



E AGGREGATE EU HOUSEHOLD INDEBTEDNESS: FINANCIAL STABILITY IMPLICATIONS

INTRODUCTION

The household sector is one of the key sectors for financial stability analysis in EU and in the euro area for two main reasons. Firstly, the household sector accounts for a significant proportion of non-bank lending in terms of the stock of credit outstanding. At the end of June 2004, approximately 30% of loans granted to euro area residents were to households (see Chart E.1). By contrast, about 25% were granted to non-financial corporations. This share has not changed very significantly since the start of EMU.

Secondly, the growth rate of lending to this sector has also been the fastest among the non-financial sectors in recent years. The growth rate of loans extended to households in some EU countries has been very strong over recent years. There has been little sign yet of a reversion to more conventional growth patterns in 2004, and this category has been the fastest growing type of lending in the euro area for the past two years (see Chart E.2).

This Special Feature concentrates on lending trends to households over the period 2002-2003, though longer periods are used where relevant. It assesses

the most important exposures for euro area and EU banks to the household sector as far as the data allows.¹

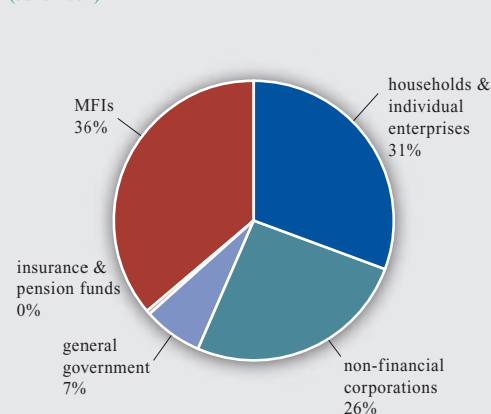
DATA SOURCES FOR FINANCIAL STABILITY ANALYSIS

The most comprehensive way of conducting this analysis is to look at multiple sources of data in order to cross-check the analysis. These sources could potentially include the assets and liabilities sides of the household sector's balance sheet; explicitly modelling the debt of the household sector using financial accounts data; or analysis of micro data from representative surveys of each country.²

- 1 The analysis is based on quantitative and qualitative data provided by the Banking Supervision Committee, and on ECB and other data gathered from secondary sources where necessary. Euro area data are used for time series data in some of the graphs owing to the non-harmonised nature of the data in the EU15.
- 2 For examples of each see Benito, A., J. Whitley and G. Young (2001), "Analysing Corporate and Household Sector Balance Sheets", Bank of England Financial Stability Review, December 2001; Hamilton, R. (2003), "Trends in Secured Debt", Bank of England Quarterly Bulletin, Autumn 2003; Kearns, A. (2003), "Mortgage Arrears in the 1990s: Lessons for Today", Central Bank of Ireland Quarterly Bulletin, Autumn 2003; The Nederlandsche Bank (2003), "The Financial Behaviour of Dutch Households", DNB Quarterly Bulletin, September 2003; and Riksbank (2004), "Swedish Households' Indebtedness and Ability to Service Debt – An Analysis of Household Data", Financial Stability Report, 1/2004. For a more macroeconomic perspective, see Debelle, G. (2004), "Household Debt and the Macroeconomy", BIS Quarterly Review, March.

Chart E.1: Distribution of bank lending to euro area residents

(June 2004)



Source: ECB staff calculations.

Chart E.2 Total loans to euro area households and non-financial corporations

(Mar. 1999 – Jun. 2004; % growth per annum)



Source: ECB.

However, each of these approaches is to a greater or lesser degree unsuitable for the present purpose. A full set of quarterly financial accounts is not yet available for the euro area owing to incomplete information on some instruments and sectors and a lack of published national financial accounts in some Member States. There are also methodological difficulties in comparing data across countries, which precludes the use of more sophisticated modelling approaches based on these data.³ Finally, micro data have been used in some countries to provide a more holistic view of household indebtedness. For the EU as a whole, there is a lack of a timely data source. The main comprehensive EU data source is the European Community Household Panel Survey (ECHPS), the last panel of which was undertaken in 2001. This article uses harmonised euro area data on banks' lending to households in the euro area and on additional information collected through the Banking Supervision Committee.

environment together with the probable wealth effects of steadily increasing house prices in some EU countries has driven strong demand for housing and consumer credit. At the same time, supply has been fostered by competition between banks in some countries. The resulting growing level of household indebtedness has a number of possible implications for financial stability.

In the euro area, annual consumer loan growth to the household sector peaked at over 10% in 1999, slowing down to about half that rate thereafter. However, it picked up again after the first quarter of 2004. By contrast, even though annual growth rates in loans extended to households for house purchase peaked at over 12% in 1999, they have continued to grow at about 8% thereafter (see Chart E.3).

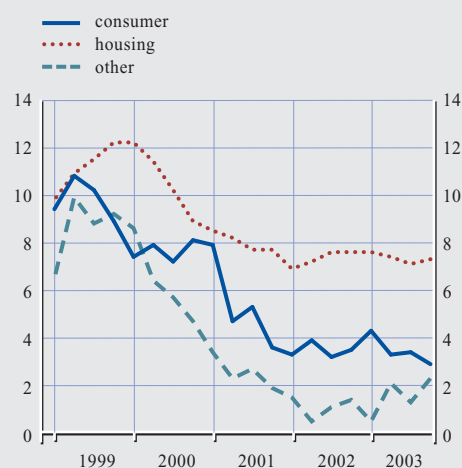
HOUSEHOLD LENDING EXPOSURES: AN OVERVIEW

Lending to households has been fuelled both by demand and supply stimuli. A low interest rate

3 A comparative analysis has been carried out on the non-financial sector balance sheets in the euro area, the US and Japan; see ECB (2004), "Developments in Private Sector Balance Sheets in the Euro Area and the United States", ECB Monthly Bulletin, February.

Chart E.3 Euro area lending to households by type

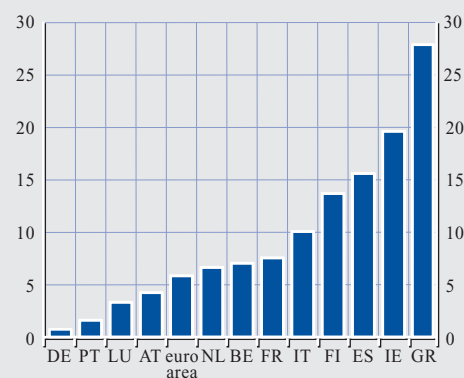
(Q4 1998 – Q3 2003; % growth per annum)



Source: ECB.
Note: The annual growth rates are calculated from flows.

Chart E.4 Loans to households in the euro area

(2002 – 2003, % growth per annum)



Source: ECB.
Note: Growth rates are based on outstanding amounts and do not take into account the effects of securitisations.

SIZEABLE CROSS-COUNTRY DIFFERENCES EXIST IN THE EURO AREA MEMBER STATES

Trends in euro area aggregate data also mask sizeable differences within the region. Chart E.4 shows loan growth to households – including both consumer and housing loans – between 2002 and 2003 by country. Household sector lending growth was fastest in those countries with a relatively strong rate of economic growth. By contrast, loan growth to households was subdued in other countries, for reasons primarily related to sluggish economic growth.

BACKWARD-LOOKING INDICATORS OF RISK EXPOSURES

Given the sizeable difference in growth rates, it may be reasonable to ask whether the risks faced by banks also differ across countries. One of the key risks for banks is the credit risk they face in extending loans to households. A backward-looking indicator of the risk exposure of the banking sector to household loans is the amount of arrears incurred by banks on such loans extended in the past. However, data for EU countries are either not harmonised or incomplete, so that it is only possible to make broad cross-country comparisons.

The distribution of the ratio of loans in arrears and non-performing to total loans for 2003 is relatively uneven across the EU. The majority of the countries for which data were available had a ratio of distressed loans as a proportion of total loans of less than 3%. Some countries had higher figures. These high figures generally relate to a shorter period for the classification of problem loans than for the other countries.⁴ Overall, it is difficult to draw any firm conclusions concerning financial stability from this indicator.

HOUSING AND NON-HOUSING LENDING

The main factors underpinning this accumulation of debt have been financial liberalisation such as relaxing liquidity constraints, growth in disposable income and employment, a reduction in repayment burdens through the reduction in nominal and

real interest rates over the period, as well as an increase in residential property prices.⁵

Unfortunately, there is a paucity of data concerning arrears owing to housing or non-housing credit to the household sector. To understand the aggregate figures better, the amount of loans granted to the household sector can be split by country into housing and non-housing components. Housing credit can generally be regarded as being secured, as the property provides collateral for a significant proportion of the loan. Non-housing credit can be approximated by other credit granted to households. In common with the dispersion in the growth rate of loans mentioned in the previous section, the distribution of housing and non-housing lending varies significantly across the euro area.

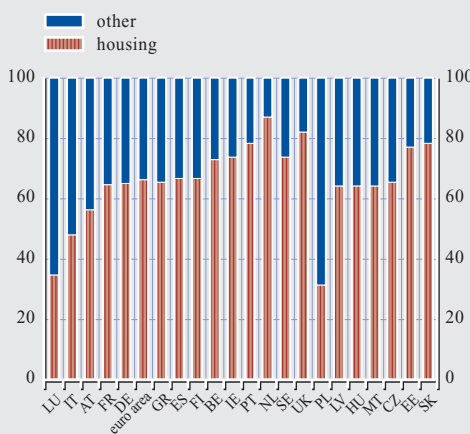
At the end of 2003, about two-thirds of lending to the household sector in the euro area was destined for housing, with the remainder accounted for by consumer lending and other

4 See Moody's (2003), "Non-performing Loans and Loan-Loss Provisioning Policies in Various European Countries", Special Comment, October

5 See ECB (2003), "Structural Factors in EU Housing Markets", for a full discussion of these factors as well as the influence fiscal policy has on the housing market

Chart E.5 Share of housing and non-housing credit in the EU

(end-2003, %)



Sources: ECB and Banking Supervision Committee (BSC) for non-euro area countries.

credit. Within the euro area, the share of housing-related lending in total lending to households in 2003 remained relatively small in several countries (see Chart E.5). At the other extreme, some countries had about 90% in housing lending. In other EU Member States, a significant proportion of lending goes towards housing, as is the case in some of the new Member States.

HOUSING LOAN RISKS

Two factors may be particularly relevant for financial stability analysis in the euro area and in some EU Member States: interest rate sensitivity, and the increase in residential property prices.

REPAYMENT RISK

(i) *Repayment burden sensitivity*

The effects of interest rate changes will vary depending on how much household net worth is in housing assets and how much is in financial assets. The sensitivity of borrowers to interest rates also depends on the relative availability of fixed and variable rate mortgages. At the end of 2003, about 43% of euro area housing loans were contracted at floating interest rates with initial fixation periods of less than one year, while the remaining 57% were fixed between one and ten years. In the EU, the mix between floating and fixed rate mortgages differs substantially across countries. Table E.1 shows this more clearly. In seven countries, the most common interest rate contracts for new housing loans in 2003 were fixed, while in the remaining 16 countries for which information was available, variable rate loans were more widespread.

The sensitivity of households to changes in repayment burdens will therefore differ substantially, with countries with predominantly floating rates first to feel any changes in interest rates.⁶

Continued debt accumulation may become a source of concern for financial stability if it affects households' debt servicing capacity. The

way in which mortgage borrowers adjust to an environment of lower interest rates is *ex ante* ambiguous. For instance, some borrowers may refinance at lower interest rates to reduce their debt service burden, if this is allowed by banks or if other institutional barriers such as legal fees are not prohibitive. However, other borrowers may take advantage of the lower repayment burden to assume more debt, thereby increasing their indebtedness and, possibly, increasing the duration of their repayment widespread.

(ii) *Repayment burden risks*

There is a risk that there may be some interest rate illusion among borrowers, given the very low level of nominal interest rates by historical standards. A recent report shows that in one EU country most borrowers focus excessively on the initial financial cost of the mortgage rather than the longer-term level of future interest rates and repayment burdens.⁷ In particular, borrowers may not have entirely factored the possibility of future changes in short-term interest rates into their repayment schedules. This risk may be partially mitigated by stress testing exercises for banks and their borrowers, as well as by the fact that, according to the limited information available, heavily indebted borrowers currently make up only a small proportion of banks' loan books.

Other important factors that can impact on the capacity of households to service their debts include the possibility of a rising unemployment rate or of a reduction in disposable income. Ultimately, these can be a source of risk for banks. Whether or not this risk materialises as an idiosyncratic country-specific or as a region-specific shock will colour its importance for the euro area and the EU financial systems.

⁶ However, even with fixed rate mortgages, there are some risks for repayment burdens. The term until the next period of re-fixing will also have a bearing on the repayment burden faced by households. For example, the Nederlandsche Bank (2003) points out that even though the majority of housing loans were contracted at a fixed rate in the Netherlands, one-quarter of the outstanding mortgage contracts will be re-fixed before the end of 2004

⁷ See Miles, D. (2003), "The UK Mortgage Market: Taking a Longer-term View: Interim Report", UK Treasury, December, Chapter 3.

Table E.1: Most common types of interest rate contracts for new mortgages in 2003

Country	Type	Country	Type
AT	Variable	DK	Fixed
BE	Fixed	SE	Variable
DE	Fixed	UK	Variable
FI	Variable	CZ	Fixed
FR	Fixed	EE	Variable
GR	Variable	HU	Fixed
IE	Variable	LI	Variable
IT	Variable	MT	Variable
LU	Variable	PL	Variable
NL	Fixed	SL	Variable
PT	Variable		
ES	Variable		

Source: Banking Supervision Committee (BSC).
Note: Variable includes fixed for less than one year. Fixed includes contracts with an initial fixation period of greater than one year.

HOUSING LOANS AND PROPERTY PRICES

(i) Links between property prices and the mortgage market

In recent years, real residential property prices have increased markedly in some countries (see Chart 2.11). While the main increase in indebtedness has for the most part been due to increased income expectations and low nominal interest rates, in some countries the interaction between housing and mortgage market dynamics may have tightened the link between residential property prices and mortgage indebtedness.⁸

One obvious link is mortgage equity withdrawal (MEW). This phenomenon is significant in some EU countries; however, harmonised data do not exist that would enable making a detailed cross-country comparison. Equity withdrawal in itself is not an immediate cause for concern from a financial stability perspective, as it depends on the purpose for which borrowers use the equity. The relatively limited available evidence for euro area Member States from micro-data studies shows that in some countries only a very small percentage of borrowers used MEW to restructure their balance sheets. A recent empirical study examining a small sample of countries also tends to point in this direction, although the magnitude of the effect varies markedly across countries.⁹ If household consumption is becoming more

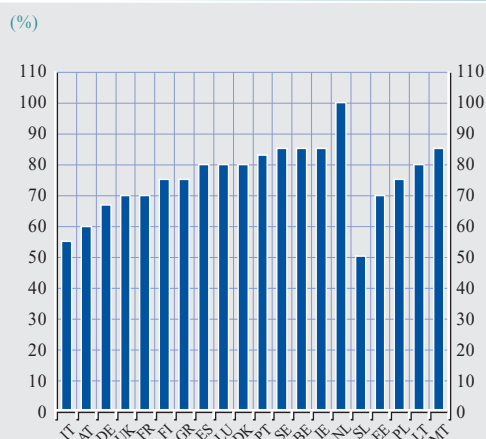
closely dependent on mortgage credit and housing markets, then an important issue is whether banks are adopting prudent lending policies that are robust to changing economic circumstances.

A frequently used measure of prudence in mortgage lending is the Loan to Value ratio (LTV). This is the original outstanding amount of mortgage debt expressed as a ratio of the value of the property.¹⁰ LTVs are used by credit institutions as an important input into the decision-making process in advancing new loans. There is a sizeable degree of variation in this ratio across the EU (see Chart E.6).

There is some evidence for individual countries that some borrowers have LTVs ranging from 90-100%. However, these represent a small

- 8 See Gerlach, S. and P. Weng (2004), "Bank Lending and Property Prices in Hong Kong", Journal of Banking and Finance, forthcoming.
- 9 See Catte, P., N. Girouard, R. Price and C. Andre (2004), "Housing Markets, Wealth and the Business Cycle", OECD Economics Department Working Paper No 394. Given that many of these economies underwent structural changes during the period, the coefficients on the consumption functions should also be interpreted with caution.
- 10 The method of valuation consists of open market valuation or by reference to historical averages.

Chart E.6 Loan-to-value ratios on new mortgages in 2003



Sources: Banking Supervision Committee (BSC) and ECB (2003).
Note: LTVs are average LTVs on new mortgages loans in 2003.

proportion of the overall stock of lending for house purchase. In several countries LTVs increased slightly in 2003. In general, regulatory restrictions on the maximum level of LTVs do not appear to be common in Member States.

Furthermore, while LTVs may represent the haircut the bank takes on the mortgage loan, different methods for valuation of the house collateralising the loan may impact on the dynamics of lending over the cycle.¹¹ However, the evidence for this is limited at present.

(ii) Risk of a disorderly correction in residential real estate prices

A reduced ability to repay through either increased repayment burdens or reduced income would not automatically produce increased mortgage defaults and losses for banks, given that mortgage lending is secured. However, the ability of banks to realise this collateral varies across countries.¹²

In a rising interest rate scenario, with floating rates, this may result in both negative income and wealth effects for households. Such effects also depend on households' holdings of financial assets. In the worst-case scenario, a positive correlation between rising interest rates, a decreased ability to repay, and a decline in house prices may cause problems for lenders, particularly those with a substantial exposure to the residential property market. This low probability risk may be more relevant in countries where the mortgage credit and housing markets are becoming ever more closely intertwined.

NON-HOUSING LOAN RISKS

While the increase in consumer credit outstanding has been substantial in some countries, the stock of consumer and other credit as a proportion of total loans to households remains quite small (see Chart E.5). Lending to consumers is usually a high margin business for banks and their consumer finance subsidiaries. One of the reasons why consumer credit attracts high margins is that the loans are usually unsecured

and hence carry higher risk. It has grown in importance as a business line in recent years but, as with housing lending, growth has been unevenly distributed across Member States.

PRICING OF CONSUMER CREDIT RISK

In an effort to price risk more efficiently, the use of credit scoring models by banks or their consumer finance company subsidiaries has become widespread. As Chart E.3 shows, this type of lending for the euro area appears to be somewhat more volatile than housing-related lending. This is not especially surprising given that households' ability to repay consumer loans – with relatively short maturities – generally varies with their income and business cycle conditions.

Despite the fact that this type of lending, as a proportion of total household debt, is relatively small, some individual country evidence suggests that it tends to have a higher level of arrears than mortgage debt. The development of scoring models is important in containing the incidence of future write-offs and as part of supervisory initiatives to improve risk management practices (see Special Feature D). Scoring models are also subject to model uncertainty, and may not perform as accurately during economic downturns owing to changes in household behaviour, or if losses do not follow historical patterns. One instructive example can be taken from the US experience during the 2001 downturn. For secured lending (credit card and other consumer loans), one-third of respondents to the Federal Reserve senior loan officer survey – conducted in January 2002 – reported worse expected credit quality than would have been predicted by their credit scoring models, taking the slowdown into account.¹³ Given that the use of these models is quite widespread in Europe, there is a need to review periodically the assumptions upon which

11 See Tsatsaronis, K. and H. Zhu (2004), "What Drives Housing Price Dynamics: Cross-country Evidence", BIS Quarterly Review, March.

12 See Catte et al. (2004).

13 Senior Loan Officer Opinion Survey, January 2002.

these models are based in order to ensure their accuracy regarding expected losses.

CONCLUSIONS

At the current juncture, the risks facing the EU banking sector as a whole that arise from exposure to households appear relatively sanguine, though the situation varies at a country level. There are some caveats concerning the analysis of risks from a "top-down" perspective, i.e. by using aggregate data. The ideal situation would be to complement this type of analysis with household micro data in order to understand better the distribution of European indebtedness and the consequences of this for banks.

The risks to the banking sector posed by stretched household balance sheets are quite closely linked to the evolution of the macroeconomy, as this impacts on the ability of households to service their debt burdens. The improvement of banks' risk management systems and risk transfer methods may mitigate this to some extent. Improved risk management may also have led to European banks' provisioning for losses being less cyclical in nature. The available evidence for the euro area and the EU suggests that banks have increased their solvency ratios, which will contribute further to resilience in the face of unexpected losses.

Looking forward, to the extent that households have been myopic concerning the future evolution of interest rates, an unanticipated increase in repayment burdens across Member States could lead to household balance sheet strains, ultimately posing credit risks for banks. Given differences in the share of fixed and floating rate debt across the EU countries, increased burdens are not likely to be shared symmetrically by households across the region.