effects of the crisis on the Finnish economy. Households reinforce again their position as net borrower, after slightly deleveraging in 2009.

Fiscal consolidation is on-going and the government has proclaimed the reduction of the debt ratio by 2015 as one of its most important goals. The budget balance of the Finnish general government turned from a surplus of 4.4% of GDP in 2008 into a deficit of -2.5% of GDP in 2010. Fiscal consolidation led to a narrowing of the public deficit to -0.6% of GDP in 2011, but the deficit is expected to have widened to -2.2% in 2012. The central and local government deficit has been offset by the surplus of social security funds of 2.5- 2.8% in these years. A small general government deficit target can therefore still imply a substantial deficit at the central government, which would entail general government debt level increases. In 2013, the central government deficit is likely to widen further, even based on the optimistic government forecast of still 1% GDP growth in 2012 and 2013 underlying the budget proposal. In light of fiscal measures decided in 2012 that took effect in 2013, public net borrowing is expected to be on a declining path in 2013 and 2014. The general government net assets are sizeable (54% of GDP, shown on Graph 2.3a) because these include the assets of the social security funds.

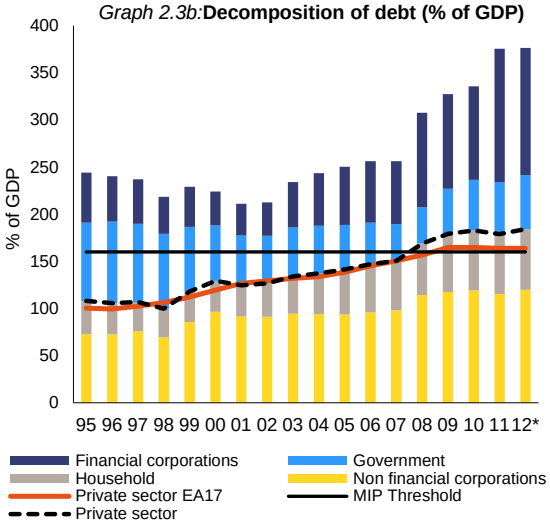
The continuous accumulation of debt by households is worrying. Over the past decade, apart from a small deleveraging episode in 2009, households had a net borrowing position, leading to an accumulation of household debt. Although households deleveraged slightly in 2009, they re-accumulated debt in 2010 and 2011. The household savings rate jumped during the crisis from 7.8% of gross disposable income in 2008 to 11.7% in 2009, before declining again to about 8% in 2012. Over the coming years a stabilization of the household savings rate is expected. In the context of an ageing population, the net borrowing of households over the last decade and the declining savings rate translate into a declining ability to cover the future costs of ageing. A deleveraging of households, combined with fiscal consolidation, would bring Finland back to a net lending position. Despite the accumulation of debt, net assets of households remain positive (Graph 2.3a).

Both the financial and non-financial corporate sector consistently saved more than they invested, resulting in a net lending position. While the financial corporate sector posts a net lending position of 0.8% of GDP in 2011, the non-financial corporate sector's share in the net

Graph 2.3a: **Net assets by sector**



Graph 2.3b: **Decomposition of debt (% of GDP)**



Source: Commission services

lending/borrowing position of the Finnish economy is more important, as well as its share in total savings and investments. The net lending position of non-financial corporations was reduced to almost zero in 2008, after which it jumped back to sizable levels, partly compensating the net borrowing position of households and the general government.

Debt levels have increased over the last decade. The private sector, excluding the financial sector, has been accumulating debt up to 179% of GDP (non-consolidated) in 2011, illustrated by Graph 2.3b. While exceeding the scoreboard threshold of 160% of GDP, it remains lower than in other Nordic countries. Non-financial corporations account for almost two-thirds of this private debt, the remainder being held by households. Public debt in % of GDP remains modest, despite having increased over the last decade, and is expected to stay below the 60% ceiling, at least until 2014. Risks of derailing public debt levels are seen as low as the Finnish government prepares for the rising ageing-related expenditures in the near future by keeping the budget under tight control.

The financial sector remains strong relative to many other national financial sectors of the euro area. The banking sector did not need government support during the crisis and has been seen as stable (the 'safe haven' phenomenon). Exposure to Greece, Portugal, Italy and Spain is limited as are non-performing loans (Table 2.1).

Furthermore, the banking system has remained overall profitable; the average return on equity is around 10%. This has allowed improving solvency with the average capital adequacy ratio of around 14%. ([2]) The main banks operating in Finland; Nordea Bank, Danske Bank and OP-Pohjola Group; were not required to take measures in order to comply with the 9% minimum core Tier 1 capital ratio following the EBA *EU Capital Exercise* of December 2011. Still, OP-Pohjola Group ([3]) strengthened its Core Tier 1 ratio from 14% at the end of 2011 to 15.1% in June 2012.

([2]) However, the equity ratio has been decreasing in recent years. Equity ratio relates total capital to total assets. It is a non-risk weighted capital adequacy measure, which is used as a complementary measure by the Bank of Finland (Financial Stability Report, May 2012)

([3]) The only Finnish banking group which participated in the EBA exercise, as Nordea Bank is a Swedish institution and Danske Bank a Danish one.

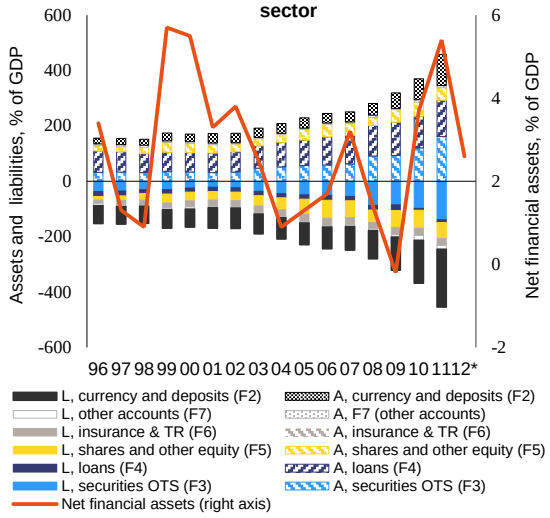
Table 2.1:
Selected macro-financial stability indicators

	2007	2008	2009	2010	2011	2012
Total assets of the banking sector (% of GDP)	170.4	213.4	231.8	268.7	340.3	308.4
Share of assets of the five largest banks	81.2	82.8	82.6	83.8	.	.
Foreign ownership of banking system	65.3	69.5	67.1	.	.	.
Financial soundness indicators:						
non-performing loans (%)	.	0.8	1.1	0.9	0.8	0.9
capital adquacy ratio (%)	15.1	13.6	14.6	14.4	14.2	15.0
profitability - return on equity (%)	18.0	12.2	10.0	9.2	10.1	12.1
Private credit growth (y-o-y)	12.3	11.7	0.6	5.4	8.3	7.0
Lending for house purchase (y-o-y)	12.5	8.7	6.4	6.7	6.6	5.5
Loan to deposit ratio	144.7	143.7	142.9	139.4	142.3	140.1
CB liquidity as % of liabilities	0.2	1.1	0.8	0.1	0.4	0.7
Exposure to macro-financially vulnerable countries* (% of GDP)	0.0	0.0	0.0	0.5	0.3	0.2
Private debt (% of GDP)	88.7	93.5	104.0	105.2	106.9	113.8
Gross external debt (% of GDP)						
Public	29.8	28.8	37.9	43.3	45.9	48.5
Private	42.3	51.6	52.5	52.0	47.1	51.4
Long term interest rates spread versus DE	0.1	0.3	0.5	0.3	0.4	0.4
Credit default spreads	.	28.7	38.3	29.5	49.2	56.6

Source: ECB, Eurostat, BIS, IMF, WB, CB.
*Peripheral euro area countries:IE, EL, PT, as well as RO, LV and HU.

Nevertheless, the year-on-year growth of the non-consolidated financial liabilities of the financial sector amounted to 30.8%, by far the highest growth rate among EU Member States. The second-largest growth recorded in the EU was only 11.3%, with all other countries recording changes between -5% and 9%. The extraordinary growth of the non-consolidated financial liabilities of the Finnish financial sector therefore warrants a closer examination. The financial sector's assets and liabilities have continuously grown as from the late nineties (Graph 2.4). This is analysed in detail in section 3.3.

Graph 2.4: **Assets and liabilities of the financial sector**



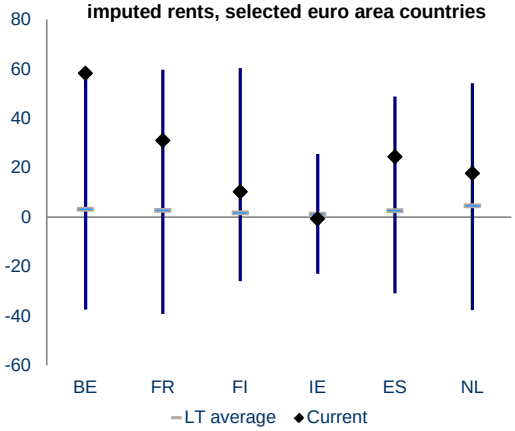
Source: Commission services

2.4. HOUSING MARKET DEVELOPMENTS

Since the mid-1990s, housing became significantly more expensive in inflation-adjusted terms. Real house prices increased by 92% in Finland over the years 1993-2007 (from trough in 1993 to peak in 2007), indicating a relative increase in housing costs vis-à-vis consumption prices. This cumulated increase and the continuous upward path might signal concerns with regard to the sustainability of the housing market. In most countries however, this increase exceeded 100%.

The housing market could represent a risk to the Finnish economy, as certain structural features of the Finnish housing market tend to amplify price volatility. Cuerpo Caballero and Mordonu (2011) discuss the effect of various policies on a possible build-up of housing imbalances. Firstly, policies aimed at encouraging home ownership, especially for the low-income population, may have a negative impact on house price stability. Fostering a stable and properly functioning rental market instead, particularly focusing on lower-income households, might reduce the occurrence of housing imbalances. Secondly, variable mortgage interest rates appear to increase the risk of housing market imbalances. Thirdly, high loan-to-value ratios play a role. Finally tax incentives for house purchase may come at the cost of lower market stability. The Finnish government focuses efforts on providing social housing and granting housing allowances to low-income households, irrespective of renter or home-owner status (Vartia, 2006). Because of this equal treatment of low-income tenants and low-income home-owners, the Finnish institutional setting does not seem to excessively encourage home ownership for low-income households. On the other hand, other factors prevail in Finland, with virtually all mortgage loans being on variable interest rates, high loan-to-value ratios for first-time buyers, tax deductibility of mortgage interest payments, low property taxation and the absence of taxation applied on capital gains from selling the owner-occupied property (if the property has been held for more than two years).

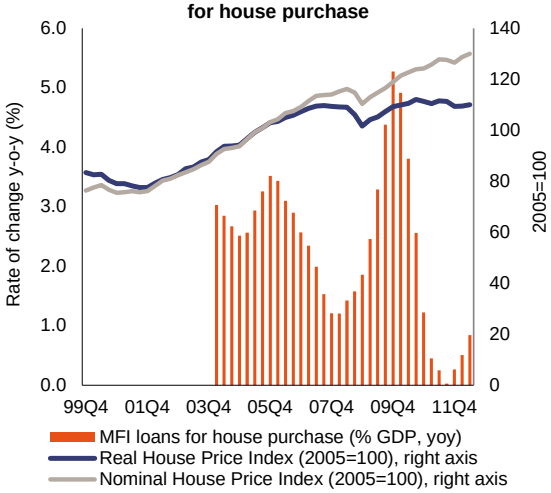
Graph 2.5: **House price valuation gap based on imputed rents, selected euro area countries**



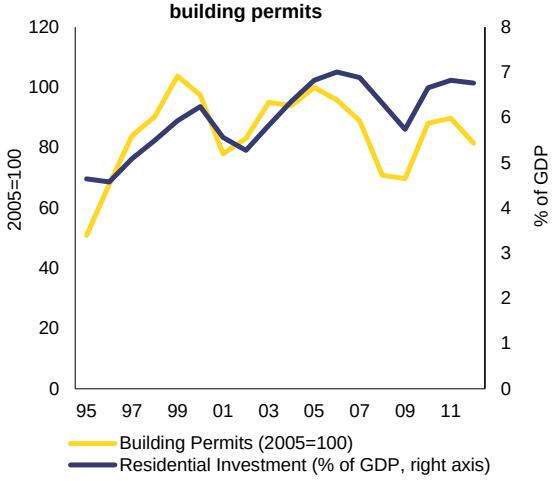
Source: Commission Services, ECFIN calculations
Current date is 2011 Q4 and the starting point differs across countries: BE 1976Q4, IE 1987Q1, ES 1981Q1, FR 1973Q3, NL 1974Q2, FI 1980Q3. Sample max. and min. values are depicted by the blue bars.

Analysis suggests that the Finnish valuation gap is still somewhat above the long-term average. The European Commission (2012a) discusses a range of valuation methods. These indicate that

Graph 2.6a: **House price index and MFI loans for house purchase**



Graph 2.6b: **Residential investment and building permits**



Source: Commission services

house prices for Finland are above, but close to, the long-term average (Graph 2.5).

However, a levelling off of the house price increase is in sight. Although still rising in 2010, deflated house prices slightly receded in 2011 and remained stable in the first half of 2012, reflected in Graph 2.6a. This change is accompanied by much smaller increases in the total amount of loans for house purchases in 2011 compared to previous years. Graph 2.6b illustrates how building permits and residential investment are stabilizing. Data on the first three quarters of 2012 indicates that new construction activity has been decreasing, while we forecast it to remain below its recent peak trough 2013.

All in all, the Finnish housing market seems to respond to structural changes in underlying supply and demand factors. Low mortgage interest rates result in higher total lending amounts for the same level of monthly repayments. Hence the increase in prices relative to income is partly driven by the feed-through of higher lending amounts into prices, as well as by limitations to housing supply. New construction activity decreased from its recent peaks and is expected to remain below it throughout 2013. The phasing-out of incentives encouraging debt-financed house purchase should help to reduce upward pressures on housing prices.

3. IN-DEPTH ANALYSIS OF SELECTED TOPICS

3.1. COMPETITIVENESS AND EXPORT PERFORMANCE

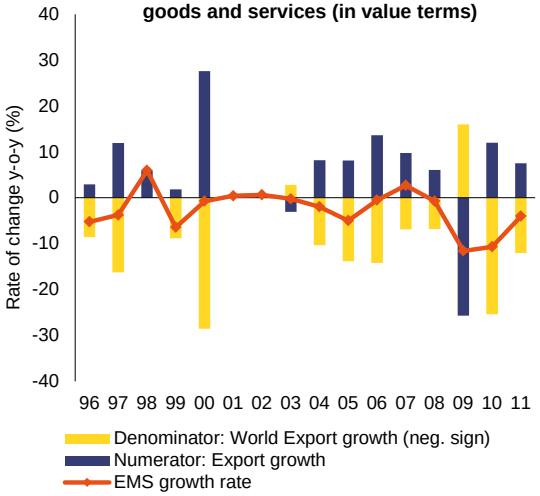
At first sight, the Finnish economy remains one of the most competitive of the EU. The European Commission's Innovation Union Scoreboard ranks Finland fourth, within the group of four 'innovators' together with Germany, Denmark and Sweden (top position). Finland's national competitiveness ([4]) ranks third in the World Competitiveness Index of 2012. As noted in the report by the World Economic Forum (2012), Finland is considered to be the world leader in health and education and the country is in the top five regarding innovation, financial markets and institutional setup. Weaker points listed are the macroeconomic environment, labour market efficiency and product market efficiency. Finland occupies the eleventh place in the ease of doing business index of The World Bank (2012).

3.1.1. Export market shares

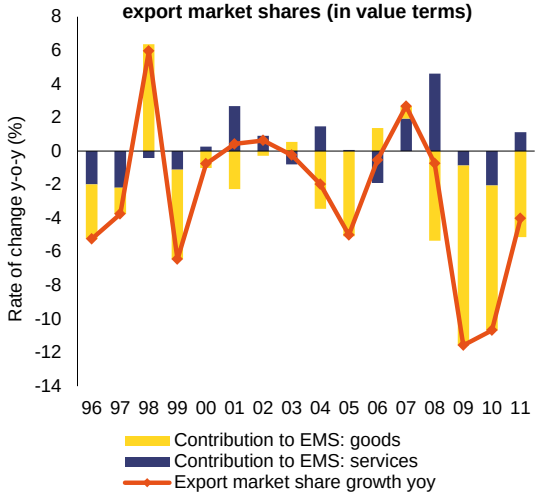
Over the period 2007-2011, Finland recorded a loss of 23% in its export market share. Graph 3.1a shows how Finland's exports managed to keep up with world export growth in value terms in 2007 and 2008, resulting in a stable export market share. In 2009 the crisis caused world exports to decline by 16% compared to 2008. Unfortunately the downturn hit Finland hard, causing the country's exports to decline by more than one fourth. This caused Finland to experience a loss of 11.6% in export market share. In 2010, world exports recovered and Finnish exports as well, albeit to a lesser extent, again resulting in a large loss in export market share. The recovery of world exports continued in 2011, but Finnish export growth continued to trail behind world export growth, resulting again in a loss of export market share, although much smaller than the previous years. Graph 3.1b depicts the negative contribution of goods to Finland's export market share during the crisis years, while services delivered a positive contribution in 2007-2008 followed by a small negative contribution in 2009-2010. The increase in services exports might also reflect increased outsourcing of auxiliary activities. Many activities that were earlier handled by companies themselves, such as logistics, have been outsourced and are currently recorded as business services. Given the still smaller share of services in Finnish exports, Finland could only regain export market share in the near future by strengthening its goods exports, whereas an increase in services exports would gain influence over the overall trade balance over the medium term.

([4]) A concept defined by the World Economic Forum as the set of institutions, policies, and factors that determine the level of productivity of a country.

Graph 3.1a: **Export market shares (EMS) in goods and services (in value terms)**



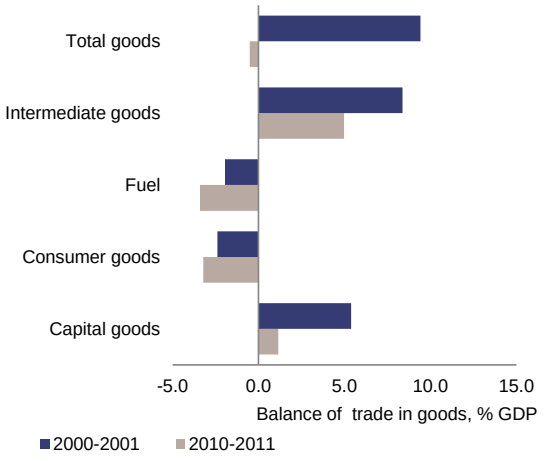
Graph 3.1b: **Contribution to the change in export market shares (in value terms)**



Source: Commission services

Declining exports are also reflected in the trade balance, which turned into deficit due to negative contributions from fuel and consumer goods. Throughout the late nineties and the early 2000s the trade balance surplus fluctuated between 9 and 10% of GDP, before shrinking towards zero and turning into a small deficit in 2011. Graph 3.2 splits out the contribution to the trade balance by four broad categories of goods. The overall surplus in the early 2000s can mainly be attributed to intermediate and capital goods. These two categories lost ground by the end of the same decade, accompanied by deficits for fuel and consumer goods. Finland is highly dependent on energy imports (mostly crude oil), accounting for 22% of total imports in 2011. The increase in oil and gas prices therefore has a large impact on Finland's energy imports, although the net effect on Finland's trade balance is lessened by the increases in prices of refined oil exports. Imports of consumer goods largely exceeded exports in 2009-2010, reflecting Finnish households' increased appetite for imported consumer goods while exports of consumer goods in absolute terms increased less than imports.

Graph 3.2: **Trade balance contribution by broad category**



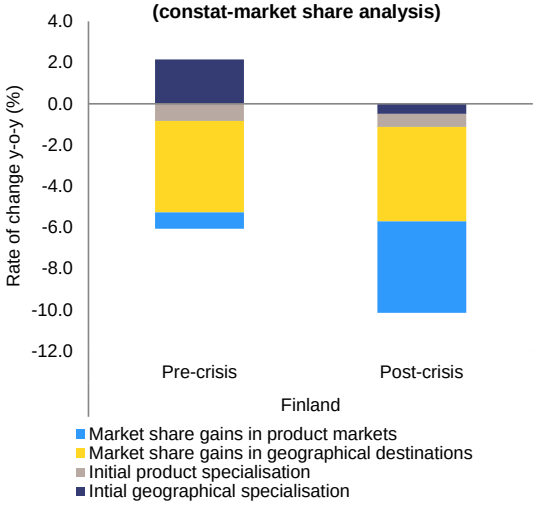
Source: Comtrade, ECFIN calculations

Contrary to goods, the trade balance of services was much smaller and moved in the opposite direction, from a deficit of about 1.5% of GDP in the late nineties to a small surplus in 2011. If continued, this evolution could support the current account balance in the future. Services imports and exports are, however, difficult to measure and tend to be more volatile than imports and exports of goods, especially with the presence of multinational companies. The headquarters of these companies charge headquarter services to their subsidiaries abroad, which are recorded as services exports and imports in the respective countries. These services include overarching activities such as for example IT, marketing and accounting services, for which the company itself can set the level of the internal pricing according to the tax regimes of the different countries in which it operates.

3.1.2. Decomposition of the export market share loss

To a large extent the export market share loss reflects competitiveness losses. In Graph 3.3 the loss in export market share for goods is broken down into four components. Part of the change in export market share can be attributed to the geographical destination composition, reflecting growth (decline) if the change in export demand in Finland's destination countries is more positive (more negative) than the world average. Secondly, change can partly be due to product composition, reflecting growth (decline) if the change in export demand in Finland's product markets is more positive (more negative) than the average of all product markets combined. Both of these merely reflect a presence in expanding or shrinking geographical and product markets. For Finland these had only a small influence on the country's export market share. The negative effect from Finland's product composition can be attributed to the fact that global investments have declined more than consumption, because capital goods represent a relatively large share of Finnish exports. The largest contribution comes from the competitiveness change in geographical destinations, meaning that within Finland's export destinations demand for Finnish exports has been losing ground vis-à-vis total demand for foreign goods. Additionally, Finland also records a decline in competitiveness in products, representing a demand for Finnish products lagging behind total demand for the same types of products. To summarise, Finnish exported goods are losing ground within their respective product markets and geographical destinations, reflecting losses in competitiveness.

Graph 3.3: **Growth in nominal exports of goods relative to global growth in exports of goods (constat-market share analysis)**



Source: Commission services

The product composition of Finland's exports had only a small influence on the export market share loss. It is worth noting though that the concentration of Finland's exports in terms of products makes the country vulnerable to structural shocks. Finland's main export products are wood and paper products, chemicals and oil products, metals, machinery and electrical products. Together these accounted for 79% of total Finnish exports in 2011 (Graph 3.4a). Over the last few years, the pick-up of growth in metals, chemicals and machinery has only partly compensated for the decline in electronics and forestry. Finland exports mainly intermediate goods (around 50% of exports of goods) and capital goods (around 30% of exports of goods).

The geographical destination composition also accounted only for a small part of the export market share loss. The European Union is Finland's main export destination for both goods and services, accounting for over half of total exports with one third of Finnish exports sent to euro area countries and about one quarter to the remaining Member States (Graph 3.4b). Of all euro area countries, Finland has the highest share of trade with countries outside the euro area. In 2011 about 70% of Finnish exports went outside the euro area, whereas for the total euro area this is about 50%. Finland's main non-euro area export destinations on the European continent are Sweden (12% of total exports in 2011) and Russia (9%). Finland's main export destinations, apart from Russia, are not high-growth markets. All in all, only 16% of goods and services were exported to developing economies in 2011. A later-than-expected recovery in Europe would be a drag on Finnish exports, especially if Germany and Sweden would maintain low capacity-utilization rates. On the positive side, Russia represents a promising and growing market for Finnish exports.

3.1.3. Non-cost competitiveness of Finnish exports

Finland's strongest export industries have been losing ground between 2000 and 2010. Wood and wood products, metals, machinery and electrical products, but also raw hides, skins, leather and furs each have a world market share above Finland's average of 0.6% in 2009-2010, henceforth representing Finland's main export industries. These four categories are the only categories for which the Finnish economy boasts a positive comparative advantage. Compared to 2000-2001 however, Finland heavily lost market share in wood and wood products as can be observed in Graph 3.5a. Machinery and electrical goods lost a large part of their market share over the same period, while the metal industry managed to limit market share losses. Despite the losses in market share, three of these industries maintain their comparative advantage, illustrated by the Symmetric Revealed Comparative Advantage Index ([5]) shown on Graph 3.5b. The comparative advantage in wood and wood products has remained stable over the 2000-2010 decade and improved for metals and raw hides, skins, leather and furs; while it declined for machinery and electrical products. In services, the market share of the broad category of other services ([6]) lies above

([5]) RCAci = (Xci/ΣiXci) / (Xbi/ΣiXbi). The numerator represents the share of a given sector (i) in national exports (Xci are exports of sector i from country c). The denominator represents the share of a given sector (i) in the total exports of a benchmark economy (b) (in our case the rest of the world). RCA can be in the range between 0 and infinity; with levels below 1 indicating a comparative disadvantage and above 1 an advantage (or specialisation. The symmetric RCA (SRCA), which is more convenient to interpret, equals (RCA − 1)/(RCA + 1) and ranges from −1 to +1. Positive values of SRCA represent a comparative advantage while negative values reflect a disadvantage.

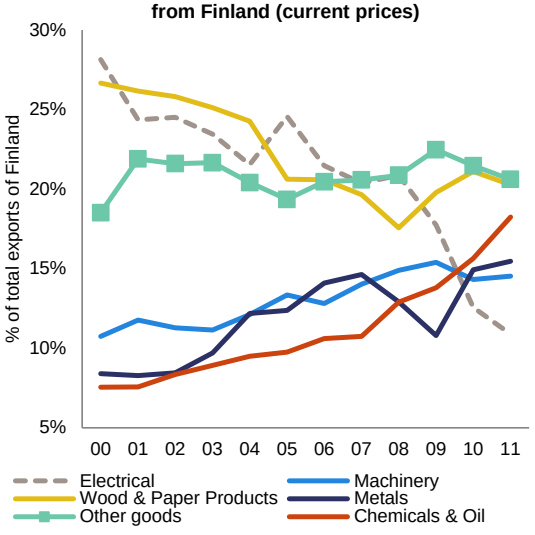
([6]) Other services includes services in the domains of communication, construction, insurance, finance, and computer and information, as well as royalties and license fees, other business services, personal, cultural and recreational services and government services.

the market share of total services, while travel and transportation lag behind (Graph 3.5c). The 'Other services' category is the only services category in Finland enjoying a comparative advantage vis-à-vis the rest of the world, shown on Graph 3.5d. The comparative disadvantage in travel services and transportation services increased even further, the latter partly reflecting the stricter emission rules for water transportation on the Baltic Sea coming into force in 2015.

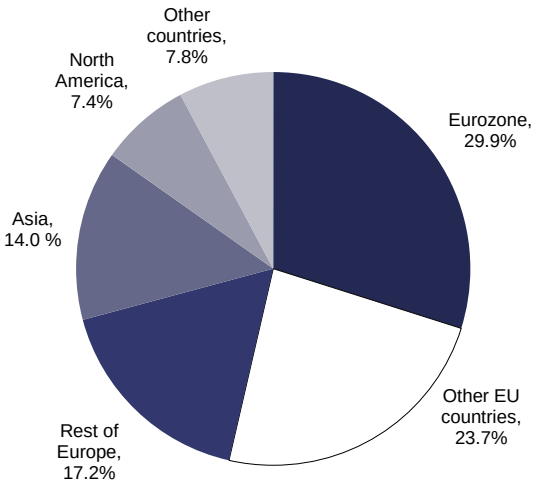
Finland should work on effectively translating its high R&D intensity into the development of new products. This is reflected in the Innovation Union Scoreboard, where of all sub dimensions Finland's score is lowest (15th place, barely above EU27 average) on "innovators", encompassing SMEs introducing product or process innovations and SMEs introducing marketing or organisational innovations. The Finnish government is in this matter initiating or strengthening several measures encouraging entrepreneurship and innovation. Finnvera, a specialized financing state-owned company, has been given increasing risk financing abilities targeted at homeland financing purposes. Through this law active up to end of 2015, Finnvera can cover corporate losses up to 58-60% of programme-companies. The so-called business-angel law is targeted at investing in small companies with a turnover below 10 million euros or maximum 50 employees. The law allows an individual investor to deduct 50% of his capital income after investing in a limited company in 2013-2015. Another measure allows additional deductions on R&D costs for companies between 2013-2015. A tax deduction on revenue from licensing intellectual property rights is still under discussion.

Export market shares could be gained in certain niche sectors. The market share loss of the forest industry reflects the on-going move to close down production plants in Finland, moving them to lower-cost countries and closer to growing demand. In the medium term however, the Finnish forest industry might be able to reorient itself towards clean-tech, with high value-added products. Other sectors in which Finland could gain export market share are mining products, off-shore related machines and equipment and ICT products and services.

Graph 3.4a: **Composition of goods exports from Finland (current prices)**

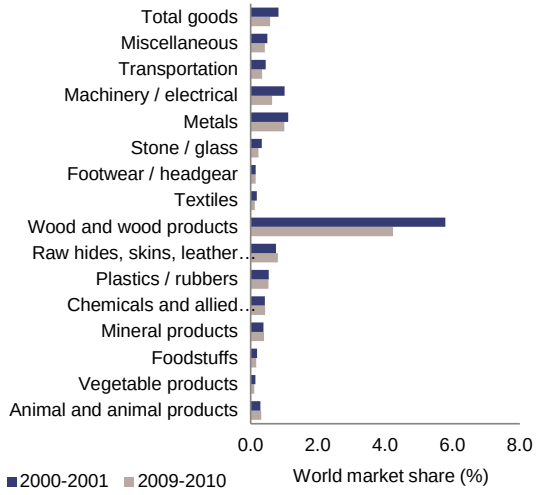


Graph 3.4b: **Main export markets for Finland, goods and services combined (2012)**

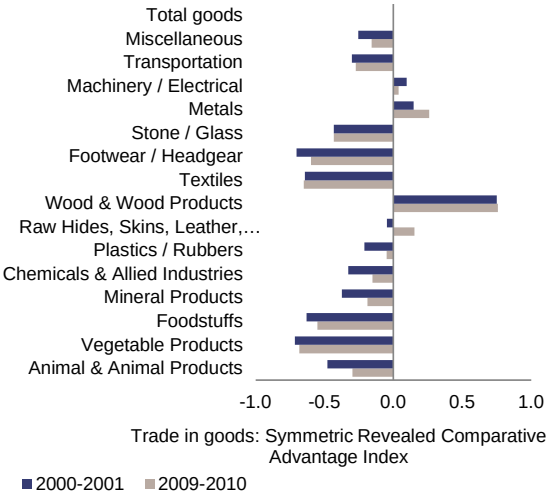


Source: Commission services (a) and Tulli Customs (b)

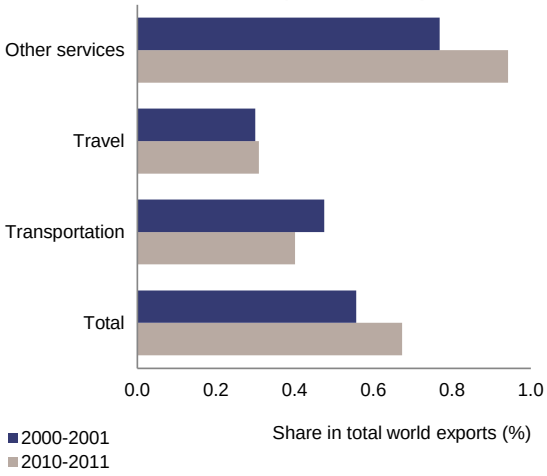
Graph 3.5a: **Sectoral export market shares in goods (in value terms)**



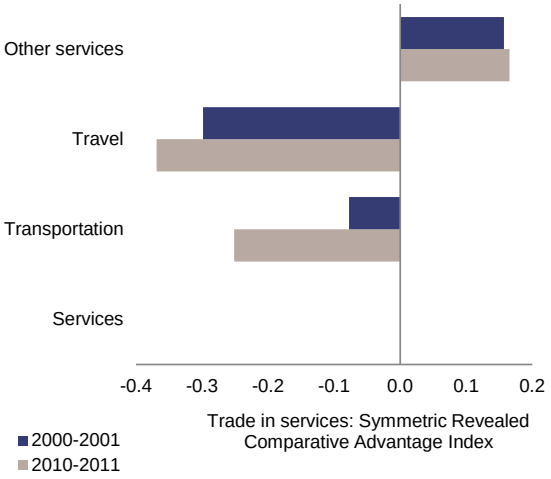
Graph 3.5b: **Revealed comparative advantage across product categories**



Graph 3.5c: **Sectoral export market shares in services (in value terms)**



Graph 3.5d: **Revealed comparative advantage across services categories**



Source: Commission services

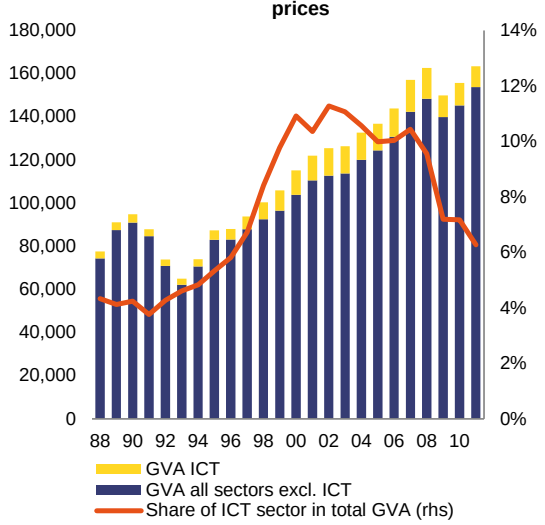
3.1.4. The importance of ICT products for the Finnish economy

Nokia provided a large contribution to Finland's Gross Value Added growth, exports performance and employment in the early 2000s. The company became leader in its industry and Finnish subcontractors thrived on its success. In 1995 the ICT cluster produced 5% of Finland's total gross value added, which increased to 11% in 2000 (Graph 3.6a). Up to half of the growth in gross value added during 1998-2000 can be contributed to the ICT sector (Graph 3.6b). Nokia itself accounted for 4% of GDP in 2000 and contributed 2% points to growth in GDP (ETLA, 2012). When competition to Nokia intensified, the company struggled to maintain its leading position. As a consequence, the importance of the ICT cluster in (growth of) Finland's gross value added diminished.

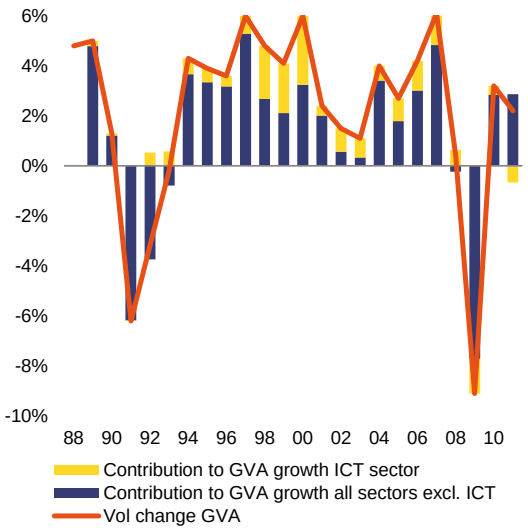
The share of ICT products ([7]) in Finnish exports has declined compared to its heydays in 2000. Expressed as a share of exports of goods, ICT products went from 31% in 2000 to only 13% in 2011. This is not surprising, taking into account the on-going relocation of Nokia's production outside of Finland. By end-2012 the company closed its last manufacturing line in Finland,

([7]) Referring to goods only, i.e. C26 (computer, electronic and optical products) and C27 (electrical equipment)

Graph 3.6a: **Share of ICT in total GVA, current prices**



Graph 3.6b: **Contribution of ICT to GVA growth**



Source: Commission services, ECFIN calculations
Note: The ICT industry comprises C26 (computer, electronic and optical products), C27 (electrical equipment), J61 (Telecommunications) and J62-J63 (Computer programming, consultancy, and information service activities).

effectively bringing the amount of mobile phones exported to zero as of 2013. Within Finland, Nokia now has the role of an exporter of services, namely R&D and headquarters services.

The ICT sector is expected to emerge much smaller from restructuring, based on smaller companies and a strong focus on R&D. Companies such as Samsung and Lenovo announced the planned setup of R&D centres in Finland, presumably leveraging the presence of well-trained and experienced engineers in Finland. International success has been encountered by the emerging smartphone and tablet game industry. The government-funded Tekes foundation is providing funding and support for several new start-ups in the ICT sector.

The government is looking into ways to support the on-going restructuring process. The ICT 2015 working group recently identified 4 critical directions that should be followed to re-establish Finnish technological lead in ICT. These are: i) fast development of common architecture for all public services; ii) establishment of a 10 year programme on ICT related research, development and innovation; iii) establishment of funding programme to secure the funding for high-growth enterprises; and iv) establishment of a governmental expert group to ensure long-term development.

3.1.5. Cost competitiveness and productivity

Recent improvements in cost competitiveness are driven by exchange rate movements. Between 2007 and 2009 the real effective exchange rate (REER) ([8]) increased sharply, especially with the unit labour cost as deflator (shown in Graph 3.7a). The subsequent large drop in 2010 was followed by a negative or close-to-zero real effective exchange rate growth in 2011 and 2012, indicating an improvement of Finland's cost competitiveness. However, the nominal unit labour cost depicted in Graph 3.7b increased over the same period and is forecast to continue rising. The improvement in cost competitiveness was thus mostly due to exchange rate movements vis-à-vis Finland's main trading partners, such as Sweden, Denmark and Russia. The large decline in 2010 was partly induced by the appreciation of the Swedish Krona.

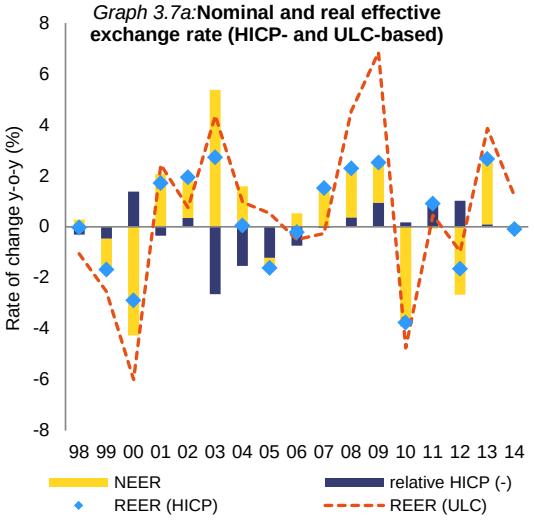
([8]) Real effective exchange rates (REER) are aggregate relative price and cost indicators which may be used to assess a country's price or cost competitiveness relative to its principal competitors in international markets. They correspond to the nominal effective exchange rate deflated by selected relative price or cost deflators, here the harmonized index of consumer prices (HICP) and the unit labour cost (ULC).

Low productivity growth causes the nominal unit labour cost to increase. Finland's nominal unit labour cost consistently grows faster than the average for Finland's main trading partners (IC36). Although not shown Graph 3.7b, nominal unit labour cost growth in Finland exceeded both the Eurozone's and the EU27 average growth. While in most years between 1998 and 2007, productivity and wage developments were closely linked and real compensation per employee and inflation were largely offset by productivity increases, this does not hold anymore for 2008 and 2009. In 2007 new sectoral wage agreements were negotiated providing for high wage growth, as a severe impact from the crisis was not expected at the time. In 2008 and 2009 productivity growth turned negative, due to less hours worked and labour hoarding, resulting in a jump in ULC far above previous Finnish levels and the euro area average. In 2010, productivity growth outpaced inflation and real compensation per employee, offsetting only partly the ULC increases of the years before, again followed by low productivity growth in 2011 and 2012. As a result, productivity growth dropped below that of Finland's trading partners during the crisis. Over the period 2000-2007, the Finnish manufacturing sector enjoyed high productivity growth of 7% on the back of a strong productivity growth in the ICT sector, compared to 4.2% in Germany and 6.6% in Sweden. Afterwards this reversed to -2.9% over 2007-2011, compared to -1.9% in Germany and 0.9% in Sweden (Ministry of Finance, 2012). Without measures to spur productivity growth or wage moderation, compensation per employee is forecast to continue outpacing productivity growth in 2013 and 2014, resulting in further increases in the nominal unit labour cost.

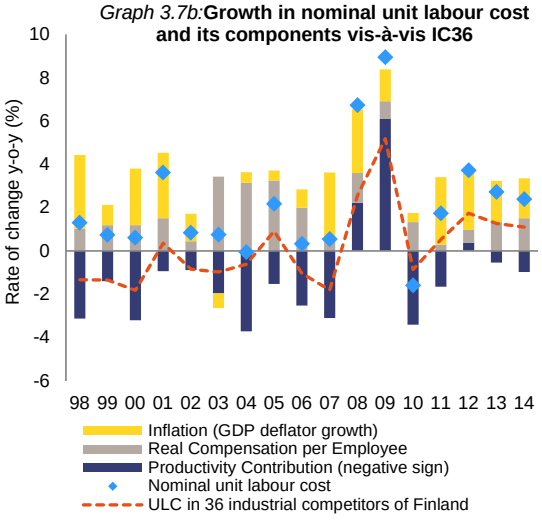
Unit labour costs are increasing for market services, but decreasing for manufacturing. These opposite movements, shown in Graph 3.8a, reflect diverging developments in labour cost competitiveness across sectors. Labour cost developments outpaced productivity developments in market services, which are less traded than manufactured products, and thus in general experience less competition. If productivity in manufacturing increases while stalling in market services, and the centralized wage agreement framework ensures an equal wage evolution in all industries, this will lead to higher unit labour costs in market services. Productivity differences have, however, lately been shrinking, as a result of the declining share of the electronics industry.

Wage growth in the non-tradable sector puts pressure on the tradable sector. As illustrated by Graph 3.8b, prices in the non-tradable sector are rising faster than in the tradable sector. The same is true for the compensation of employees. Hence, the non-tradable sector now accounts for a larger part of compensation of employees, to be covered fully by domestic demand. This in turn hurts the tradable sector, as it increases the cost of intermediate goods purchased domestically, such as business services and construction. It also increases the cost of ageing, since ageing-related

Graph 3.7a: **Nominal and real effective exchange rate (HICP- and ULC-based)**

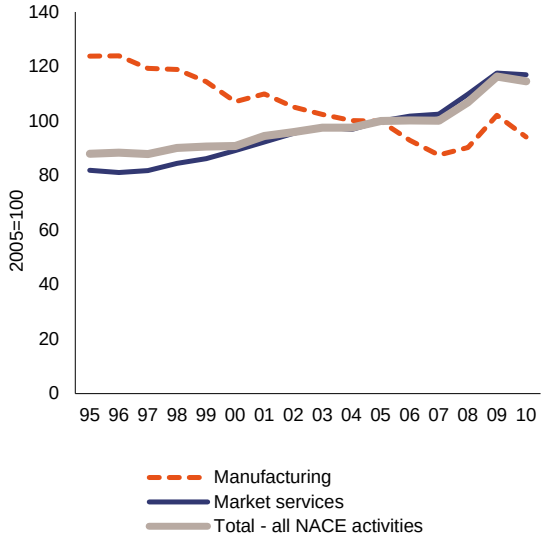


Graph 3.7b: **Growth in nominal unit labour cost and its components vis-à-vis IC36**

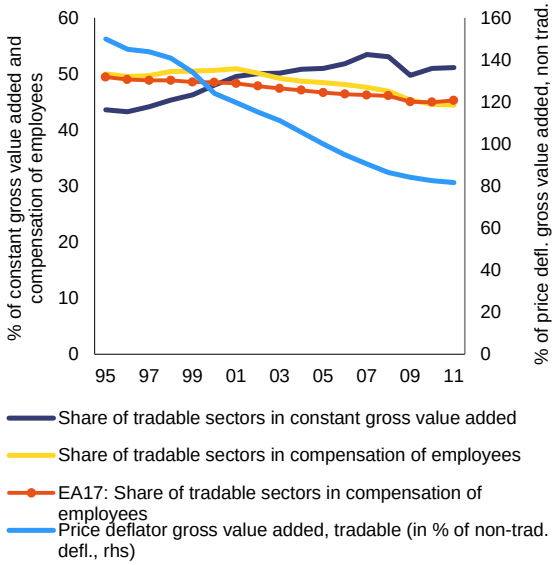


Source: Commission services

Graph 3.8a: **Sectoral unit labour costs**



Graph 3.8b: **Tradable vs non-tradable shares**



Source: Commission services
Note: Based on data according to the nomenclature of economic activities Nace Rev1. Market services include industries G_K.

services, such as healthcare, are included in the non-tradable sector. The fastest rise in the hourly compensation of employees within the non-tradable sector has been in construction and private healthcare services (Ministry of finance, 2012).

The latest wage agreement ([9]) still resulted in wage growth above productivity growth. The recent Tripartite Agreement negotiated end of 2011 ([10]) and valid for two years sets wage growth at a moderate pace. However, in light of the stagnating labour market, ULC have increased by 3.6% in 2012 and are forecast to increase by 2.7% in 2013. On top of inflation, this nominal ULC growth includes a growth of real compensation per employee that outstrips productivity growth. Nominal unit labour cost growth is expected to remain above other countries' ULC growth.

Population ageing affects labour supply. The working age population is expected to decline as of 2013 due to ageing of the Finnish population. Over the near future activation policies and immigration can still offset the effects of ageing, keeping the total labour force stable. However, companies are expected to experience labour shortages, especially for highly qualified or specific profiles, which in turn could affect wage developments or productivity levels. An increase in the effective and the statutory retirement age would result in a slower decline in the working age population. Currently there is a large spike in the number of people who draw their pension at the minimum old-age pension age of 63. This outcome is in line with international experience and consistent with the findings of behavioural economics (Barr, 2013). Linking the statutory retirement age to life expectancy would therefore be more effective than the current link between monthly pension benefits and life expectancy through the life-expectancy coefficient.

([9]) The Finnish labour market is highly organised. The majority of both employers and employees are members of the organizations that participate in collective bargaining. These negotiations are facilitated by the government, who could lend its support to the agreement by agreeing to modify a tax level or increase certain types of support to enterprises or households. As an example, corporate income tax was lowered to facilitate the 2011 agreement. Whereas national legislation forms the basis for regulating the labour market, specific employment terms are determined according to collective agreements within each branch. If the parties to a collective agreement cover at least half of the employees within a specific branch, the collective agreement has general applicability for all companies within that branch.

([10]) The latest agreement was reached in October 2011. The agreement sets the framework for pay and cost increases in branch-level collective agreements for a period of 25 months. According to the framework agreement, the total cost effect of the sectoral agreements shall not exceed 2.4% for the first 13 months, followed by 1.9% for the next 12 months. The numbers include the rise in payroll costs and the cost effects of changes made in the terms and conditions of employment. The annual cost effect is calculated to be about 2%.

The next wage agreement should aim for lower wage growth, in line with productivity growth. Negotiations between the employer associations and trade unions will start in 2013. Given the current state of the economy, the employer associations are hinting towards a nominal wage freeze as their starting position for the negotiations. This would help to bring wages back in line with productivity levels. Productivity developments should be considered explicitly in each wage negotiation round. Sectoral agreements as opposed to one centralized agreement could help ensure wage growth does not outpace productivity growth in one of the sectors. The approach of the 2007 round of sectoral agreements however should be avoided, where the first concluded sectoral agreement was taken up by the other sectors as a minimum benchmark, with each sector outbidding the other sectors' wage growth.

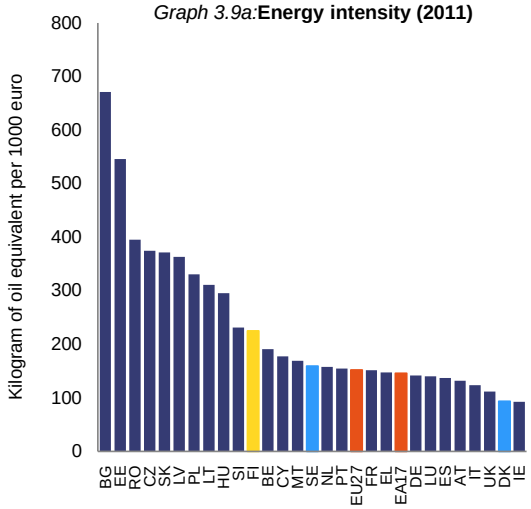
3.1.6. Energy intensity of the Finnish economy

Finland's energy intensity is high compared to its Nordic neighbours and the euro area members, as shown on Graph 3.9a**.** The industry covers almost half of the final energy consumption, within the manufacturing sector the forest industry is by far the largest energy consumer, followed by the metal and the chemical industry (Graph 3.9b).

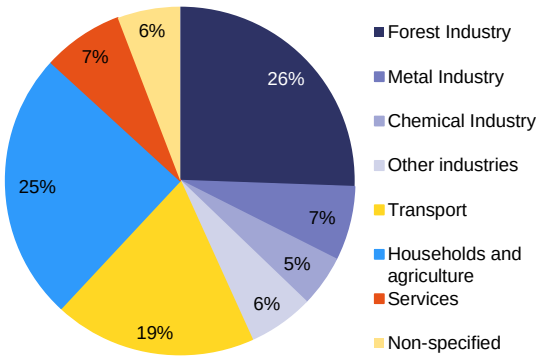
A high energy intensity combined with energy imports affects the industries' cost competitiveness and Finland's trade balance. Through a high energy intensity rising energy prices translate into increasing production costs for the Finnish industries. Although the overall high energy intensity stems from the dominance of energy-intensive industries in Finland, a focus on energy efficiency could provide these industries with a competitive edge vis-à-vis competing industries in other countries. Finland cannot fully cover energy consumption by domestic production; more than half of the consumed energy is imported (Graph 3.9c), mostly from Russia. The high dependency on Russia for energy imports partly originates from the structure of the existing infrastructure. Finland is an "energy island" and could benefit from the cooperation with the Baltic States in linking its gas network.

Already more than one fourth of the consumed energy originates from renewables. Most of the energy from renewables is produced through by-products of the forestry industry, indicated as wood fuels on Graph 3.9d, complemented by hydro and wind power. The high share of renewables reduces the impact of energy prices on Finland's trade balance as less fossil fuel needs to be imported.

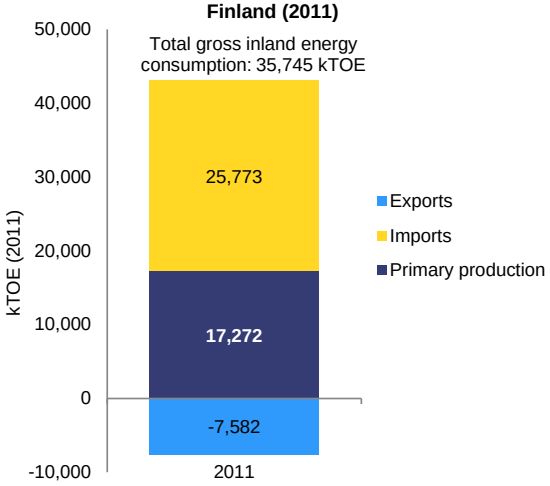
Graph 3.9a: **Energy intensity (2011)**



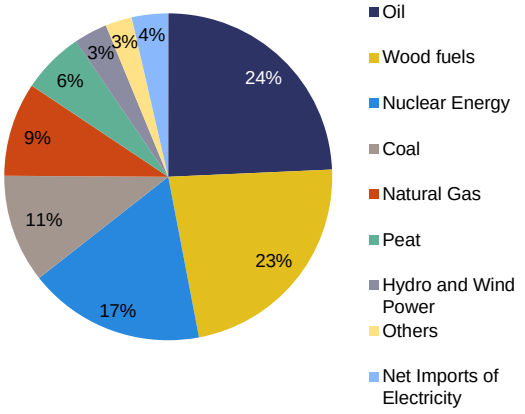
Graph 3.9b: **Energy consumption by sector (2011)**



Graph 3.9c: **Total energy consumption in Finland (2011)**



Graph 3.9d: **Total energy consumption by source (2011)**

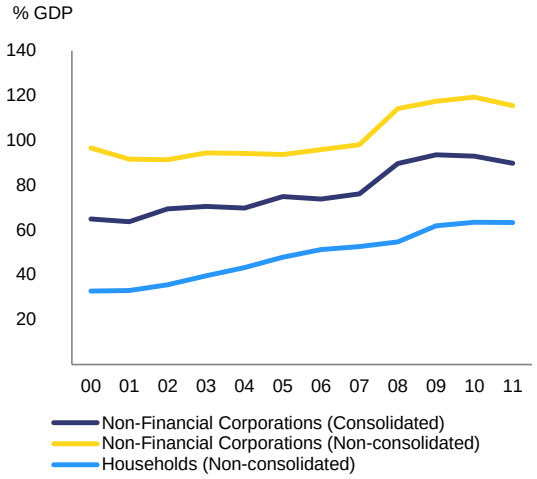


Source: Commission services (a,b,c) and Statistics Finland (d)

3.2. PRIVATE SECTOR DEBT

In nominal terms, both non-financial corporations and households piled up debt over the past ten years, with households accumulating at a faster pace. Non-financial corporations experienced a big increase from 2007 to 2008 which cannot be explained by an increase in domestic intercompany lending, as consolidated data show the same jump. The rise in non-consolidated private debt of non-financial corporations was in line with GDP growth until the jump in 2008, maintaining a level of around 100% of GDP up to 2007 (Graph 3.10). The level reached in 2011, 116% of GDP for non-financial corporations, sits above the EU average of around 100% of GDP, but below the 150% of GDP attained in Sweden. Household debt increased much faster, nearly doubling over the last decade from 33% of GDP in 2000 to 63% of GDP in 2011. It has to be noted that in Finland a special kind of structure – housing corporations – exists, that although statistically classified in the corporate sector, is more akin to household borrowing. This increases non-financial corporations' debt, while decreasing total household debt.

Graph 3.10: **Private debt in % of GDP**



Source: Commission services

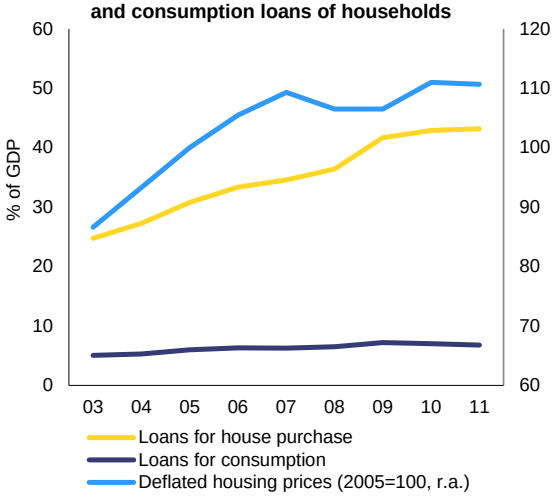
3.2.1. Household debt

Finnish household debt has nearly doubled over the last decade from 65% to 118% of disposable income. The increase is almost fully due to an increase in mortgage loans, with consumption loans for other purposes remaining more or less constant around 5-7% of GDP (Graph 3.11a). Apart from the household debt level, currently at the euro area average, its distribution among households warrants to be monitored. The share of households with debt levels exceeding 500% of their disposable income lies only at 4.5% (Statistics Finland).

Lenient loan conditions and policies facilitating home ownership encouraged debt accumulation and real house price increases. Over the past years decreasing interest rates and lengthening of the average maturities enabled larger loan amounts for the same level of monthly payments. In this context, it is important to note that virtually all mortgage loans in Finland are tied to variable interest rates. In addition, loan-to-value ratios of 100% or even above were not uncommon, especially for first-time buyers. The tax deductibility of mortgage interest rate payments is meant to encourage home ownership, but may by reducing the cost of financing contribute to an upward pressure on house prices that reduces the affordability of houses. ([11]) Property taxation on home ownership is low and capital gains from selling the owner-occupied property are not taxed (if the property has been held for more than two years).

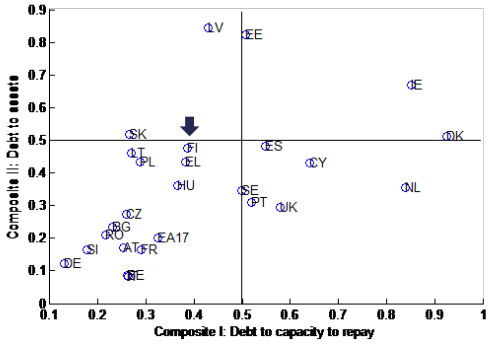
([11]) Mortgage interest rate payments are deductible from capital income. Beyond that, 28% of the deficit due to interest on owner occupied dwellings up to EUR 1400 can be credited against taxes paid on earned income. (European Commission, 2012e)

Graph 3.11a: **Real house prices and housing and consumption loans of households**



Source: Commission services

Graph 3.11b: **Composite indicator on deleveraging pressures for EU 27 member states, households (2011)**



Households do not face excessive deleveraging pressures. Two composite indicators have been constructed ([12]) to assess deleveraging pressures according to, on the one hand, the capacity to repay and, on the other hand, leverage (debt to assets). These are shown in Graph 3.11b. Finnish households have a higher capacity to repay than the last third of the distribution (the 66th percentile line), while in terms of the leverage indicator deleveraging pressures on Finnish household are a bit more pronounced. Despite weaker consumer expectations, mortgage debt was still growing in the first three quarters of 2012. This may have been partly attributable to household wanting to take advantage of the old rules before more restrictive conditions on mortgage loans are being phased in in the near future and the increase in the transfer tax from 1.6% to 2% in March 2013.

Although prevailing debt levels are currently not considered a major risk to the stability of the Finnish economy, measures to curb debt growth are most welcome. The net overall borrowing position of Finnish households and their low savings rate is a cause for concern. The Finnish Financial Supervisory Authority's recommendation on maximum loan-to-value ratios of 90% is not always followed up by financial institutions and might therefore have to become binding. Talks are indeed on-going to turn the recommendation into a regulation, in which the Finnish Financial Supervisory Authority would decide on the maximum loan-to-value ratio for mortgage loans, which at it tightest could be even set at 80%. The tax deductibility of mortgage interest payments should be phased out. A first step has been taken, reducing the tax deductibility from 100% to 85% in 2012, 80% in 2013 and 75% in 2014. A ceiling on the maximum deductible amount was already in place, in order to prevent the government from supporting excessive lending. In addition, banks are urged to maintain a cautious approach towards amortisation-free housing loans, which at the moment account for no more than 1% of all mortgage loans in Finland.

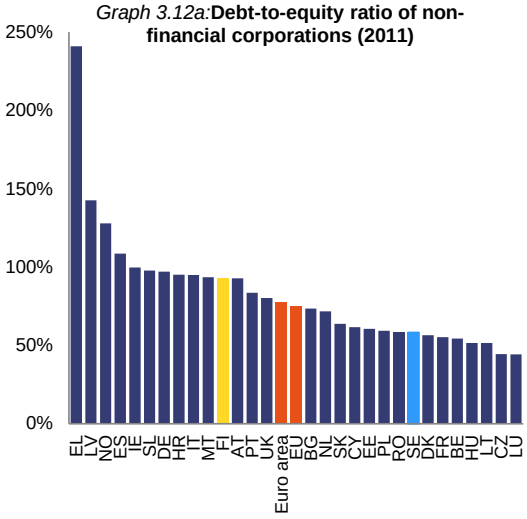
3.2.2. Corporate debt

The high level of corporate debt with respect to Finland's GDP need not be a problem as it might be due to the high degree of internationalisation and the lowering interest rates, which could lead to an overestimation of the risks associated with non-financial corporation debt.

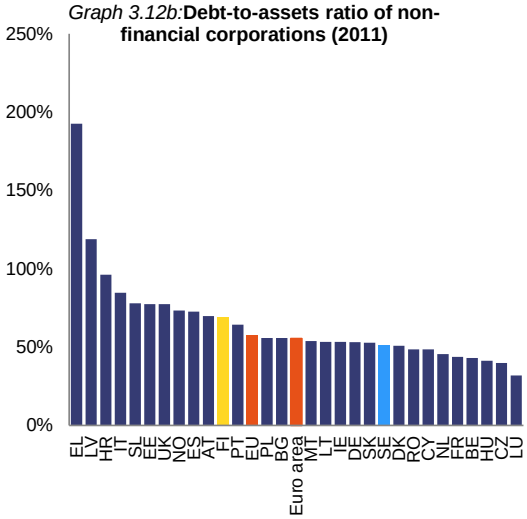
The international character of the non-financial corporate sector could play an important role. First of all, gross debt levels can be inflated by a large share of domestic intercompany loans. Netting out of domestic intercompany loans which represent around one fifth of corporate debt in Finland, results in a still elevated consolidated debt level of 90% of GDP. Secondly, contrary to domestic intercompany loans, cross-border intercompany loans are not cancelled out when consolidating the debt of non-financial corporations. Cross-border intercompany loans and multinational companies concentrating part of their debt in Finland therefore increase the degree of indebtedness of Finnish non-financial corporations. As multinationals service their debt with revenues from global sales, the debt sustainability is not directly linked to Finland's GDP. In that case, the debt-to-equity and debt-to-assets ratios of the sector of non-financial corporations provide a more accurate view; these are given in Graph 3.12a and Graph 3.12b. Still, even by these measures Finland's corporate sector is characterised by still high debt levels, contrary to, for example, Sweden where despite high debt-to-GDP levels the debt-to-equity and debt-to-assets ratios are much lower. Ideally, the share of cross-border intercompany lending should be consolidated before calculating these ratios on a sectorial level by country; unfortunately this is not possible due to data constraints. Depending on the share of cross-border intercompany lending, the debt ratio of companies residing in Finland might be overestimated compared to companies in other

([12]) The composite indicators were derived using clustering techniques in combination with Principal Component analysis (PCA). Data on the following variables – debt-to-GDP ratio, debt-to-gross operating surplus (or disposable income for households) ratio, debt-to-financial assets, and debt-to-deflated financial assets - for the "accumulation phase" 2000 to 2008 and for 2011 were collected for all 27 Member States. In a first step, clustering techniques were used to reveal underlying similarities or mathematical distances between the multi-dimensional data vectors (in order to classify countries into different categories). Subsequently, PCA analysis was carried out to reduce the dimensionality of the data and to create composite indicators that account for the highest possible variation in the underlying variables set using the smallest possible number of factors. Non-consolidated figures. Debt includes loans and securities other than shares. The methodology is described in detail in Cuerpo et.al., 2013.

Graph 3.12a: **Debt-to-equity ratio of non-financial corporations (2011)**



Graph 3.12b: **Debt-to-assets ratio of non-financial corporations (2011)**



Source: Commission services

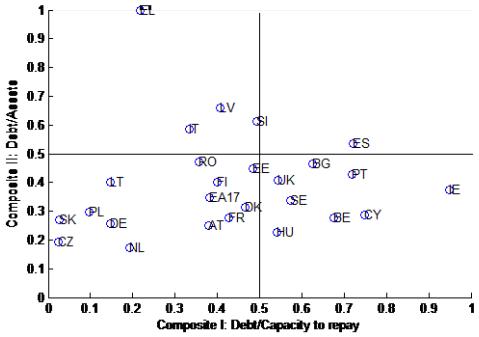
countries. This is especially the case when imperfections in local capital markets and tax systems favour allocation of lending within a group in such a way that disproportionally high levels of debt are accounted for in Finland.

Furthermore, the increase in non-financial corporation debt potentially reflects an increased appetite for loans linked to the historically-low level of interest rates. The interest rate dropped from an average of 5.7% in 2007 to 4.4% in 2008, which might partly explain the higher debt-to-GDP levels in the period 2008-2011, compared to the years before. Nevertheless, the biggest drop actually occurred from 2008 towards 2009, falling from a level of over 4% to barely 2.5%; this was not accompanied by further increasing debt levels. Presumably, the further drop in interest rates reflected a 'safe haven' effect, while the crisis context did not encourage the companies to leverage further.

Even when taking these factors into account, Finnish non-financial corporations are highly indebted; but risks are limited. Given that companies are currently net lenders to the rest of the economy, access to financing remains good and deleveraging is not pressing at the moment; corporate indebtedness is not seen as a major issue in the Finnish economy. The assessment is confirmed by the constructed composite indicators([13]) along the capacity to repay dimension and the leverage dimension, shown in Graph 3.13. Finland's non-financial corporations score below the last third of the distribution on both dimensions.

([13]) The composite indicators were derived using clustering techniques in combination with Principal Component analysis (PCA). Data on the following variables – debt-to-GDP ratio, debt-to-gross operating surplus (or disposable income for households) ratio, debt-to-financial assets, and debt-to-deflated financial assets - for the "accumulation phase" 2000 to 2008 and for 2011 were collected for all 27 Member States. In a first step, clustering techniques were used to reveal underlying similarities or mathematical distances between the multi-dimensional data vectors (in order to classify countries into different categories). Subsequently, PCA analysis was carried out to reduce the dimensionality of the data and to create composite indicators that account for the highest possible variation in the underlying variables set using the smallest possible number of factors. Non-consolidated figures. Debt includes loans and securities other than shares. The methodology is described in detail in Cuerpo et.al., 2013.

*Graph 3.13:***Composite indicator on deleveraging pressures for EU27 member states, non-financial corporations (2011)**

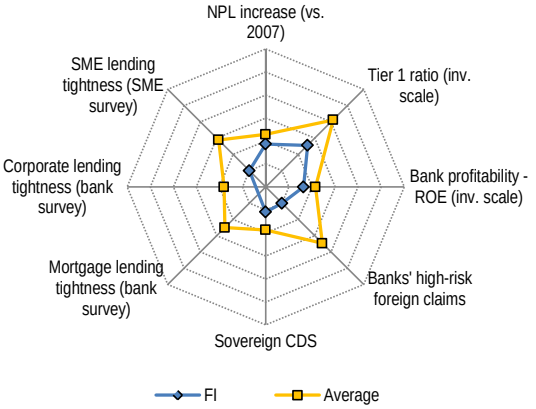


Source: Commission services, ECFIN calculations

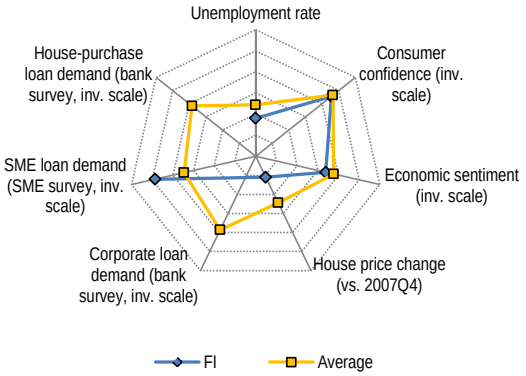
3.2.3. Health of the financial sector

Credit supply and demand conditions remain solid. Graph 3.14a and Graph 3.14b compare the credit supply and demand conditions in Finland with the European Union average. ([14]) Finland's financial corporations score above the average on all financial soundness indicators, such as the increase in non-performing loans and the tier 1 capital ratio. On the demand side, consumer confidence and SME loan demand are slightly below average, indicating the impact of the crisis on consumer confidence and the Finnish economy as a whole. The indicators illustrate how the financial position of the Finnish banking sector has remained solid throughout the crisis. Based on these fundamentals, no sudden credit crunch or deleveraging is expected in the near future.

*Graph 3.14a:***Stress map of credit supply conditions**



*Graph 3.14b:***Stress map of credit demand conditions**



Source: Commission services

([14]) The charts present stress maps of credit supply and demand conditions. For each variable the range of the graph is given by the maximum and minimum observation among all Member States (MS) with available data. A weighted average of all available EU27 Member States is provided as a visual reference. Variables are plotted on a regular or inverted scale ensuring that a larger map corresponds to more adverse conditions. Credit supply-related indicators include the change in overall non-performing loans relative to 2007, the banks' Tier 1 capital ratio, banks' return on equity, banks' exposure to high risk foreign claims as % of GDP, the sovereign CDS spread, the Bank Lending Survey (BLS) tightening of credit standards for: (i) loans to enterprises; and (ii) house purchase loans (trailing 4-quarter average), and the Survey on the access to finance of SMEs (SAFE) loan request failure rate (percentage of requests that did not receive all or most of the amount requested). Credit demand-related data include the EC Consumer Confidence Indicator, the Economic Sentiment Indicator, the unemployment rate, the house price evolution relative to 2007Q4, the BLS changes in demand for: (i) enterprises; and (ii) house purchase loans, and the SAFE variable on External financing needs. Most recent available data are presented (2012 Q2, Q3 or Q4).

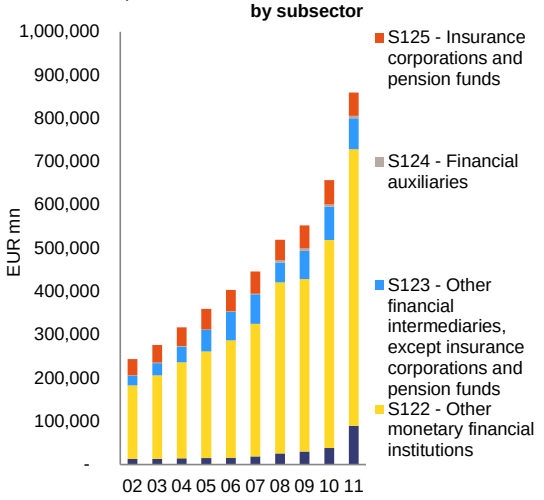
3.3. GROWTH OF FINANCIAL SECTOR LIABILITIES

The year-on-year growth of the non-consolidated financial liabilities of the financial sector stood at 30.8% in 2011, far above the threshold of 16.5%. In fact, the non-consolidated financial liabilities of the financial sector have increased substantially over time and were mostly concentrated in the subsector S122 – other monetary financial institutions, with a part of that growth originating from the central bank, as can be observed in Graph 3.15a.

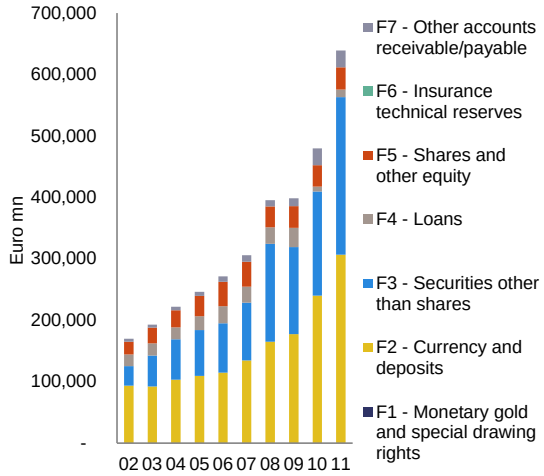
Regarding the expansion of the commercial banks' liabilities, it was driven mainly by currency and deposits (F2) and securities other than shares (F3), as demonstrated by Graph 3.15b. The former category includes deposits from all sectors, including other MFIs. The latter one encompasses debt securities (short- and long-term) as well as derivatives. Although not visible in the presented charts, more than a quarter of total bank liabilities is towards counterparties outside the euro area. ([15])

The Finnish banking sector is highly concentrated, with Nordea Bank Finland holding two thirds of the total assets. Data of the Finnish Financial Supervisory Authority allow for splitting out the movements in Nordea Bank's liabilities (Table 3.1). Nordea Bank Finland, subsidiary of Swedish Nordea Group, accounts for over half of the growth in total financial liabilities of the entire financial sector.

Graph 3.15a: **Non-consolidated financial liabilities by subsector**



Graph 3.15b: **Non-consolidated financial liabilities of S122 (Other monetary financial institutions)**



Source: Commission services

([15]) According to ECB data, it amounted to 28% in October 2012.

Table 3.1:
Non-consolidated financial liabilities by subsector

	2010 (M€)	2011 (M€)	10-11 change (M€)	10-11 change (%)	Share of total financial liabilities change
Total Financial liabilities	657,422	859,840	202,418	31%	100%
Of which:					
S121 - Central Bank	38,639	90,029	51,390	133%	25%
S122 - Other monetary financial institutions	479,904	638,830	158,926	33%	79%
Of which Nordea Bank Finland	*286,086*	*399,287*	*113,201*	*40%*	*56%*
Of which S122 excl Nordea Bank Finland	*193,818*	*239543*	*45,725*	*24%*	*23%*
S123 - Other financial intermediaries, except insurance corporations and pension funds	77,147	70,964	-6,183	-8%	-3%
S124 - Financial auxiliaries	5,455	5,936	481	9%	0%
S125 - Insurance corporations and pension funds	56,277	54,081	-2,196	-4%	-1%

Source: Commission services

3.3.1. Nordea derivatives

The growth of the Nordea derivative portfolio accounts for more than one third of the growth in total financial liabilities of the Finnish financial sector. According to a decision at group level, all Nordea derivatives were to be concentrated in the Finnish subsidiary. The expansion of Nordea Finland liabilities by EUR 113 billion in 2011 was largely due to the increase in value of Nordea's derivatives portfolio by EUR 73 billion. ([16]) At the end of 2011, the gross value of Nordea's derivative portfolio stood at EUR 166 billion. The values of derivatives on the assets and liabilities sides were balanced.

According to corporate information, Nordea hedges its derivative portfolios by the corresponding contracts and use of collateral. The most common risk-mitigation technique is the use of closeout netting agreements, which allow to net positive and negative replacement values of contracts under the agreement in the event of default of the counterparty. In addition, Nordea mitigates the exposure towards large banks, hedge funds and institutional counterparties by an increasing use of financial collateral agreements, where collateral (mainly cash and government bonds) is placed or received on a daily basis to cover the current exposure. After reductions from closeout netting agreements (EUR 150 billion) and held collateral (EUR 5 billion), Nordea's net derivative exposure at the end of 2011 amounted to only EUR 11 billion, compared to a gross exposure of EUR 166 billion.

The steep growth in the derivatives portfolio in 2011 resulted mainly from the significant fall in interest rates and the appreciation of the dollar in that year, which pushed up value of the contracts. ([17]) The bulk of derivatives in Nordea's portfolio reflects client business while proprietary trade is very limited. The contracts include mainly interest-rate swaps and options and currency swaps, whose fair value changes according to market volatility. ([18]) High value swings are typical for this portfolio, reflecting volatility of the underlying markets. After having expanded by as much as 173% in 2008 and declined by 16% in 2009, the value of Nordea's derivative portfolio increased by 76% in 2011. In the first two quarters of 2012, it fell slightly again (8% since end 2011).

It can be concluded that the increase of the value of derivatives portfolio in the Finnish banking sector did not lead to a proportional increase in the risk level, but resulted to a large extent from the underlying market developments (i.e. interest rate falls and US dollar appreciation), consistently with the nature of derivative contracts. Nevertheless, the business volumes also increased in 2011 (by 22%) measured as notional volumes of newly-concluded contracts. Overall, the sizeable derivatives portfolio concentrated in Nordea Finland features specific risks (counterparty credit risk and settlement risk, portfolio risk). ([19])

([16]) Fitch data

([17]) The average maturity of an interest rate derivative contract is 5 years, so a number of contracts was concluded at the time when interest rates were higher. The fall in interest rates in 2011 automatically increased the fair value of these contracts reflected on the balance sheet.

([18]) Bank of Finland. 2012 "Financial Statistics Annual Review 2011".

([19]) Counterparty credit risk is the risk that a counterpart in a FX, interest, commodity, equity or credit derivative

Therefore, Nordea's relevant risk mitigation techniques and practices should be carefully monitored by the competent supervisory authorities.

3.3.2. MFI deposits

Apart from Nordea's derivatives portfolio, the growth of the financial sector liabilities resulted mainly from the increase in foreign deposits at Finnish MFIs. This phenomenon concerned all commercial banks as well as the central bank. In 2011, total currency and deposits at Finnish MFI, excluding the central bank, increased by EUR 67 billion (Table 3.2), or one third of the growth in total financial liabilities of the Finnish financial sector. MFI deposits at the central bank increased by EUR 50 billion.

The foreign deposits flew in through a specific channel. Directly, they came mostly from the banks based in the Nordic non-euro area countries: Sweden, Norway, Denmark and also the UK. Indirectly, according to information received during the IDR mission, they originated from banks established in the crisis-hit euro-area countries. The deposits of banks from euro area countries, mainly Southern peripherals, increased substantially in 2011 in Northern Europe due to its 'safe haven' reputation. Faced with the substantial deposit inflows, Swedish, Norwegian or Danish banks transferred their excess euro-denominated liquidity to their Finnish branches or subsidiaries in order to subsequently place them with the Bank of Finland; the only central bank in the region belonging to the Eurosystem.

The above-mentioned developments are reflected in the aggregated balance sheets of the Finnish banking sector. In 2011, total interbank lending in Finland increased by EUR 57 billion, while interbank borrowing increased by EUR 4 billion.([20]) Thus, the net interbank lending by Finnish commercial banks amounted to EUR 53 billion. Their EUR 50 billion deposits at the central bank made up the bulk of this sum.([21]) In the same period, external liabilities of Finnish commercial banks increased by EUR 58 billion. This includes intra-group fund transfers from non-euro area banks to their Finnish branches and subsidiaries. The analysis of the aggregated accounts of the Finnish banking sector indicates that a large share of these external funds was transformed into interbank lending, i.e. mainly commercial bank deposits at the central bank as described above.

Bank deposits at the central bank are double-counted in total non-consolidated liabilities of the financial sector. For example, a deposit received from Sweden by Nordea Finland and subsequently placed at the Bank of Finland is recorded among the commercial banks' liabilities and also on the liability side of the central bank balance sheet. The EUR 50 billion increase in deposits of monetary and financial institutions (MFIs)at the Bank of Finland in 2011 led to the double counting effect amounting to 8 percentage points within the total 31 per cent financial sector liabilities increase. The double counting, however, is also taken into account in setting the relatively high threshold for the growth of non-consolidated financial sector liabilities indicator in the MIP Scoreboard.

3.3.3. Other liabilities

Abstracting from the impact of derivatives and MFI deposits, other liabilities of the financial sector also increased, although at a more moderate pace. Both non-MFI deposits and wholesale funding, as well as an increase in the own funds, contributed to the overall growth. In Finland, loans and deposits account for a relatively small part (less than a half) of the total banking sector balance sheet. In 2011, deposits of households and non-financial corporations increased by 6% (EUR 7 billion). It was below the growth of credit to the private sector, which amounted to 8% in 2011 (EUR 14 billion), up from 1% in 2009 when the economy was deeply in recession. At around 140%, the loan-to-deposit ratio in Finland is relatively high and the structural liquidity position of the banking sector could benefit from further enhancement. However, banks

contract defaults prior to maturity of the contract. Settlement risk is the risk of losing the principal on a financial contract, due to a counterpart's default during the settlement process. Portfolio risk is the risk that balancing market risks by cross-hedging the positions does not bring the expected results.

([20]) ECB data

([21]) The remaining EUR 3 billion were lent to other euro area MFIs

Table 3.2:
Split of financial liabilities of S122

Split of financial liabilities of S122 - Other monetary financial institutions:	2010 (M€)	2011 (M€)	10-11 change (M€)	10-11 change 'assigned' to Nordea Bank Finland	Remaining 10-11 change	Share of change in financial liabilities excl. Nordea Bank Finland
S122 - Other monetary financial institutions	479,904	638,830	158,926	113,201	45,725	100%
F1 - Monetary gold and special drawing rights (SDRs)	-	-	-	-	-	0%
F2 - Currency and deposits	240,094	306,780	66,686	28,258	38,428	**84%**
F3 - Securities other than shares	169,321	256,544	87,223	84,547	2,676	6%
F4 - Loans	8,022	12,012	3,990	-	3,990	9%
F5 - Shares and other equity	35,076	36,133	1,057	396	661	1%
F6 - Insurance technical reserves	-	-	-	-	-	0%
F7 - Other accounts receivable/payable	27,391	27,361	-30	-	-30	0%

Source: Commission services, FINFSA
Note: The amounts assigned to Nordea Bank Finland are based on statistics from the Finnish financial supervisory authority.

have currently no difficulties in financing their operations as access to the wholesale market is open at advantageous conditions, reflecting the Nordic countries' 'safe haven' status. As a consequence, there are no credit supply constraints and surveys show that enterprises do not see lack of credit among their most serious problems.

The wholesale funding market is supported by the highest credit rating for the Finnish sovereign, which ensures the value of collateral. In 2011, the issuance of debt securities by Finnish banks increased by 17%, especially in the segment of maturities above 2 years (by EUR 10.5 billion). The increase of average bond maturity (currently at 7 years for bonds with maturities above 1 year) enhanced funding stability. Simultaneously, the role of covered bonds was increasing in the pool of bonds issued by Finnish banks. By end 2011, covered bonds accounted for 35% of total bond portfolio. ([22])

3.3.4. Assessment

The strong growth of financial sector liabilities, while not raising undue concern, requires careful monitoring. To a large extent, the high growth of financial sector liabilities resulted from the market movements reflected in the value of Nordea's derivatives portfolio, the 'safe haven' effect leading to inflows of foreign MFI deposits and the double counting of MFI deposits at the central bank. The change of fair value of interest rate or currency swaps on the Nordea's balance sheet did not change the risk level of its derivatives portfolio. The inflow of foreign deposits did not stimulate a lending boom by Finish banks (be it domestic or foreign), but were rather deposited at the central bank. Nevertheless, the situation warrants close supervision. As explained above, the derivatives business features inherent risks. Secondly, the hitherto prudent treatment of foreign deposits by banks does not guarantee prudence in the future. Excessive liquidity should not lead to excessive risk taking.

Potential risks for the Finnish financial sector stem also from its high concentration and its funding structure. Nordea Bank holds 67% of total banking assets in Finland. Such a strong position of one banking group is exceptional in the euro area. The second player in the market, OP-Pohjola Group, holds 15% of the assets. The insurance market is highly concentrated as well, closely intertwined with the banking sector and currently suffering from adverse economic conditions. This heavy concentration in the banking sector implies contagion risk from the systemic bank. Next, the reliance on foreign funding sources and wholesale markets imply risks for bank financing. So far Finnish banks are seen as solid, characterised by high capital adequacy and high profitability ratios as well as by low non-performing loans and low exposure to troubled economies. They are mainly increasing their long-term bond issuance, benefitting from the advantageous market terms. However, a tail event in Finland or an external shock could abruptly reverse the flow of foreign funds.

([22]) Data by the Federation of Finnish Financial Services.

4. POLICY CHALLENGES

The analysis in sections 2 and 3 indicates that macroeconomic developments in the areas of competitiveness, the high level of private debt and the structure of the financial sector are among the main challenges in Finland.

It should be recalled that these challenges were identified under the MIP in the first IDR and relevant policy responses to improve competitiveness were reflected and integrated in the country-specific recommendations issued for Finland in July 2012. The assessment of progress in the implementation of those recommendations will take place in the context of the assessment of the Finnish national reform programme and stability programme under the European Semester. Against this background, this section discusses different avenues that could be envisaged to address the challenges identified in this IDR.

Concerning the challenge of improving competitiveness a number of different avenues can be considered:

Measures aimed at increasing Finland's non-price competitiveness would be highly beneficial. Leveraging the country's high R&D intensity, this should be more effectively translated into the development of new products. Encouraging companies to introduce product, process, marketing or organisational-related innovations would be highly beneficial for the Finnish economy in terms of increasing exports and in terms of the diversification of exports beyond forestry and electronics. It should be recalled that country-specific recommendation nr 5 from 2012 called for a continuation of efforts to diversify the business structure, in particular by hastening the introduction of planned measures to broaden the innovation base. Measures aimed at fuelling innovation and rising product quality unfortunately typically take a long time to produce effects, while an improvement would be most welcome already in the medium term. Measures facilitating already existing firms and products to grow and export could generate quicker effects on non-price competitiveness for Finland. One example would be the facilitation of the access to foreign export markets by small- and medium-sized enterprises. This is tackled in Finland through Finnvera, the credit guarantee and lending agency. With regards to the longer term, the Finnish government is providing additional support for R&D through the Tekes foundation; it provides support for research activities and it aims to foster a more entrepreneurial and risk-taking attitude. In addition, the Finnish government set up the ICT 2015 working group, which recently identified 4 critical directions that should be followed to re-establish Finland's technological lead in ICT. These are: i) the fast development of a common architecture for all public services; ii) the establishment of a 10-year programme for ICT-related research, development and innovation; iii) the establishment of a funding programme to secure funding for high-growth enterprises; and iv) the establishment of a governmental expert group to ensure long-term development.

Measures to improve the energy infrastructure and lower the country's energy intensity would have a positive impact on Finland's trade balance and cost competitiveness. Given its structure, Finnish industry is relatively energy intensive. Its growth and productivity potential will therefore also depend on meeting the climate change challenges and improving energy efficiency. Related to this, Finland could improve its energy infrastructure. Finland is an "energy island" and could benefit from the cooperation with the Baltic States in linking its gas network.

Labour cost growth could be moderated through wage moderation, productivity increases, or both. The current wage formation system implies that those industry branches, which show below-average productivity growth, have come under additional pressure due to relatively higher growth in their unit labour costs. It would therefore be important to increase the responsiveness of the wage formation system to sectoral productivity developments. In particular, productivity developments should be considered explicitly in each wage negotiation round, as included in the country-specific recommendation nr 5 from 2012. Productivity increases should not only be focused on tradable sectors, but also on non-tradable industries, especially those serving as inputs to the tradable industries. Increases in productivity would also attenuate the labour force decline due to ageing. In this respect efficiency gains in public services such as healthcare and education (through cutting down the length of studies and speeding up graduation in higher

education) would be most welcome. It should be recalled that the country-specific recommendation nr 2 from 2012 included the need to take further measures to achieve productivity gains and cost savings in public service provision. The country-specific recommendation nr 4 from 2012 called for the enhancement of competition in product and service markets.

Measures are needed to increase labour supply. It would be important to take measures to increase labour supply in the longer term, in order to counter the negative effects on the labour market from population ageing and the related decline in the working age population. An increase in the effective and the statutory retirement age would result in a slower decline in the working age population. The country-specific recommendation nr 3 from 2012 urged for the activation of young people, the long-term unemployed and older workers, as well as an increase of the effective retirement age taking into account improved life expectancy.

Concerning the challenges linked to the high level of private debt, a number of measures can be considered as regards:

Although prevailing private debt levels are currently not considered a major risk to the stability of the Finnish economy, measures to curb debt growth are most welcome. The Finnish government is aware of the increase in household debt, accompanied by lower saving rates, and takes measures to reduce incentives for taking on and holding debt. A proposal to make the recommendation by the Finnish Financial Supervisory Authority, on a cap on loan-to-value ratios for mortgage loans, binding is currently being studied. The tax deductibility of mortgage interest payments is currently being decreased.

Concerning the challenges linked to the financial sector, close monitoring is required:

Close monitoring of the Finnish financial sector is required, as potential risks stem from its high concentration and its funding structure. Heavy concentration in the banking sector implies contagion risk from the systemic bank; the reliance on foreign funding sources and wholesale markets imply risks for bank financing. The large derivatives portfolio of Nordea Group concentrated in Finland requires strong supervisory oversight. Finally, the recent liquidity inflows related to the euro area crisis, so far largely absorbed by the central bank, should not lead to risky investments. All these developments require close monitoring by the Finnish FSA, both at the micro-prudential and the macro-prudential level ([23]), in cooperation with its Nordic counterparts.

([23]) Macroprudential supervision in Finland will be in the remit of the Finnish FSA Board, with the Bank of Finland contributing through the provision of analytical underpinnings and advice, according to a draft law currently in consultation.

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