

II FINANCIAL BEHAVIOUR OF COMPANIES AND HOUSEHOLDS AND THEIR RISKS

COMPANIES¹

Financial position and savings

Contrary to last year's final quarter, in the first half of 2006 corporate financial liabilities outpaced assets. Thus, the negative volume of **net financial assets** grew by 3.6 billion up to 190.3 billion kroons within a half-year. However, as in the last two quarters corporate financial liabilities grew less than nominal GDP, the negative net financial position of companies in ratio to GDP improved from 108% in late December 2005 to 101% by the end of June 2006 (see Figure 2.1).

In the first half of 2006, companies increased the volume of almost all existing **financial assets** except for stocks and shares, which decreased due to the drop in market value resulting from the stock market correction that occurred in the second quarter of 2006. The growth of companies' cash and deposits has remained rapid (48% in the sec-

ond quarter of 2006). The volume of cash and deposits held by companies increased by nearly 3 billion kroons in the first half of 2006, i.e. as much as during the same period the year before. The volume of loans granted by companies has also continued to climb, mainly due to financing the operations of non-resident subsidiaries.

The year-on-year growth of **domestic corporate deposits** has decelerated slightly compared to the rapid pace achieved late last year and at the beginning of 2006, but nevertheless exceeds 40% (see Figure 2.2). The share of time deposits, which rose along with the dynamic growth of corporate deposits in the final months of last year, has dropped again. At the end of September, time deposits comprised only 27% of all corporate deposits. The share of overnight deposits has continued to increase, indicating a rising interest of companies in investing liquid assets more productively.

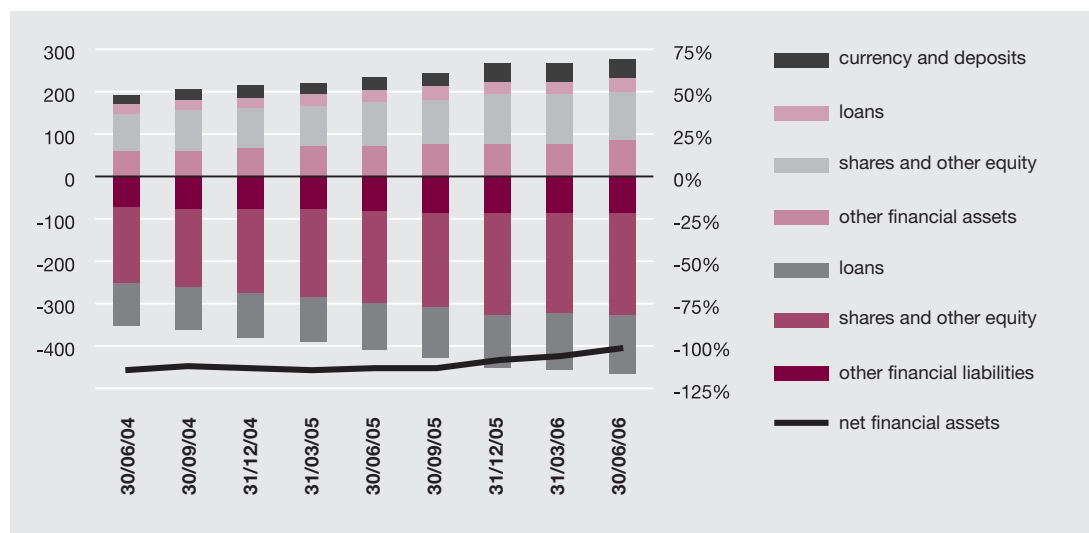


Figure 2.1. Corporate financial assets and liabilities (EEK bn; left scale) and net financial assets (% of GDP; right scale)

¹ In this chapter, "companies" refer to non-financial companies.

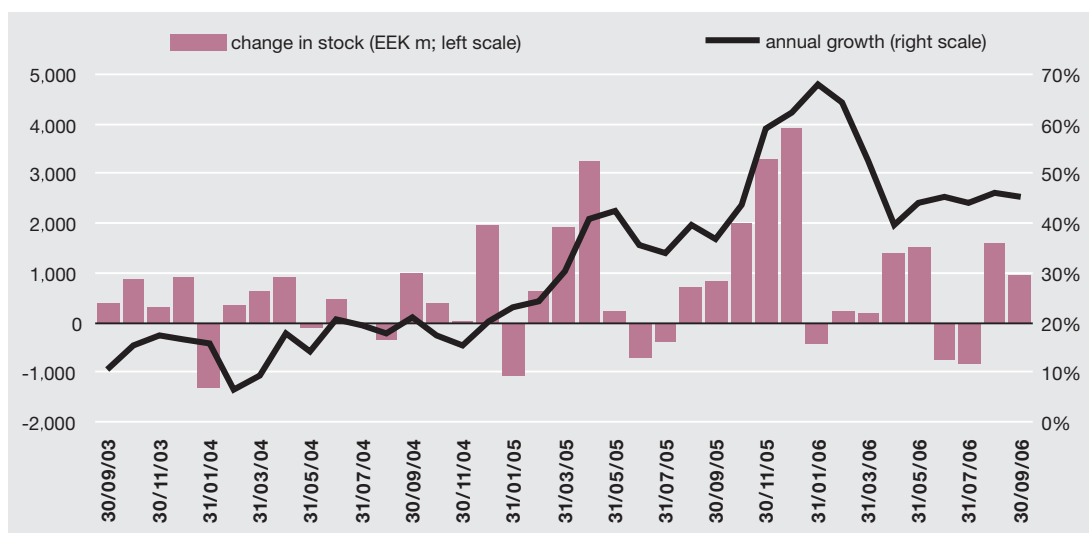


Figure 2.2. Corporate deposit growth

While in the first half of 2006 the total growth of **financial liabilities** was lower compared to last year, the volume of loans granted to companies experienced record growth in the second quarter of 2006. Meanwhile, the share of own funds in the structure of financial liabilities shrunk, owing to a decrease in the market value of shares listed (similar to financial assets).

Due to an increase in loan commitments and a decrease in own funds, the corporate **debt-to-equity ratio** (bond and loan commitments divided by share and equity commitments) has been rising rapidly since the end of last year, climbing 7 percentage points up to 61% within a half-year (see Figure 2.3).² At the same time, the **coverage of corporate loan and bond commitments by liquid financial assets** (cash, deposits, securities and granted loans) has decreased due to the modest increase in liquid financial assets. Compared

to the end of last year, it shrunk by 2 percentage points to 53% by June 2006.

Based on financial account data, the debt-to-equity ratio of the Estonian non-financial corporate sector is lower than that of 18 other European Union Member States and the coverage of debt liabilities by liquid assets is respectively higher (see Figure 2.4).

Corporate debt

The corporate demand for external funds has remained intense. The **growth rate of corporate debt** decreased slightly at the beginning of 2006, reaching 26% in the second quarter (see Figure 2.5). This was brought about by a decline in the stock of foreign resources, which reached only a tenth of the total volume in the same quarter. Meanwhile, the growth rate of loans granted by banks and leasing companies increased by 2 percentage points up to 48% compared to the end of last year.

² The impact of decreasing own funds arising from the declining market value of share prices may have partially caused that, but this was not the only reason for the weakening of the debt-to-equity ratio.

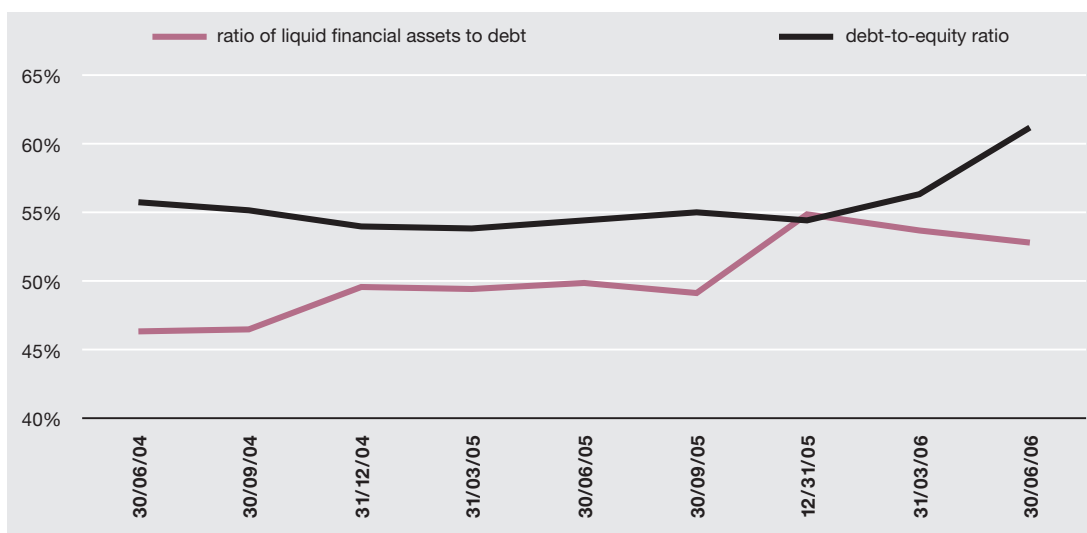


Figure 2.3. Corporate debt-to-equity ratio and ratio of liquid financial assets to debt

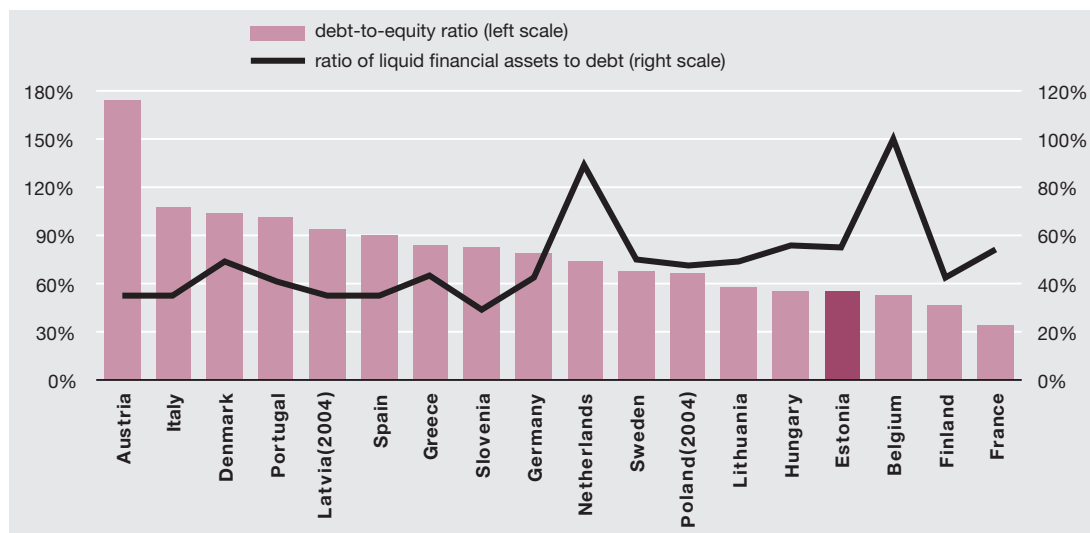


Figure 2.4. Debt-to-equity-ratio and ratio of liquid financial assets to debt of EU companies at the end of 2005

Source: Eurostat

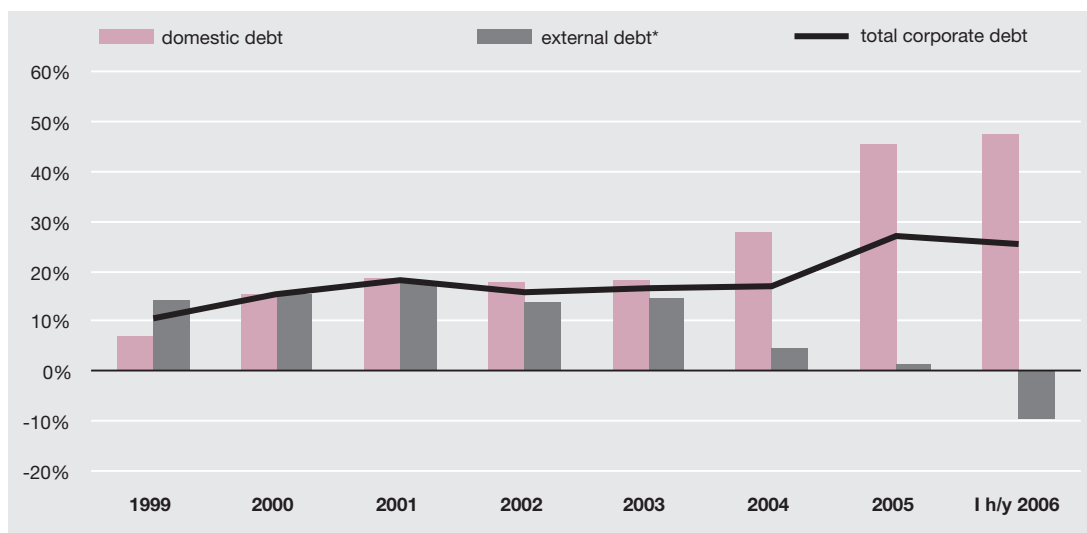


Figure 2.5. Growth rate of corporate debt (%)

* external debt calculations include intra-group claims

The stock of debt capital attracted from abroad started to shrink since the beginning of 2006. This reflects the continuation of structural changes, as the share of foreign borrowing is decreasing. In addition to a drop in the interest margins of domestic loans and the greater availability of loans, external borrowing is also increasingly affected by companies' operations abroad and their financing, because the stock of loans granted by companies to intra-group subsidiaries has grown too (see Figure 2.6).

The continuing rapid **growth of corporate debt** has increased the corporate debt by 3 percentage points to 66% of GDP, i.e. to a new record level within the year.³ According to the financial account data of 2005, Estonian companies' debt liabilities in ratio to GDP slightly exceed the average of 18 other European Union Member States, ranking between Finland and Sweden (68% and 105% of GDP, respectively; see Figure 2.7).

Regarding developments across economic sectors, debt capital was directed toward real estate and construction companies even more than

last year. These sectors received 64% of the total external funds attracted by non-financial companies, whereas contrary to last year the stock of debt capital received from abroad has also been elevated (see Figure 2.8). To give an example of a positive tendency, one can mention that compared to the year before manufacturing and mining enterprises also included more resources in the first half of 2006.

As the year-on-year growth of resources gained from domestic banks accelerated to 51% in the third quarter of 2006, the growth of total corporate debt presumably sped up even further in the third quarter.

Real estate financing by domestic banks

Similarly to corporate debt capital, the share of loans taken from domestic banks with the aim of purchasing real estate increased. At the end of September 2006, **debt capital used to acquire real estate** amounted to 42.7 billion kroons, i.e. 58% of funds acquired by companies from domestic banks, which is 4 percentage points more than a year ago. **Real estate companies** were in turn

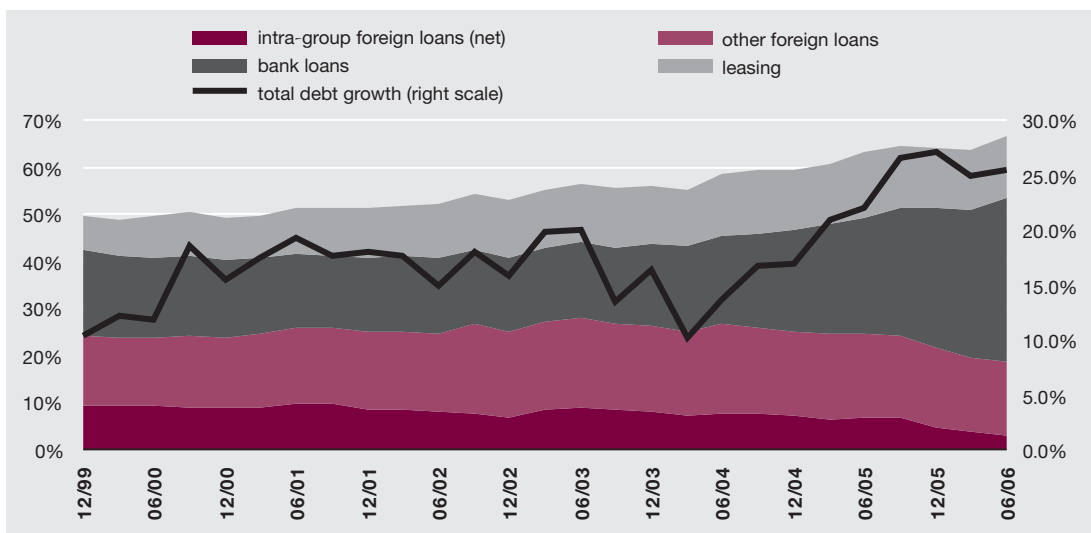


Figure 2.6. Corporate debt (% of GDP)

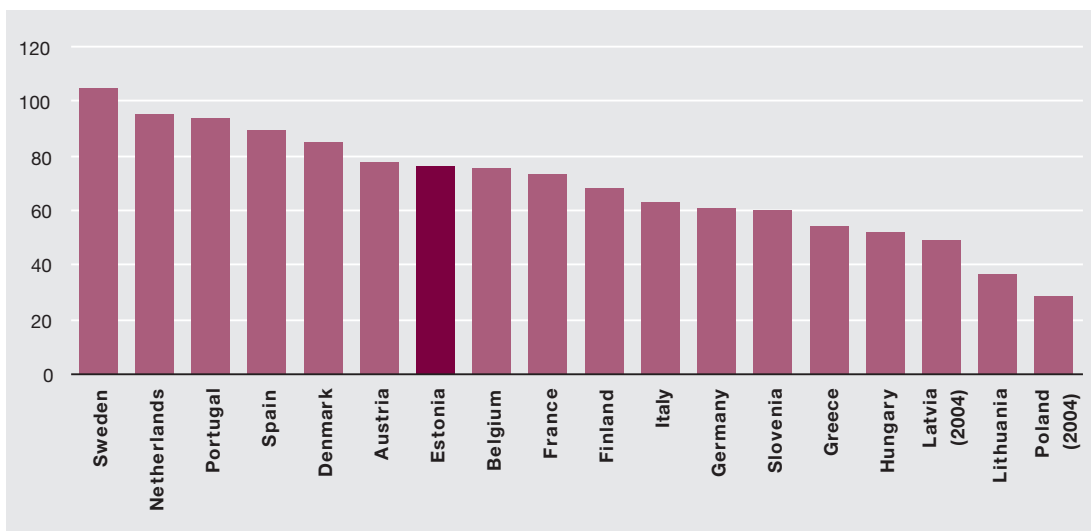


Figure 2.7. Debt-to-GDP ratio of EU companies at the end of 2005 (%)

Source: Eurostat

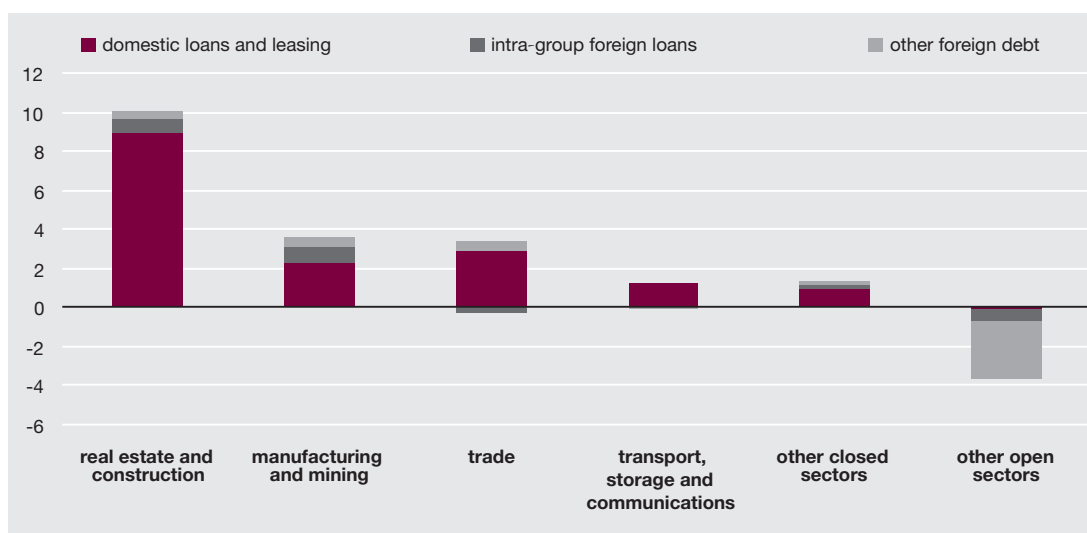


Figure 2.8. Corporate net borrowing of companies in the first half of 2006 (EEK bn)

responsible for 56% of the total loans taken by enterprises for financing real estate.

In **other sectors**, borrowing to acquire real estate has increased. The volume of such loans has grown by 63% within the year up to 18.6 billion kroons. Hence, by the end of September 2006, their share in the total volume of loans taken by other sectors rose by 3 percentage points to 41%. Construction and trade enterprises have been particularly active in borrowing to finance real estate, having respectively tripled and doubled the volume of funds intended for that purpose (see Figure 2.9).

The improvement of corporate loan terms and conditions has ground to a halt since the final quarter of last year due to the rise of the Euribor. By September 2006, the **average interest rates on long-term loans** rose to 5.0%, i.e. to the level previously reached in mid-2004 (see Figure 2.10). Although at the end of last year the average interest margin of corporate loans also rose slightly from its lowest level, no clear turn in the trend of interest margin development may be perceived yet.

HOUSEHOLDS

Financial position and savings

This year, many signs of a remarkable improvement in the **economic situation of Estonian households** have appeared. In macro data this is mainly reflected by the rapid growth of net incomes. Furthermore, this improving position is confirmed by decreased unemployment and improving employment (see Chapter 1, "Economic situation of households"). Low interest rates and the growing housing wealth have favoured private consumption, while the increase in disposable income has reinforced the improvement of savings capabilities.

The rising optimism of households is also confirmed by assessments on the micro level. The F-monitor survey conducted by TNS Emor in August-September 2006 indicated that 35% of households considered their economic situation better than a year ago and 34% of households also expected the same tendency to continue next year (see Figure 2.11). Among those who have obtained housing loans a slight majority (55%) believed that their economic situation has improved and these

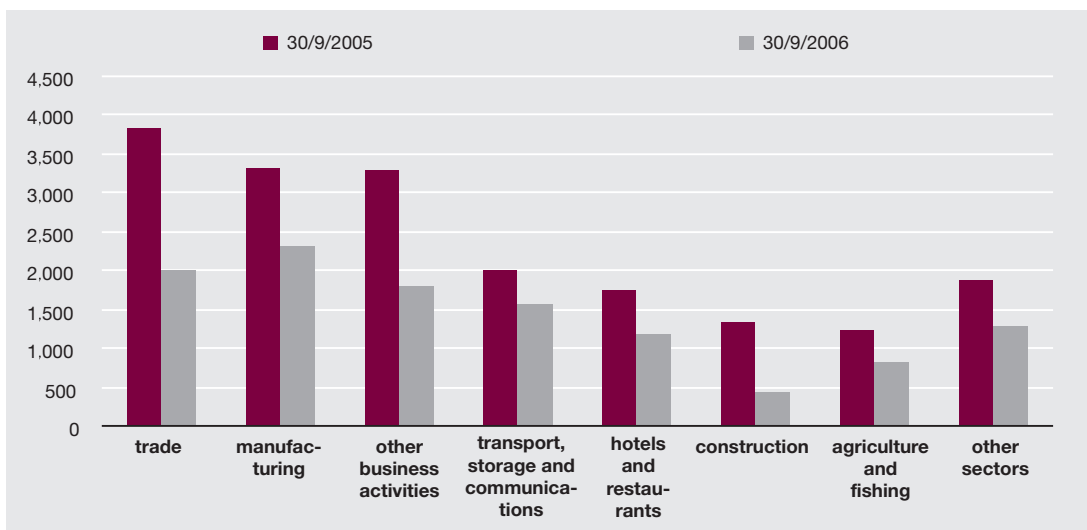


Figure 2.9. Bank loans taken by non-real estate companies for acquiring real estate (EEK m)

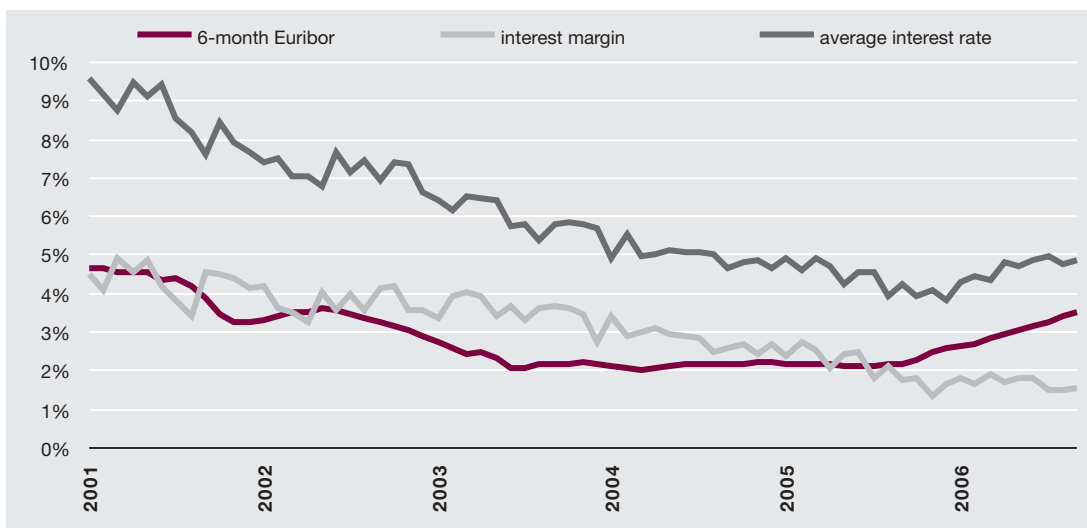


Figure 2.10 Average interest rate, key interest rate and average interest margin on long-term corporate loans (%)

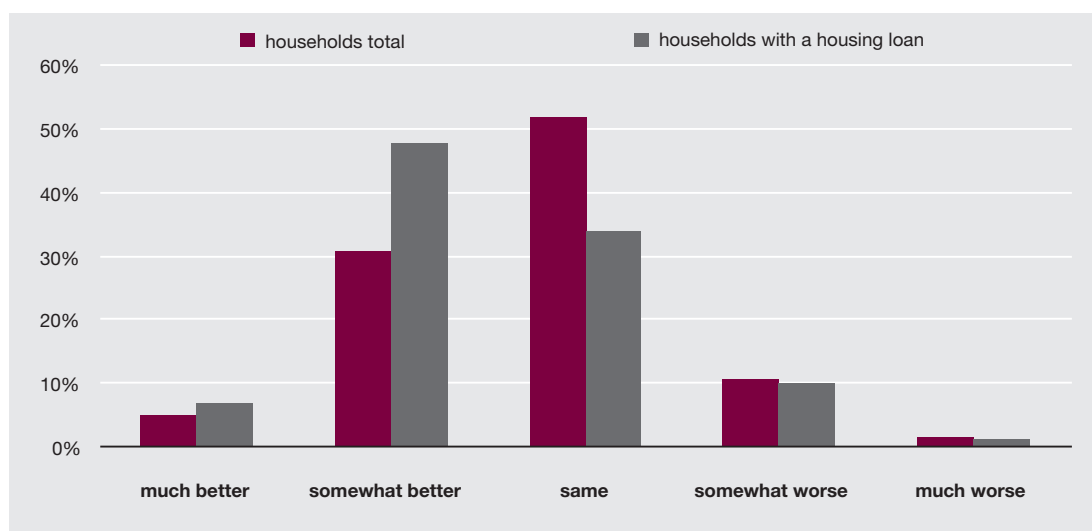


Figure 2.11. Household's economic situation compared to previous year (% of households)

Source: TNS EMOR, F-monitor, August-September 2006

families were also more optimistic about the forthcoming 12 months.

The good economic situation of households has improved savings as well as borrowing abilities. Nevertheless, borrowing outpaced savings, which is why the **net financial position** of households deteriorated by over 5 percentage points down to 13.5% of GDP within the past 12 months (see Figure 2.12). In light of the continuing loan growth it may be presumed that the net financial position also kept weakening in the third quarter of 2006: in the third quarter, households' stock of loans and leasing increased by 8.4 billion kroons, while savings grew (partially due to seasonal effects) by only 1.8 billion kroons.

The growth of households' financial assets has accelerated during recent years, supported mainly by the faster deposit growth. The increase in deposits that exceeded 30% in the final quarter of 2005 remained rapid even after the withdrawal of the base effects in April-May (see Figure 2.13). In the structure of **deposits**, demand deposits have prevailed during the past two years (approximately 60%), but

since the middle of 2006 the growth of time deposits has also accelerated in line with the increasing deposit interest rates. As a more profitable alternative to demand deposits, households have started to opt for short-term depositing: at the end of September, the stock of overnight deposits comprised 1.6 billion kroons (year-on-year growth of 91%) and the stock of deposits with maturities up to a month amounted to 2.4 billion kroons (year-on-year growth of 93%).

Besides time and demand deposits, this year has also witnessed the rising popularity of deposits with return rates connected to the yield of the stock market. Having increased by more than twice within the year with a stock of 1.6 billion kroons, these "investment deposits" still comprised only a minor share (4%) of the total stock of household deposits at the end of September 2006 (see Figure 2.14).

Regarding the development of other financial assets, steady growth in **pension savings** is worth mentioning. In late June 2006, the pension assets of households amounted to nearly 6 billion kroons, which is about 5% of the total volume of financial

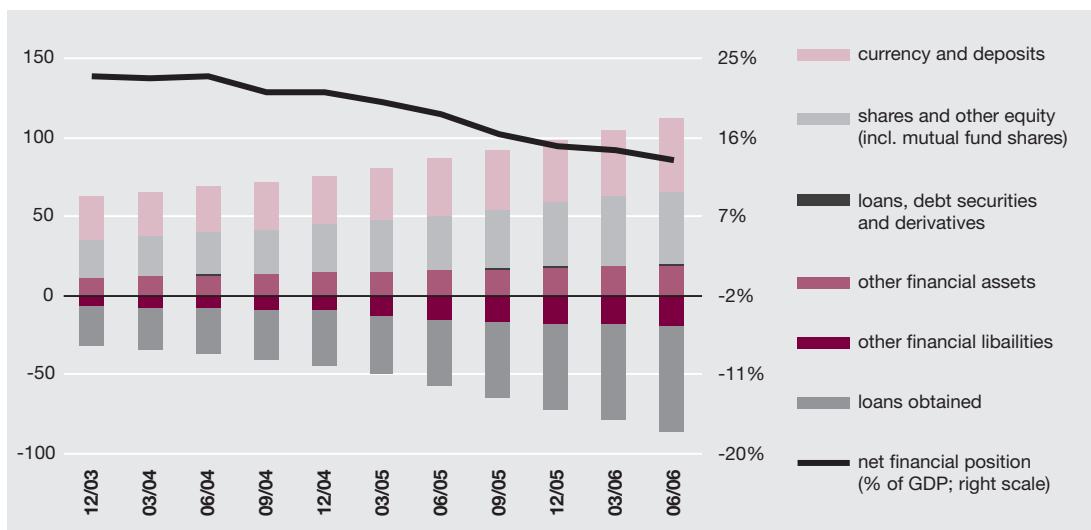


Figure 2.12. Household financial assets and liabilities (EEK bn and % of GDP)

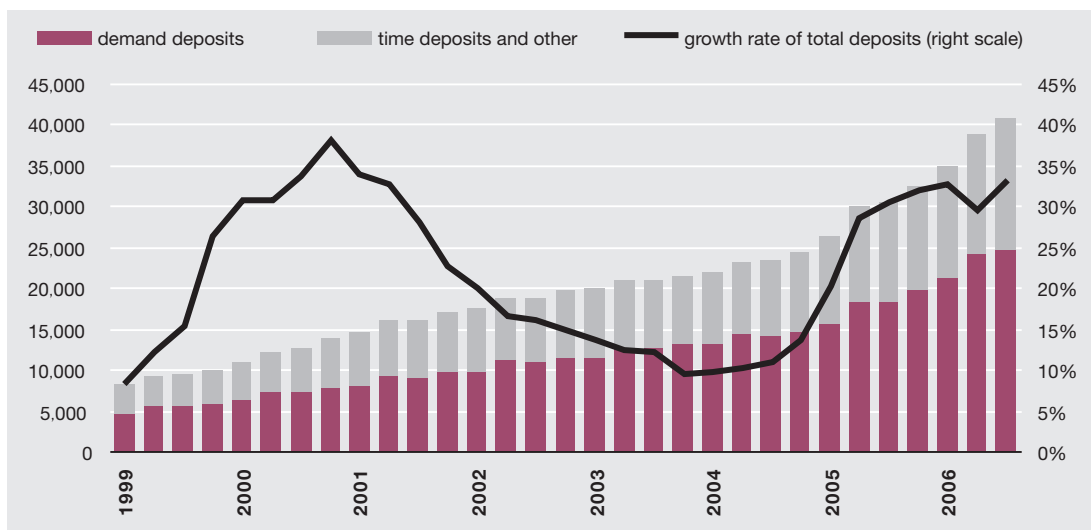


Figure 2.13. Household deposits in domestic banks (EEK m) and deposit growth

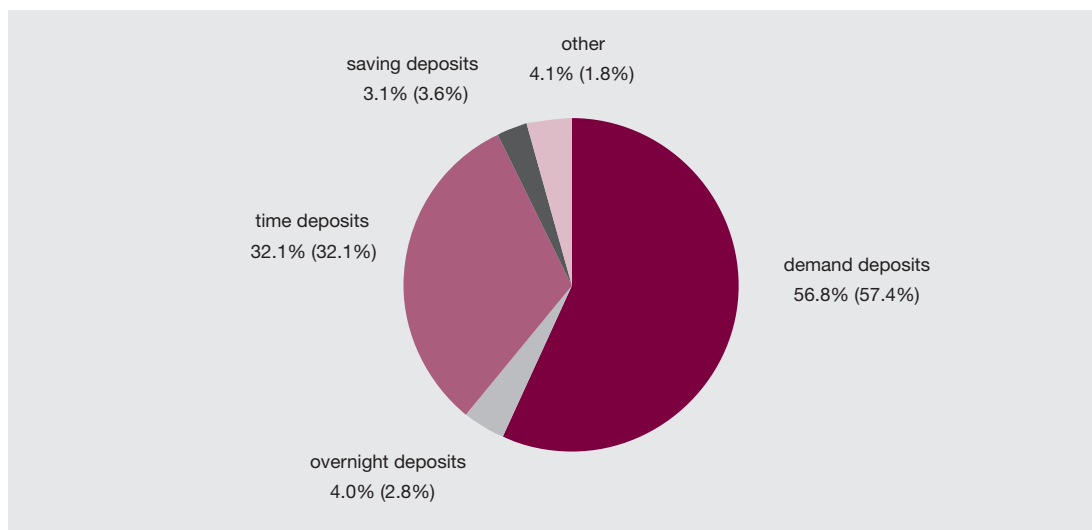


Figure 2.14. Structure of household deposits as at 30 September 2006 (in brackets as at 30 September 2005)

assets (see Chapter 5, “Pension funds and insurance”). Meanwhile, households owned approximately 5 billion kroons worth of **shares listed on the stock exchange and investment fund units**. According to the F-monitor survey conducted by TNS Emor in the autumn of 2006, 5.6% of families owned listed shares or investment fund units and within the year their number has grown by 1.8% (by over 10,000 households).

Real estate investments as savings

Together with the rapid and steady growth of real estate prices, year-by-year real estate is increasingly perceived as one of the main savings opportunities besides financial assets. According to the abovementioned F-monitor survey, 14% of households would prefer the acquisition of real estate to save as their first or second choice (in 2005, their share amounted to 10% and in 2004 7%). The high share of property owners also refers to the preference for real estate. 86% of those households interviewed owned at least one immovable property. 23.5% of all households owned more than 2 im-

movables (incl. a second residential property, land, cottage, etc.). One tenth of those families have rented out their otherwise idle property. According to the survey, the number of households living in rented spaces was 12%, although over 30% of them also own various real estate objects; usually these are a cottage, land or a future home.

Although the value of household assets has shot up due to the increase in real estate prices, the real estate market’s high price level and great loan burden hinder making new investments. According to the survey, the impact of the high activity in the real estate market during the past 12 months is also reflected in the savings behaviour of households. It may be presumed that as most households have already bought their homes within the past 12 months regardless of high prices, the number of families saving to purchase real estate or to fund construction (incl. loan down payments) has decreased from 12% to 8%. As for families living in rentals, their number is significantly greater: 28% are saving up for their own home⁴.

⁴ Renting an apartment is relatively more common among Tallinn’s young and small households, in the higher income group (net monthly income of 5,000–7,000 kroons per household member) and among skilled and blue-collar workers.

Household debt and loan-servicing capability

Level and growth of debt

Households' **loan and leasing growth** reached a record level (62.4%) in March 2006 and remained over 60% until late September (see Figure 2.15). Rapid loan growth was facilitated by the strong demand for housing loans. The dynamic growth of other loans (incl. consumer credit) is characterised by the fact that their share in the debt portfolio of households has virtually remained unchanged at 22% during the last year.

The growth of household indebtedness accelerated even further during the first nine months of 2006. Compared to last year's respective indicator, indebtedness rose by 10 percentage points in ratio to GDP and by 19 percentage points in ratio to dis-

posable income, reaching 38% of GDP⁵ and 70% of disposable income by the end of September (see Figure 2.16). The indebtedness of Estonian households is still very different compared to most developed European countries.⁶ At the same time, the remarkable growth rate of financial deepening in Estonia indicates a steady decrease in this difference (see Figure 2.17).

Housing loans

At the end of September 2006, the **stock of housing loans** reached 58.3 billion kroons, having grown by 22.2 billion kroons, i.e. 61.3% within a year. By the end of September, banks had concluded over 115,000 housing loan contracts (incl. to purchase housing, fund construction and for repairs). Compared to the end of September 2005, the number of **housing loan contracts** has increased by over 24,200. As there may be more than

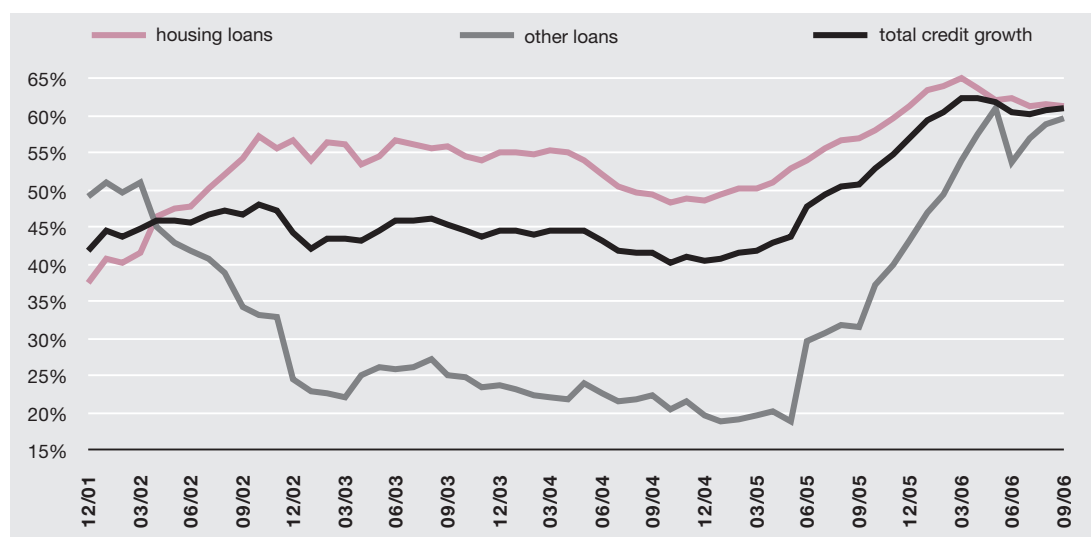


Figure 2.15. Annual growth of domestic credit to household sector

⁵ The renewed methods of revising the GDP calculation in the Statistical Office decreased the indebtedness indicators in ratio to GDP. For example, the ratio of household debt to GDP shrunk from 32.1% in 2005 to 30.6%.

⁶ As at the end of 2005, the ratio of debt to disposable income reached an estimated 234% in Denmark, 179% in Norway, 133% in Sweden and 89% in Finland. The ratio of debt of Estonian households to disposable income in September 2006 was equal to the Finnish indicator at the end of 2002.

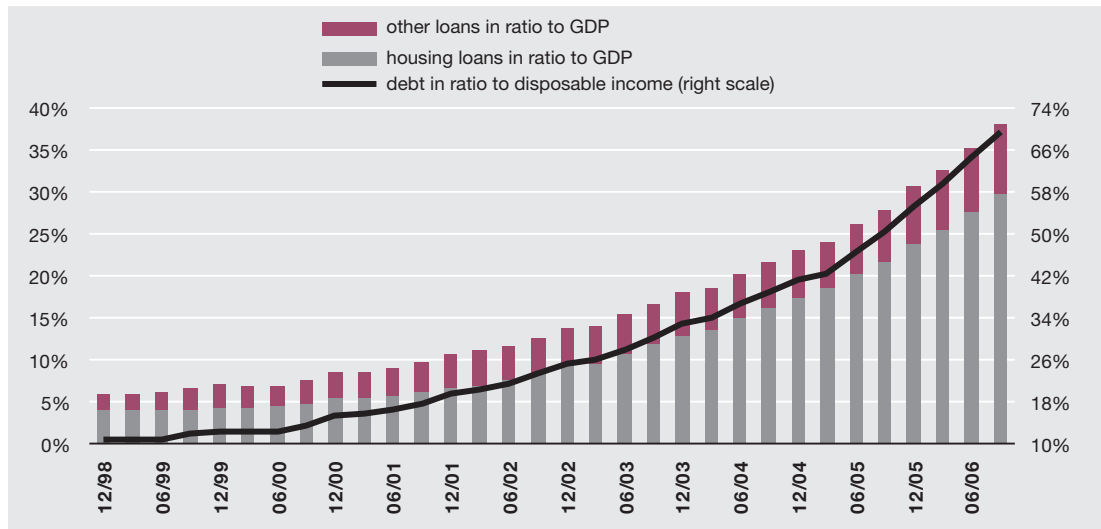


Figure 2.16. Household indebtedness

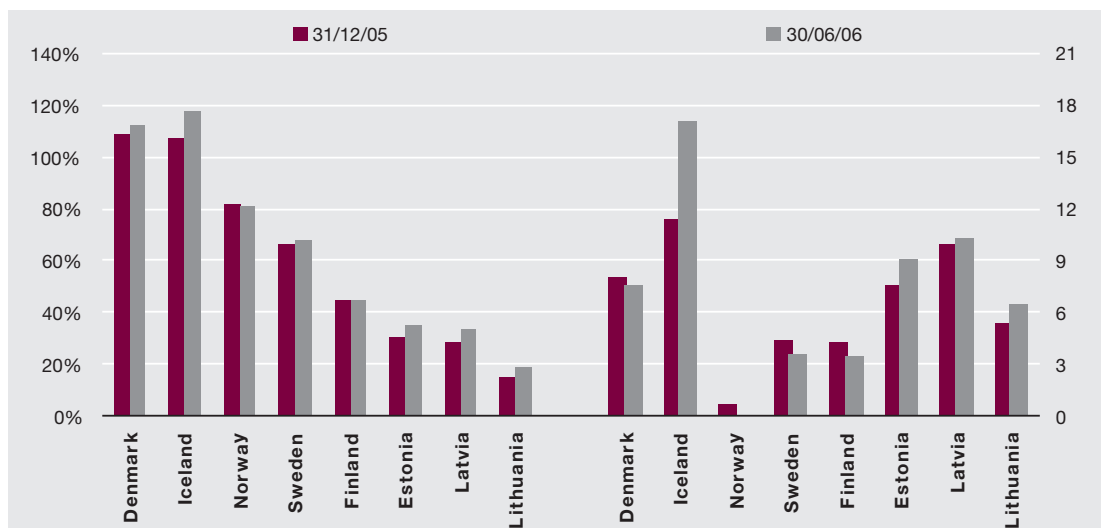


Figure 2.17. Household indebtedness in ratio to GDP (left scale) and annual growth rate (pp; right scale) in Nordic and Baltic countries

Sources: national central banks

one such contract per household, this indicator does not enable one to determine the number of households with housing loan commitments precisely enough. Based on the F-monitor survey conducted among households in August-September 2006 by TNS Emor, housing loans had been obtained by 19.1% of households. 10% of all families had borrowed to purchase housing or to fund construction. Although according to bank statistics, the growth rate of new loan customers slowed slightly, the housing loan market's activity recovered quickly and in August and September banks already concluded 16% more loan contracts than the year before. Considering the high price of real estate there are more new housing loan customers than expected.

The questions of whether the share of households that have obtained housing loans (over 19%) is great or small and what is the growth potential of that indicator are not easy to answer. Due to different housing policies, income levels and differentiation, financial market structures, and cultural and economic policy factors among countries, international comparison offers no adequate basis. As for

growth potential, evaluating the share of loan customers by income brackets may be more informative. The F-monitor survey conducted by TNS Emor in autumn 2006 also emphasised that from among residents with higher incomes, less than a third of households have obtained a housing loan. Excluding loans for repairs from housing loans, less than 20% of families with higher incomes (net monthly income of over 5,000 kroons per household member) have borrowed to purchase or construct housing (see Figure 2.18).

In the longer perspective, all income groups with suitable incomes for borrowing still have enough room for housing loan growth. However, the attitudes of households concerning borrowing next year have become much more careful. According to the survey of TNS Emor, during the next 12 months 14,000 households (i.e. 2.4% of all families) wish to obtain a loan to purchase or construct housing. 24% of the households who plan to borrow for these purposes already have such a loan commitment. Thus, the number of loan customers will presumably increase less than in the previous year.



Figure 2.18. Households with a housing loan by income brackets

Source: TNS EMOR, F-monitor, August-September 2006

In addition to the growing number of borrowing households, the loan portfolio's growth pace is also substantially influenced by the development of **real estate prices**. Compared to last year, at the end of September the average value of housing loans was over 31% larger. Had the price increase been more modest and the average loan value grown by 20%, for instance, the growth of housing loans would have decreased to the level of 52% with other conditions remaining the same. Had the average loan value grown by 10%, the growth rate of housing loans would have even shrunk to 39%. Along with this telling though robust estimation, however, one has to consider the factors that caused the appreciation of real estate prices and the rising number of borrowers (incl. the growth of incomes and changes in loan terms and conditions).

The positive effect of loan terms and conditions on the growth of housing loans is about to become exhausted. With the rise of the Euribor, **housing loan interest rates** have also started to climb. The average interest rate (4.4%) on housing loans granted in September 2006 was 1.2 percentage points higher than the year before (see Figure 2.19).

Meanwhile, as the Euribor also rose nearly 1.4 percentage points higher this year than last year refers to the fact that banks have reduced their interest margins due to tight competition. This change may certainly not be regarded as remarkable or sudden. The average interest margin of housing loans has remained quite steadily in the range of 88–95 basis points, approaching the average of the euro area. The low interest margin level expresses the continuing confidence of international markets in the Estonian economy, which, in case of any adverse developments accompanied by loss of market confidence, may entail an abrupt turn in the interest margin.

Besides the development of interest rates, a second important factor that influences borrowing abilities (but also enables the brisk growth of real estate prices) is the lengthened loan maturities. The gradual extension of the **average maturity of housing loans** also continued in 2006. In September, 59% of new housing loans were granted with maturities of over 25 years (40% of granted loans); a year ago their share amounted to 41% (27% of granted loans; see Figure 2.20).

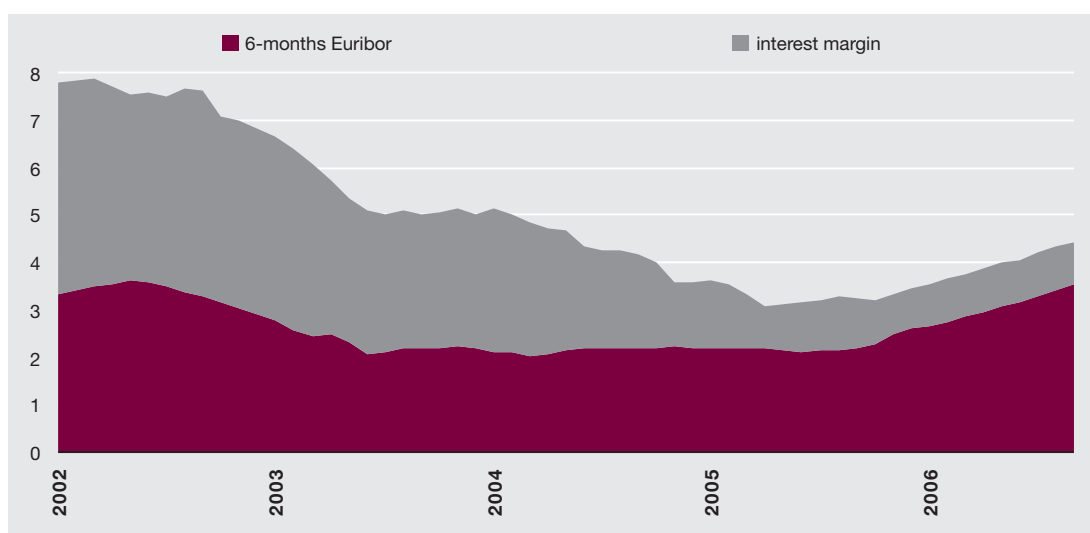


Figure 2.19. Dynamics of housing loan interest rates

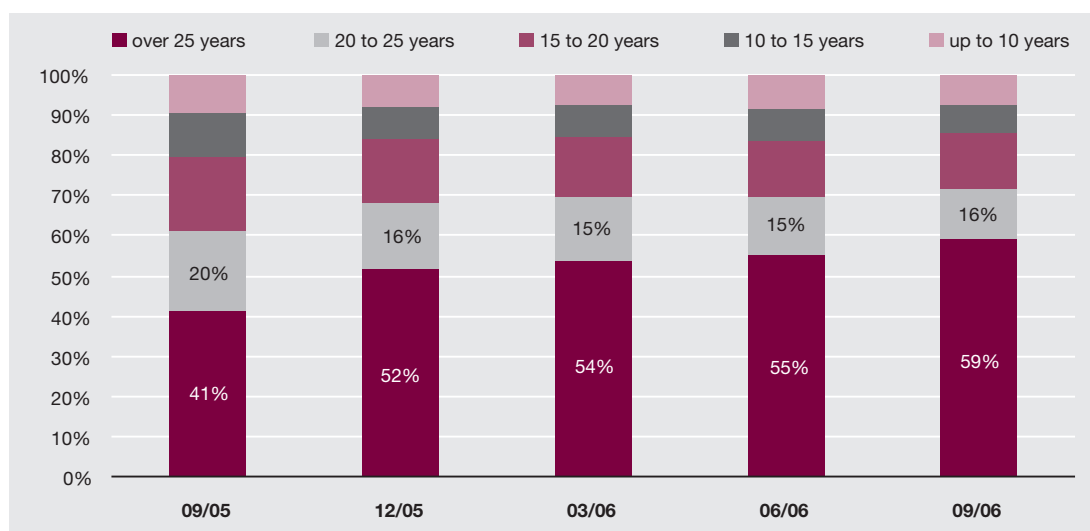


Figure 2.20. Maturity structure of new housing loans

As for the state's role in the housing market, thanks to favourable loan terms and conditions and greater access to loans, the state's intervention in the Estonian housing loan market's development is no longer necessary. The share of loans guaranteed by **KredEx** has dropped significantly. While in 2001, loans guaranteed by KredEx comprised 29% of all granted loans, in 2003 they amounted to 18.5% and in 2006 only 2.8%. During the first eight months of 2006, 797 young families and specialists had purchased homes with loans guaranteed by KredEx (loans in the sum of 582 million kroons).⁷

The **income tax refund** on the housing loan interests paid in 2005 comprised a total of 202 million kroons, growing by a modest 3% compared to the previous year (see Figure 2.21). In light of the increasing activity in the housing loan market, this development was mainly caused by a drop in the income tax rate last year and the reduction of the

income tax refund limit to 50,000 kroons per declaration. Furthermore, as loan interest rates were also at a record low in 2005, the average interest refund decreased from 3,200 kroons in 2004 to 2,700 in 2005.

Consumer credit

Rapid economic expansion has also favoured the growth of **loans not directly related to the financing of housing**, as expected. The annual growth rate of the respective loan and leasing stock accelerated to 60% at the end of September 2006. While the year-on-year rise in car leasing reached 35% and that of study loans stood at 5%, the year-on-year growth of the rest of the consumption credit portfolio⁸ amounted to 105%.

Consumption as well as obtaining consumer credit has been somewhat influenced by the surge in real estate prices. As their increase var-

⁷ Source: KredEx.

⁸ According to the common definition, consumer credit includes loans that are granted to households to purchase commodities and services, as well as credit card loans. Besides, car leasing and study loans may also be classified as consumer credit.

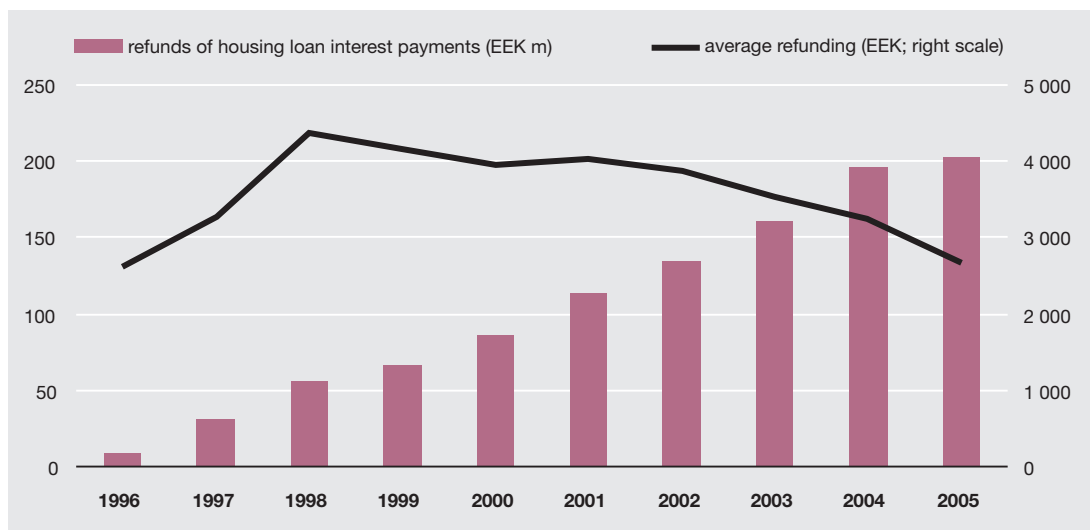


Figure 2.21. Refunds of income tax calculated on housing loan or finance lease interest payments

Source: Estonian Tax and Customs Board

iously affects owners, tenants and households with intentions of purchasing a home, the aggregate impact is not very substantial. Compared to several other developed countries, the correlation between the real estate wealth of Estonian households and their consumption is much weaker. One of the main causes for this may be the relatively lesser importance of the speculative real estate market (see background information “Does the increase in real estate prices affect private consumption?”).

The **volume of consumer credit** reached 7.2 billion kroons by the end of September 2006, comprising nearly 4% of GDP (see Figure 2.22). With car leasing and study loans, however, the stock of consumer credit amounted to 13.7 billion kroons, which is rather high in ratio to nominal GDP (7% of GDP)⁹. According to the F-monitor survey car-

ried out by TNS Emor in August-September 2006, 28% of households have obtained consumer credit (see Figure 2.23). Although leasing statistics do not indicate remarkable growth, according to the survey the number of families that opted to borrow or lease in order to purchase a vehicle has climbed substantially (10% of households; 7% a year ago). It is interesting to note that leasing is preferred in nearly half of the cases and loans were obtained by 24% (incl. 10% guaranteed by real estate). Purchasing other durable goods with a loan or through leasing has decreased compared to last year.

Interest rates on different consumer credit products have remained relatively stable during the year and have followed the rise in the euro area money market interest rate only to some extent (see Figure 2.24). The risk margin has been low-

⁹ E.g. the average consumer credit level of the euro area rose to 6.9% of GDP by July 2006 (source: European Central Bank, “Financial Stability Review”, December 2006). Non-euro area EU Member States, such as Sweden, the United Kingdom and Malta, stand out with over 10% (source: European Central Bank, “EU Banking Structures”, October 2005). However, the definitions of consumer credit may vary greatly across countries.

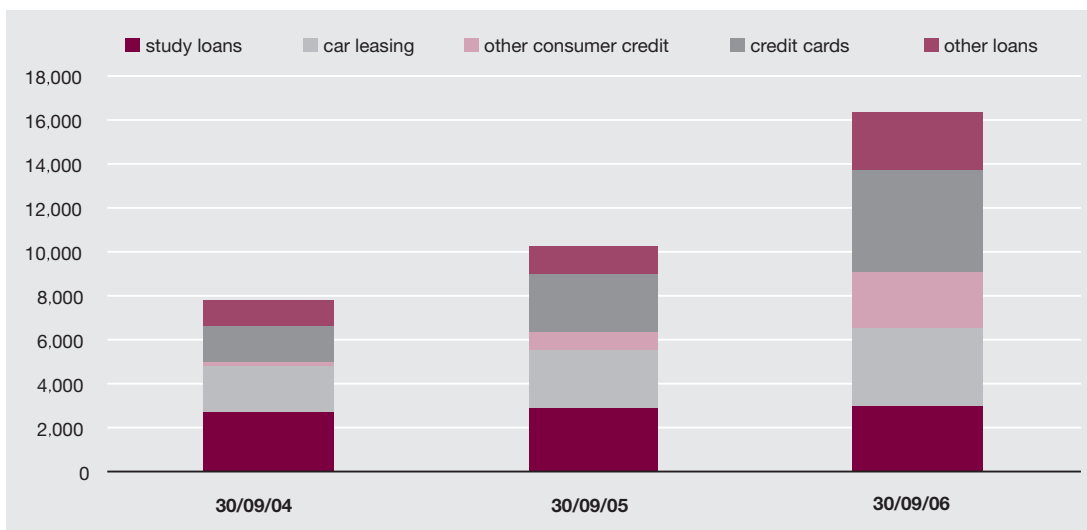


Figure 2.22. Stock (EEK m) and structure of non-housing household loans/leasing

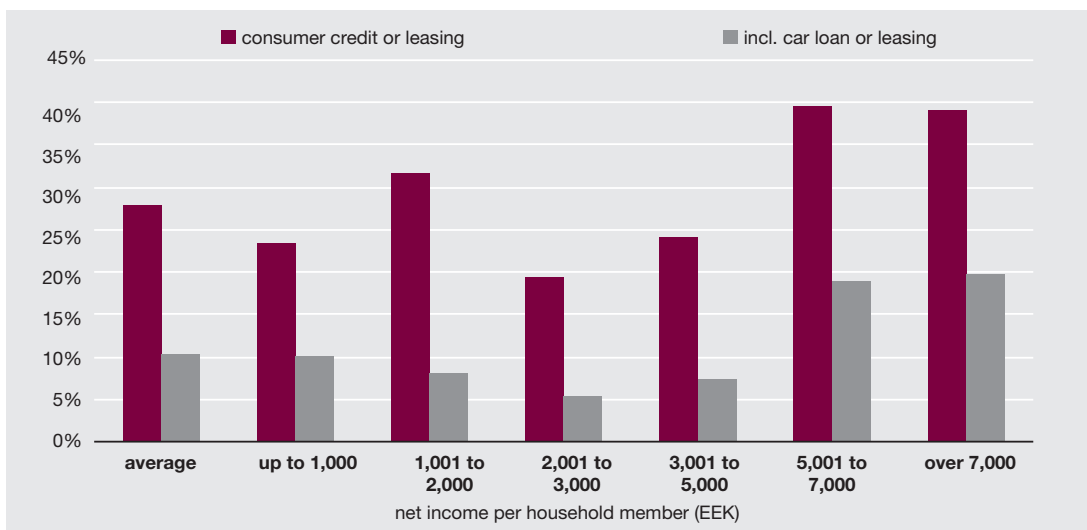


Figure 2.23. Households with consumer loan by income brackets

Source: TNS EMOR, F-monitor, August-September 2006

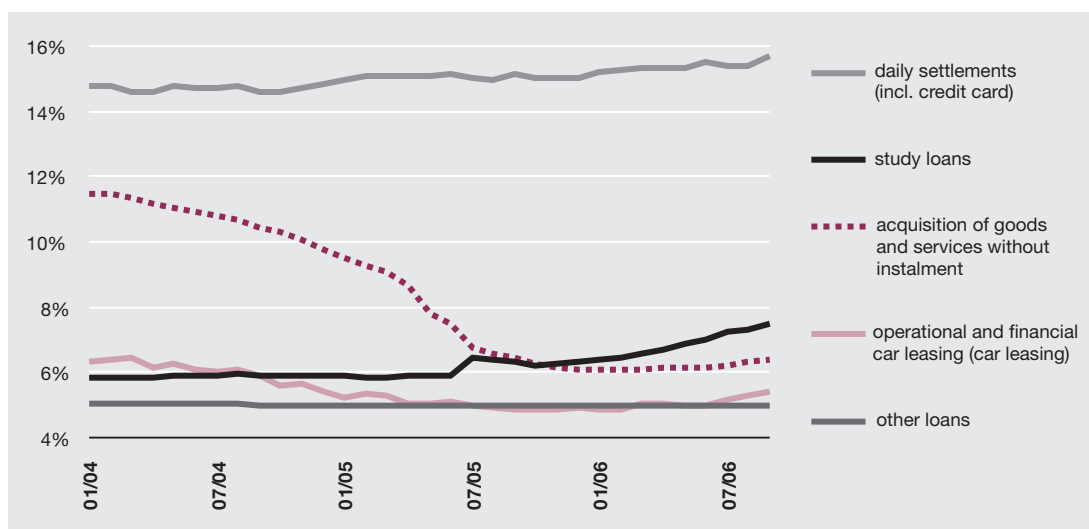


Figure 2.24. Consumer loan interest rates

* without the data of BIG

ered mostly by the increasingly frequent use of mortgages as loan guarantees (see Chapter 3, “Quality of assets”), but tightening competition

among banks has probably played a part in the interest rate dynamics as well.

DOES THE INCREASE IN REAL ESTATE PRICES AFFECT PRIVATE CONSUMPTION?¹⁰

In recent years, real estate prices in Estonia as well as advanced European economies and the US have increased quite rapidly. Changes in real estate prices or values¹¹ may influence private consumption in various ways. For instance, based on Ludwig and Slok (2002)¹², the potential impact channels may be divided as follows.

1. **Realized wealth effect** – the growth of real estate prices increases net wealth and

consumers thus may either sell their existing real estate or obtain a loan for consumption and/or investments guaranteed by real estate.

2. **Unrealized wealth effect** – the growth of real estate prices might not influence consumers towards selling their real estate or increasing their loan burden but they may

¹⁰ This approach is based on the research paper written in spring 2006, “Does the increase in housing value influence private consumption in Estonia” (A. Paabut and R. Kattai), Working Papers of Eesti Pank, 2006, in publication.

¹¹ As the amount of real estate has remained approximately the same during recent years, changes in real estate prices may also be regarded as an increase in real estate value.

¹² L. Slok, “The Impact of Changes in Stock Prices and House Prices on Consumption in OECD countries”, International Monetary Fund Working Paper Series, WP/02/1, 2002.

save less because of it, as their discounted net wealth has increased.

3. **Budget constraint effect** mostly concerns those who rent living spaces: rising real estate prices may entail an increase in rental prices, which in turn means greater pressure on the budgets of families that rent housing.
4. **Liquidity constraint effect** is related to the operation of the financial market and the existence of respective loan products. If a consumer is not able to take a loan, changes in consumption arising from price changes may be modest or even non-existent.
5. **Substitution effect** is related to consumers who are planning to purchase housing. Higher real estate prices mean greater down payments and higher repayments in the future. Hence, potential real estate owners need to limit their consumption in order to save more for loan down payments and future loan repayments.

It is very complicated or even impossible to distinguish between the impacts of these effects upon empirical assessment. However, in cases of a rise in real estate value the overall impact of these effects on private consumption can be observed.

The amount of marginal propensity to consume out of wealth¹³ (MPC) deriving from total wealth depends on the division of households' wealth among different components (financial wealth, real estate wealth and holdings in enterprises), the planning horizon as well as the different liquidity of wealth components. Usually, the impacts of changes in real estate wealth are assessed by a consumption equation. Studies based on micro data have found the MPC

stemming from wealth to be 5.4–8.2 cents per euro of wealth value; the respective indicator of MPC deriving from real estate wealth is somewhat smaller, i.e. 2–6.2 cents per euro of real estate value. By assessing the macro data it has been found that MPC deriving from wealth is 3–16 cents per euro of wealth value and the MPC stemming from real estate value remains within the range of 1.3–7.5 cents per euro of real estate value. The greatest indicator (i.e. 7.5 cents per euro of real estate value) was found in Germany, but this is exceptional – usually it remains within the range of 1.3–4 cents (see Figure 2.26).

The consumption function was evaluated by using the macro data of **Estonia** (during the period 1997–2005) and the long-term propensity to consume out of wealth due to real estate wealth was found to be **1.1 cents per kroon of real estate value** (see Figure 2.27). Compared to other countries this indicator is significantly smaller and may derive from the abovementioned effect. In Estonia, acquired real estate or real estate in the process of being purchased is primarily used for living and the increased number of real estate transactions within recent years indicates households' desire to improve their living conditions rather than an interest in speculation. Additionally, here the development of the financial market is an important factor: loan standards require a 10–40% loan down payment from households, which may significantly hinder the possibilities of many households to obtain a loan in the near future. Meanwhile, the growth of real estate prices has increased the rate of self-financing in cases of real estate acquisitions. Thus it may be said that **in Estonia, these effects offset**

¹³ Marginal propensity to consume out of wealth (MPC) indicates how many cents are consumed from every euro/kroon added to the value of wealth.

each other sufficiently and the impact of the rising value of real estate on private consumption has remained modest.

In conclusion, the increase in real estate value in Estonia does affect private consumption, but to

a much smaller extent than in other developed countries. However, there is no reason to believe that changes in real estate wealth should affect private consumption less – in other countries real estate wealth also plays an increasing role in affecting private consumption.

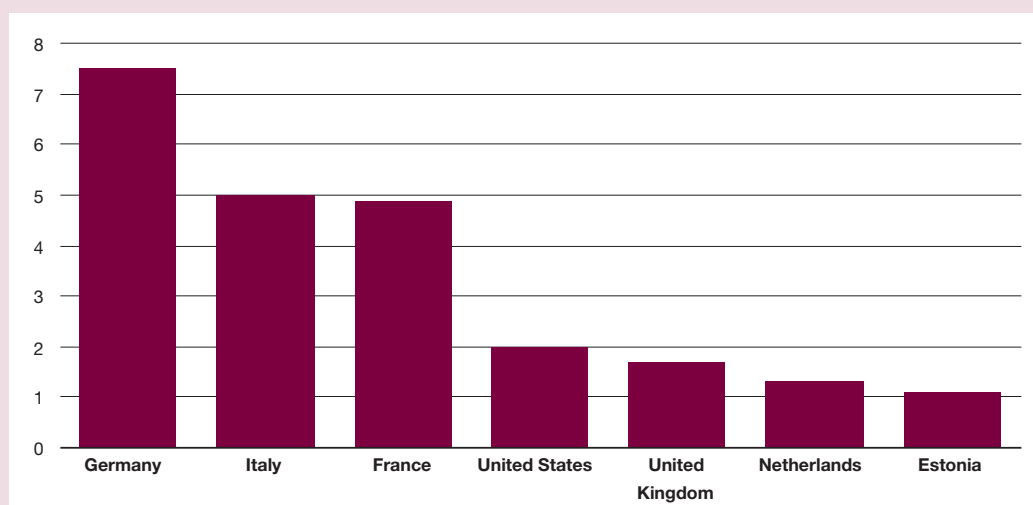


Figure 2.25. Marginal propensity to consume out of housing wealth in selected countries (%)

Sources: Altissimo et al. (2006) "Wealth and asset price effects on economic activity"; Paabut, Kattai "Does the increase in housing value influence private consumption in Estonia?" (2006)

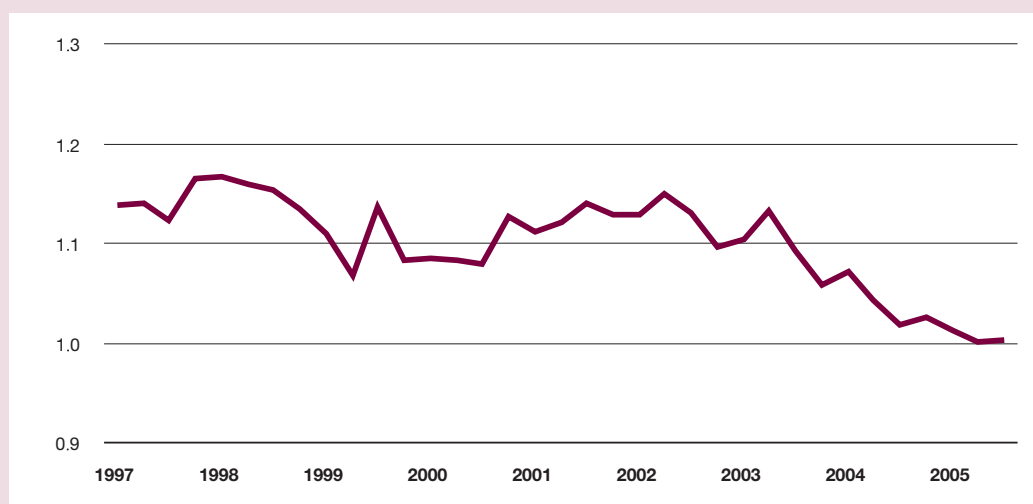


Figure 2.26. Marginal propensity to consume out of housing wealth in Estonia (%)

Source: Paabut, Kattai "Does the increase in housing value influence private consumption in Estonia?" (2006)

Households' loan-servicing capability and risks

Within the first nine months of 2006, the loan servicing costs of households have shot up drastically. By late September the **interest burden**¹⁴ of households had already reached 3.8% (see Figure 2.25). While in previous years, it grew mainly due to a remarkable increase in loan volumes, the past 12 months have also shown the influences of rising interest rates. For instance, had the average loan interest rate remained at the previous year's level, the interest burden ratio would have stood at 3%. In comparison: in Nordic countries where the debt burden is much higher, the interest burden of households is not much higher than in Estonia (at the end of 2005, the respective indicator in Sweden amounted to 3.4%, in Denmark 4.3%, in Norway 4.4% and in Iceland 11.3%)¹⁵ and in the euro area it amounts to an average level of 4%.

The interest burden ratio will probably also keep growing rapidly next year. Presuming that the relatively fast growth of loans and rise in interest rates

continue, while the growth of households' net incomes will probably diminish. The growth of the interest burden is fostered by households' uncovered interest rate risks. Although since the autumn of 2005, the attitude of loan customers towards **fixing interest rates** has started to change, this opportunity has still been used quite modestly. After the eagerness for interest rate fixing faded slightly during the summer months, in autumn banks again started advertising interest volatility protection, which is also reflected in a slight growth of borrowing with fixed interest rates. Meanwhile, as interest rates in housing loan contracts with fixed interest rates are higher by an average of 0.5–0.75 percentage points depending on the duration of the contract, households consider fixing interest rates unprofitable at the present time.

The **total cost of loan-servicing** in the household sector (i.e. interest payments with loan repayments) has also increased remarkably, although the continuing extension of loan maturities has somewhat

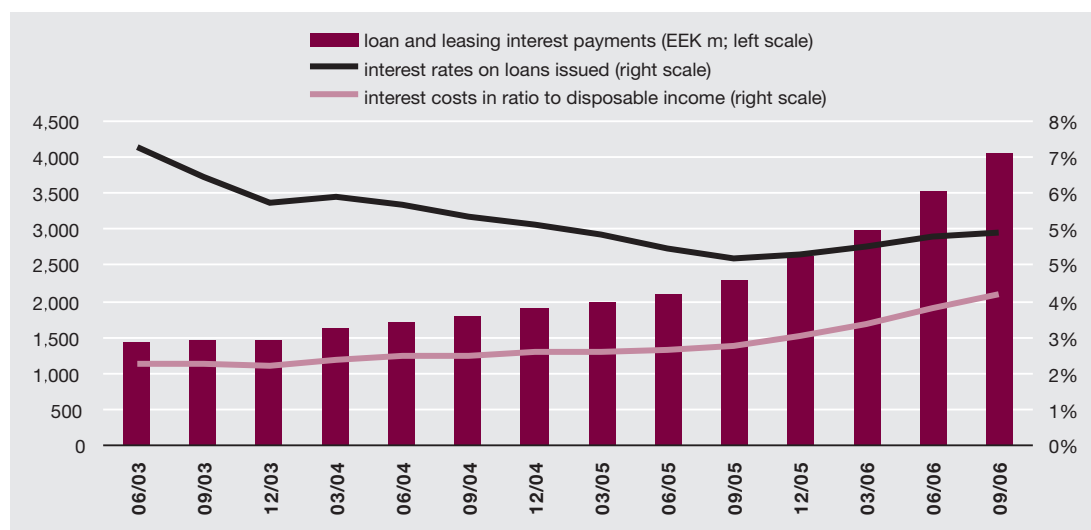


Figure 2.27. Households' loan and leasing interest payments during a year, interest rates on outstanding loans and interest expenditure costs in ratio to disposable income

¹⁴ Interest rate burden is the ratio of interest payments to disposable income.

¹⁵ Source: national central banks and European Central Bank, *Financial Stability Review*.

alleviated the negative impacts of increasing real estate prices on the ability of households to service their loans. According to the F-monitor survey conducted by TNS Emor in 2006, the average monthly loan repayment comprised 24% of the households' monthly net incomes (19% a year ago and 18% two years ago). At the same time, the share of households who have to pay over 30% of their net income to service the loan has shrunk, making up 10.5% (see Figure 2.26).

vice their loan commitments successfully so far. Although the interest burden of households has grown, the rise of the Euribor has not substantially reduced the ability to service loans, because the climbing net wage has been able to offset the negative impact of the interest rate rise. However, it is important that households' optimistic expectations about growing incomes do not prevent them from assessing and, if necessary, hedging their risks adequately.

In conclusion, the high quality of the housing loan portfolio refers to the ability of households to ser-

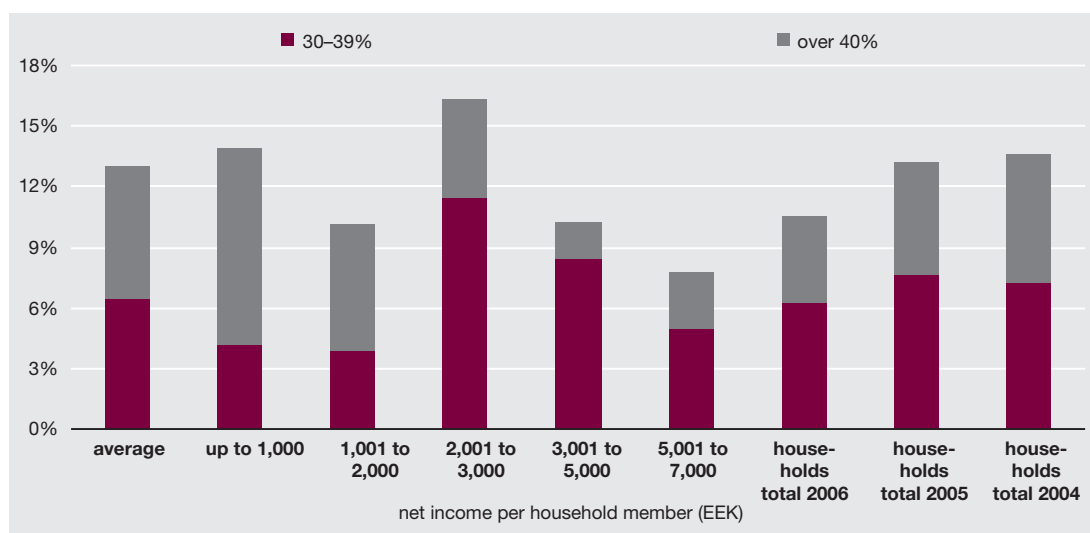


Figure 2.28. Households with financial liabilities where loan-servicing costs in ratio to household's net income exceed 30%

Source: TNS EMOR, F-monitor, August-September 2006

ASSESSING THE DEVELOPMENT OF THE FINANCIAL SECTOR AND FINANCIAL DEEPENING

Financial sector plays an important role in the economy, which is why its development has primarily been explored from the aspect of promoting economic development. In order to study the financial sector's impacts on economic development, one has to determine the indicators characterising the development of the financial sector. However, as there is no common method to assess the financial sector's ability to fulfil its tasks, the question arises which indicators would be most suitable for that purpose. The aim of this background information is to discuss the indicators suggested in the literature and used for measuring the financial sector's development and the problems related to them.

The following are generally regarded as the main tasks of the financial sector: a) acquiring information about potential investments b) monitoring and evaluating investments after a positive investment decision, c) facilitating risk diversification and management, d) mobilising and allocating savings, and e) facilitating the exchange of trading goods and services. Accordingly, the role of the financial sector is to reduce market failures that occur in the course of financing the economy due to the acquisition of information, enforcement of contracts and transaction costs. The assessment of the financial sector's development should thus be based on how well it can perform the abovementioned tasks. However, as unambiguous assessment is complicated, if not impossible, various indicators have been used for this purpose in the literature.

The basis for literature dealing with the relationship between the financial sector and economic growth was laid by Schumpeter (1911), who claimed that financial intermediaries are essen-

tial from the viewpoint of technological innovation and economic development. Goldsmith (1969) and McKinnon (1973) were next to demonstrate the positive correlation between the financial sector and economic growth, drawing attention to the positive viewpoint of the financial liberalisation from the viewpoint of economic development. However, some studies also claim that economic development promotes the financial sector, not vice versa, or even question the existence of any correlation between the development of the financial sector and economic growth as such.

Goldsmith and McKinnon also proposed the first indicators that characterise the development of the financial sector. Goldsmith measured it by the ratio of financial intermediaries' assets to GDP; McKinnon measured it by the ratio of money supply to GDP. Indeed, the development of the financial system is most frequently assessed through financial deepening, which is generally regarded as the increase in the volume of financial intermediation in ratio to GDP. In order to assess the impact of the liberalising of financial markets, real interest rates were also used to describe financial development.

Further studies also tried to take into consideration that the role of the financial sector be fulfilled by delegated financial intermediaries and that savings intermediated by the financial sector reach the private sector, which is essential from the aspect of economic development. Thus, the following indicators were added to the ratio of financial intermediaries' assets or monetary aggregates to GDP: a) loans granted by banks divided by the sum of their and the central bank's domestic assets and b) the private sec-

tor's loans divided by GDP. The ratio of financial intermediaries' assets or monetary aggregates to GDP and private sector loans divided by GDP have remained the most frequently-used indicators by which financial deepening and the financial sector's development are described.

In addition to the volume growth of financial intermediaries, the development of the financial sector is also characterised by the improvement of efficiency and the availability of financial services. In addition, it has been found that the financial sector's ability to fulfil its tasks is also influenced by the financial market's structure and competitive ability, liberalisation of financial markets, institutional environment, economic convergence, and monetary policy. The financial sector's improvement in efficiency has been described by the loan-deposit spread, and the ratio of the monetary base to bank deposits. The availability of financial services has been proxied by the ratio of population to the number of banks. In addition, indices reflecting financial development have been constructed, which have also tried to capture the qualitative characteristics of the financial sector with the help of expert opinions.

For international comparison of the financial system's development, or more specifically, financial deepening, mainly indicators based on the domestic banking sector have been used. As an alternative (or in addition) to those, indicators reflecting the stock market's volume and turnover have also been employed. These measures aim to determine the financial sector's ability to fulfil its tasks by the volume of the financing of the economy that occurs through the domestic financial sector. This approach, however, focuses narrowly on only one or a few financing components of the economy and is inadequate from the aspect of the modern financial system, as the financial markets' integration deriving from

globalisation and structural differences between the domestic financial sectors of various countries are not taken into consideration.

As a result of the integration of financial markets, the borders between financial sectors have become ambiguous. If there are no restrictions on the movement of capital between countries, foreign borrowing can play an important role besides the funds intermediated by the domestic financial sector. Similarly, the financing of the private sector may occur through other financial intermediaries besides banks or securities markets (e.g. leasing companies). For example, within the European Union, there are economies that are 100% financed by banks as well as economies that are about half-financed by other funds (incl. foreign loans; see Figure 2.29). However, if there are no restrictions on capital movement, neither the physical location nor form of the financial market is essential from the perspective of financing. From the aspect of financing the economy, what matters is the access to finance regardless of from where or through which channels it is provided.

The drawbacks of using only one or two components of the total borrowing of the private sector to describe financial deepening appear especially clear in the cases of countries where great institutional and structural changes are taking place that may significantly influence the development of different components of borrowing. Consequently, one may draw the wrong conclusions based on a borrowing component's development that is undergoing structural changes. Hence, an adequate assessment of financial deepening requires the usage of indicators that cover the total borrowing of the economy.

In conclusion, there is no common understanding or agreement on how to describe and assess the capability of the financial sector to fulfil

fill its given tasks. Various indicators have been used for that purpose and no common approach has been found as of date. Indicators based on the domestic banking sector or securities market are often applied in order to describe financial deepening, but they do not take the integra-

tion of financial markets or international structural differences of financial markets into account. If financial deepening indicators are to be used, one has to apply indicators reflecting the total borrowing of the economy in order to draw informative conclusions.

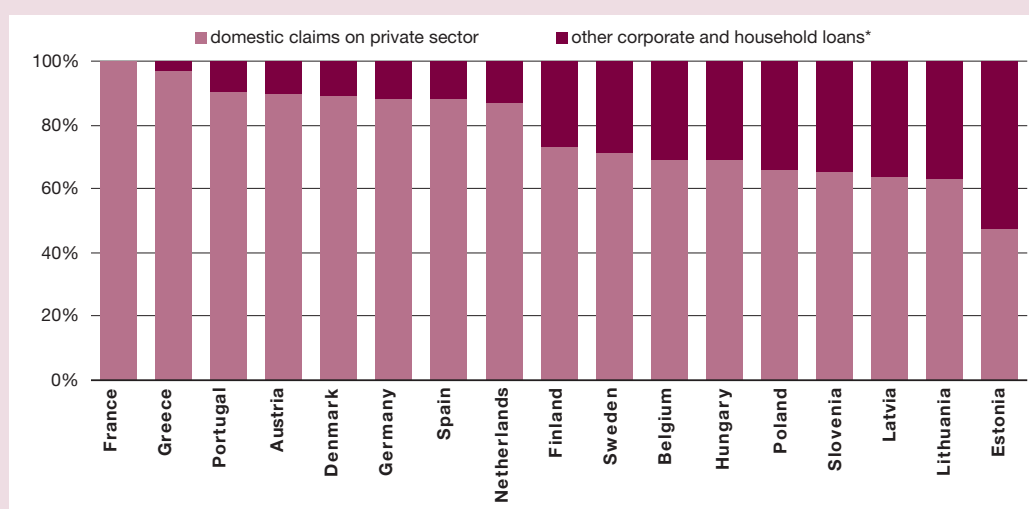


Figure 2.29. Structure of loans taken by non-financial corporations and households in EU countries at the end of 2004

* leasing and foreign loans

Sources: Eurostat; IMF, International Financial Statistics, August 2006