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Survey data on household finance and consumption - research summary and policy use

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EUROPEAN CENTRAL BANK
EUROSYSTEM

OCCASIONAL PAPER SERIES
NO 100 / JANUARY 2009

SURVEY DATA ON HOUSEHOLD FINANCE AND CONSUMPTION

RESEARCH SUMMARY AND POLICY USE

by the Eurosystem
Household Finance and
Consumption Network

EUROPEAN CENTRAL BANK

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ABSTRACT

The first part of this paper provides a brief survey of the recent literature that employs survey data on household finance and consumption. Given the breadth of the topic, it focuses on issues that are particularly relevant for policy, namely: i) wealth effects on consumption, ii) housing prices and household indebtedness, iii) retirement income, consumption and pension reforms, iv) access to credit and credit constraints, v) financial innovation, consumption smoothing and portfolio selection and vi) wealth inequality. The second part uses concrete examples to summarise how results from such surveys feed into policy-making within the central banks that already conduct such surveys.

Keywords: Household finance, consumption, survey data

JEL Classification: C42, D12, D14

NON-TECHNICAL SUMMARY

This paper has a dual purpose. First, it provides a brief survey of the recent literature that employs survey data on household finance and consumption. Given the breadth of the topic, it focuses on issues that are particularly relevant for policy, namely: i) wealth effects on consumption, ii) housing prices and household indebtedness, iii) retirement income, consumption and pension reforms, iv) access to credit and credit constraints, v) financial innovation, consumption smoothing and portfolio selection and vi) wealth inequality. Second, it summarises how results from such surveys feed into policy-making within the central banks that already conduct such surveys.

This research overview demonstrates that survey data on household finance and consumption have been successfully analysed in many studies which have contributed substantially to our understanding of both individual behaviour and the evolution of aggregate variables. In addition, household-level data make it possible to evaluate the impact of shocks, policies and institutional changes across households, and across different institutional structures, and thus allow a better understanding of the implications of shocks for macroeconomic variables. Consequently, this information yields important insights about issues like monetary policy transmission or financial stability.

In several instances, information on the behaviour of subgroups of the population is essential for such an understanding. For instance, the recent financial crisis has demonstrated that a relatively small fraction of households (in this case the ones that are highly indebted) can have important effects on market outcomes. Another example relates to the wealthiest households; given the skewness in the wealth distribution, the wealthiest households exert effects on aggregate statistics that are in disproportion to their number.

Research results are primarily available for the United States, the United Kingdom, Italy and Spain. However, given the differences across countries, e.g. in institutional settings or in the nature of shocks, results obtained for one economy cannot be easily generalised. At the same time, this overview also argues that we lack internationally comparable data, a factor that obviously prevents analyses for the euro area as a whole. Availability of such data for more euro area countries will therefore be an important asset.

Central banks that conduct surveys on household finance and consumption make ample use of them, in research work, in their communication with the public (references to survey data are often made in speeches, and results are regularly reported in the central banks' publications) and in internal notes. Survey results are routinely looked at in relation to issues of financial stability. On a number of occasions, central banks have been able to infer relevant information from the surveys that could not be recovered from aggregate statistics. To give just one example, the implications of the steep increases in household indebtedness that have been observed in a number of euro area countries over the recent years cannot be adequately judged from aggregate data alone. Data on the average debt levels of households as well as their distribution across income and/or age classes obtained from surveys have provided central banks with relevant information as to whether the increase in overall debt levels raises concerns about financial stability. At the same time, it has been shown in recent work that financial stability analyses based on disaggregated data can be hampered by the lack of comparability of the existing survey data in some euro area countries.

INTRODUCTION

This paper has a dual purpose. First, it provides a brief survey of the recent literature that employs survey data on household finance and consumption. Given the breadth of the topic, it focuses on issues that are particularly relevant for policy: i) wealth effects on consumption, ii) housing prices and household indebtedness, iii) retirement income, consumption and pension reforms, iv) access to credit and credit constraints, v) financial innovation, consumption smoothing and portfolio selection and vi) wealth inequality. Second, it summarises how results from such surveys feed into policy-making within the central banks that already conduct such surveys.

The recent financial crisis has highlighted the importance of understanding how households respond to shocks to wealth, including housing price shocks, and whether and how this reaction depends on their income, demographics and level of indebtedness. For many households, the bulk of assets consists of real estate, and mortgages constitute their largest liability. Consequently, they can be substantially affected by fluctuations in house prices or interest rates. Household-level data are essential for investigating how specific groups of the population react to such shocks.

The other topics – consumption after retirement, households' access to credit, financial innovation and wealth inequality – are also relevant for policy purposes. First, the aging of population in industrial countries raises questions about the long-run sustainability of their pension systems and the need to analyse economic behaviour of older households in alternative pension schemes. Second, financial innovation enables households to access credit more extensively and to invest in new financial instruments. However, it also increases the scope for error and makes it more important for consumers to understand the potential risks of their investment decisions. In addition, the number and extent of credit-constrained households affects the transmission of monetary policy. Third, wealth inequality has recently risen in many industrial countries, possibly in part as a result of skill-biased technological progress. Changes in the distribution of wealth can affect aggregate variables, as the consumption, saving and investment behaviour of households differs substantially depending on their wealth.

A number of central banks collect micro data on household finance and consumption, and use the information extensively for research and policy-making. The data describe how assets and liabilities are distributed across households and how the importance of various wealth components and the extent of debt service evolves over time. The statistics can be used to analyse the potential effects of possible monetary, fiscal and regulatory policies. A key topic of interest in central banks has also been the implications of household indebtedness and the consequences of adverse shocks to income, interest rates and house prices for various consumers.

The paper is structured as follows. Section 1 discusses why micro data are useful for the analysis of household finance and consumption, and contains the research summary for the various topics outlined above. Section 2 provides a detailed overview of how household finance and consumption survey data have fed into policy-making within the central banks that already conduct such surveys.

1 RESEARCH SUMMARY

This section provides a brief survey of the recent literature that employs survey data on household finance and consumption. It starts with some general motivations for the use of such micro data and continues with more specific research examples related to the propensity to consume out of wealth, housing prices, household indebtedness, micro-simulations as a policy tool, retirement income and pension reforms, financial constraints, financial innovation and wealth inequality.

1.1 WHY USE MICRO DATA FOR THE ANALYSIS OF HOUSEHOLD FINANCE AND CONSUMPTION?

The dynamics of economic aggregates are determined not only by macroeconomic variables, but also by household-specific factors. This is particularly true for household consumption, savings and balance sheets, which are to a large extent driven by expectations about future individual income (and its uncertainty)[1] and demographic and social characteristics. Because the household-specific factors remain hidden in aggregate statistics, their relevance can only be assessed with micro-level data. While we often know a priori that microeconomic conditions matter considerably – for example, demographic structure is an important determinant of aggregate savings[2] – household-level data are crucial for quantifying the size and relevance of these effects.

Surveys make it possible to evaluate the impact of shocks, policies and institutional changes on various groups of individuals. These insights in turn allow a better understanding of the implications of shocks for macroeconomic variables. For example, financial integration, financial innovation and the "democratisation of credit" made it easier for households to borrow against their future income, smooth consumption and diversify their portfolios. The resulting changes in the composition of the assetholder pool and their potential implications for welfare, wealth distribution, the relative impact of policies on different household groups and the ultimate effect on macroeconomic variables can only be judged with micro data.[3]

In addition to providing essential information about structural variables (such as the degree of risk aversion) and the propagation of shocks within each country, standardised euro area-wide data could reveal valuable insights about how institutions and policies affect the transmission of shocks and the distribution of risks. It is well-known that European countries differ in many relevant respects, such as financial regulation, systems of taxes and social benefits, pension systems, labour market institutions and regulation of goods markets. This cross-country variation can be very informative for identifying structural parameters and, ultimately, for designing optimal institutions. For example, Attanasio et al. (2002) use the density of automated teller machines (ATMs) across 95 Italian administrative provinces to identify how financial innovation affects money demand. Regional diversity within the European Economic and Monetary Union (EMU), which is likely to be more substantial, could prove even more useful in this and other applications. However, as a prerequisite it is of course necessary to ensure that the cross-country variation comes from the signal – such as the actual institutional differences – rather than the noise, which can arise through the lack of data standardisation and measurement error. In addition, it is important that as many countries participate as possible, because the strength of the signal increases when countries with different institutions are captured in the data.

The availability of micro data for understanding the impact of shocks, policies and institutional changes is particularly important in view of

1 Household-level income growth typically differs substantially from aggregate income growth. In addition, uncertainty about individual income is dominated by idiosyncratic (or household-specific), rather than aggregate, shocks.
2 Because incomes typically rise over one's lifetime, individuals tend to borrow when they are young and save later on.
3 For example, it might be interesting to ask if the total increase in credit is due to more people who borrow or due to increased lending to the existing borrowers.

the extremely large heterogeneity in economic behaviour of households. For example, Campbell (2006) provides an overview of the cross-sectional wealth distribution in the US, pointing out that many households have negligible financial assets (the median household holding only $35,000 in financial assets), and highlighting the skewness inthe cross-sectional distribution of wealth, which implies that relatively few wealthy households exert substantial effects on aggregate statistics. An analysis of aggregated data can therefore hardly shed light on the behaviour of individuals and on the differential impact of policies and asset prices across households. This heterogeneity is also apparent when it comes to participation decisions. As Campbell (2006) shows, the percentage of households holding various components of assets depends on the households' total assets. Households with low wealth are very unlikely to participate in risky financial markets, contrary to the predictions of standard economic theory. Instead, these households hold only safe assets and vehicles. Many quite wealthy households do not even participate in the stock market.

While this illustration was restricted to asset holdings, liabilities are also distributed very unevenly across households. Furthermore, cross-household heterogeneity is not restricted to the US, but is also present in the euro area, where additionally cross-country differences in institutions and policies are relevant, making availability of micro data even more crucial (see, e.g., the evidence on Italy, Germany and the Netherlands in Guiso, Haliassos and Jappelli, 2002). Indeed, international variation can be exploited to estimate the consequences of alternative policies. For that purpose, the availability of comparable, harmonised data is essential. As will be seen below, for a number of countries data are already partially available and used extensively in research and policy; however, to date these data lack comparability across countries. As a result, it is difficult to come to convincing conclusions for the euro area as a whole (see, e.g., ECB 2007, esp. pp. 48-55).[4]

Reliable data on households' wealth, income and consumption can provide important input into central banks' policies, ranging from monetary policy to financial stability and payment systems policy.[5] This paper synthesises the current research on some relevant topics through a few concrete examples.

1.2 RESEARCH ON THE WEALTH EFFECTS ON CONSUMPTION

The recent developments in housing prices have re-ignited the interest in how asset prices affect the real economy.[6] A key channel in that regard is through personal consumption; households whose wealth increases spend more because they have more resources available and because their liquidity or collateral constraints are relaxed. Altissimo et al. (2005) summarise the existing macroeconomic literature on the subject, which typically estimates that the marginal propensity to consume (MPC) out of wealth ranges between 3 and 10 cents, with housing wealth often exerting stronger effects than financial wealth. In the euro area, wealth effects appear somewhat weaker (Slacalek, 2006).

Unfortunately, most of the existing estimates from aggregate data are quite imprecise, and subject to at least two limitations. First, household heterogeneity cannot be investigated. In particular, heterogeneity with respect to income, age, indebtedness and homeownership status is likely to play an important role in determining the size of the response of consumption to wealth shocks. Second, variations in asset prices and consumption are partially driven by the same factors, which are

4 Comparative datasets such as the Luxembourg Wealth Study exist, but cover only parts of the topics of interest here.

5 On the usefulness of household survey data in policy-making see also the speech by the Governor of the Banca d'Italia Mario Draghi at the conference "The Luxembourg Wealth Study: Enhancing Comparative Research on Household Finance", http://www.bancaditalia.it/studiricerche/convegni/atti/luxembourg/remarks/Lws_draghi.pdf.

6 The work by Bover (2005) referred to in this section is a case in point. It grew out of an article in the May 2005 Economic Bulletin of the Banco de España, motivated by the high share of real estate in household wealth in Spain and the steady increase in real estate prices since the late 1990s.

difficult to account for adequately. This problem is much less severe in micro data because almost all variation of consumption at the household level is idiosyncratic. Household-level data are thus crucial for estimating structural relationships between consumption and wealth.

Estimates of the MPC obtained with micro data are typically somewhat smaller than those obtained with macro data. Paiella (2004), Guiso, Paiella and Visco (2005) and Grant and Peltonen (2005) for Italy, and Bover (2005) for Spain, find a relatively small MPC out of housing wealth (of around 1.5 to 3 cents per euro). In that regard, an important distinction has to be made between housing wealth and financial wealth. Maki and Palumbo (2001), using the US Survey of Consumer Finances (SCF) data, show that the highly educated households with high incomes, who benefited most from the run-up in equity prices in the late 1990s, substantially decreased their saving rates. However, this effect is highly concentrated among the rich, such that the entire increase in spending in aggregate data appears to be driven by these households. The Maki and Palumbo study is one of the few which identify significant effects of financial wealth. In contrast, most studies find that the MPC out of financial wealth is small, and often statistically insignificant (e.g. Bover (2005) for Spain; Sierminska and Takhtamanova (2007) for Finland, Canada and Italy; Grant and Peltonen (2005) for Italy; Bostic, Gabriel and Painter (2005) for the US). However, it is possible that the role of financial wealth becomes more pronounced over time, with financial innovation changing the portfolio behaviour of households (see below), or reforms of the pension system raising the need for more own provision of retirement income through private savings.

Wealth effects differ substantially across households. Age is an important determinant, with several studies finding a hump-shaped pattern. For instance, Bover (2005) finds that there is no wealth effect for young homeowners, a large effect for homeowners aged 35-44, and a much reduced effect for those above 44. A precautionary motive can explain these findings, whereby an increase in the value of their home reduces the need of households for other savings, particularly for those in the age bracket 35-44 where typically many savings are accrued and life-cycle consumption needs are the largest. The possibility of "downsizing" their homes in the future prevents the need for other precautionary savings.[7] The effect of house prices on consumption differs between renters and homeowners (Guiso et al. (2005) for Italy; Campbell and Cocco (2007) for the UK). While the latter increase consumption when house prices rise, the former tend to save more. Furthermore, household leverage matters. Using data from the British Household Panel Survey (BHPS), Disney, Bridges and Gathergood (2006, p. 5) "…estimate an average aggregate marginal propensity to increase household net borrowing in response to an increase in house prices of around 0.03 – varying from almost 0.4 for highly levered households to zero for households with very low loan-to-value ratios". Using the same data, Disney, Gathergood and Henley (2007) find that house price fluctuations have a disproportionate impact on savings if the household had negative housing equity at the start of the period. Finally, there is also evidence for asymmetric responses: Engelhardt (1996) for the US and Berben et al. (2006) for the Netherlands show that households tend to respond more to losses than to gains, a fact that can be explained with the concavity of the consumption function due to precautionary savings, or with the existence of liquidity constraints.

These findings have a number of important policy conclusions. First, if households react more to losses than to gains, busts in housing markets could have particularly severe consequences for

7 Hump-shaped patterns are also documented in Sierminska and Takhtamanova (2006) for Canada, Finland and Italy, using data from the Luxembourg Wealth Study, as well as in Lehnert (2004) for the US. The latter paper furthermore finds a large MPC for the very young households, which are more likely to borrow extensively. Results are dependent on the way age groups are split, with rougher classifications often leading to linear effects. Skinner (1996), for instance, finds that housing wealth fluctuations affect consumption of the young, but not of older households.

consumption, especially given the breadth of homeownership and the level of indebtedness in many euro area countries. Second, if housing wealth effects are indeed larger than financial wealth effects, experiences from stock market busts are not representative for possible consequences of decreasing house prices.

1.3 RESEARCH ON HOUSING PRICES AND HOUSEHOLD INDEBTEDNESS

The recent run-up in real estate prices has in many countries been associated with more household mortgage credit and higher overall indebtedness. Understanding the cross-sectional composition of liabilities is as crucial as understanding their overall level. Micro data are essential for analysing this structure, assessing the mismatch between assets and liabilities of households and identifying how many individuals have accumulated too much debt and what risks such over-accumulation poses to their finances and ultimately to the economy.

As with the previous topic, the research on the causes and consequences of household indebtedness is limited to a few countries. Dynan and Kohn (2007) address these issues using seven waves of the US SCF. Using simple regression models of the (potential) determinants of debt-income ratios, they identify increases in real estate prices as the key driver of US household indebtedness.[8] While some part of the variation in indebtedness can be attributed to demographic factors, other factors, such as changes in tastes, interest rates and expected income, do not seem to have had much effect on household liabilities in the US. Debt was also boosted by financial innovation, primarily by "increasing the amount of debt held by households that already had some access to borrowing", as opposed to making it possible for new consumers to borrow (Dynan and Kohn, 2007, p. 2).

The consequences of household indebtedness can be as interesting to investigate as its causes. Higher liabilities affect personal consumption through various channels. New credits give consumers better opportunities to insulate spending from shocks. On the other hand, some households may have to allocate substantial resources to debt service, leaving them with fewer funds available for further consumption smoothing. Dynan and Kohn (2007) and Dynan, Elmendorf and Sichel (2006) report that, on average, consumption of US households has become less sensitive to income shocks (following financial innovation and the increase in indebtedness). At the same time, they find that highly indebted consumers are more exposed to risk and more likely to be insolvent, and have higher mortgage delinquency and foreclosure rates.

Disney, Bridges and Gathergood (2006) investigate the interplay between housing prices, indebtedness and borrowing constraints in the UK, with a special focus on the substitutability between secured debt (e.g. mortgages) and unsecured debt (e.g. credit cards). Increased use of unsecured debt (due to financial innovation and more competition) results in a lower housing wealth effect (because houses become less important as collateral). Disney et al. report that at most one-quarter of British homeowners was collateral constrained in 1995. Given the strong house price dynamics and the spread of unsecured debt, this proportion has fallen since. The authors argue that standard empirical models that do not account for unsecured debt (such as Campbell and Cocco, 2007) substantially overestimate the housing wealth effect. In addition, Disney et al. identify a relationship between changes in house prices and total indebtedness only among collateral-constrained households which initially exhibit high levels of unsecured debt. This is in line with the findings reported by Bridges, Disney and Henley (2006). Combining the BHPS data with the Families and Children Survey, they document that homeownership gives households access to (unsecured) credit: homeowners are more than twice as likely to have credit cards and store cards as tenants. At the same time,

8 An additional indication of the important role of housing prices is that the accumulation of debt was concentrated among homeowners.

however, more housing equity is not associated with higher unsecured debt.

The substantial growth in credit card use and in revolving credit card debt creates the potential for household bankruptcy, delinquency, and financial hardship. Assessing the potential for such developments requires an understanding of the determinants of credit card behaviour and of the extent of co-existence of credit card debt with household assets, both liquid and illiquid. A body of recent literature on these issues has focused on US data, and has identified surprising patterns of co-existence of revolving unsecured debt with both liquid and illiquid asset accumulation that are hard to understand using conventional models and have prompted authors to consider psychological factors, such as self-control (see Gross and Souleles, 2001; Laibson et al., 2002; and the literature surveyed in Bertaut and Haliassos, 2006). There are considerable differences between the US and Europe, and even among European countries, regarding the nature of credit and debit cards and the institutional framework governing those. It is therefore important to use Europe-wide survey data to study the potential relevance of such considerations across the continent.

1.4 MICRO-SIMULATIONS AS A TOOL FOR POLICY

Simulations with macroeconomic models are an important and regular input to the monetary policy decision-making process. This approach can be usefully complemented with a less frequently employed tool: micro-simulations. These are based on models of behaviour of individual entities, such as a person, family or firm, and simulate the behaviour of entire populations of these entities in order to draw conclusions for higher levels of aggregation such as a country.[9]

In contrast to the traditional macro-simulations, where the explanatory variables already represent aggregate behaviour, micro-simulations can go beyond the traditional focus of monetary policy analysis on the "representative agent", i.e. the average household or firm. Accordingly, their benefits are clearly greatest when the traditional representative agent assumption is insufficient (for instance, according to the "credit view" of monetary policy, the distribution of resources among individuals has repercussions on policy outcomes due to the presence of credit constraints).

An illustrative example of how such tools can use household survey data for monetary policy purposes is the discussion paper by Herrala and Kauko (2007). They construct a micro-simulation model for Finland using a micro dataset of households. The data include income and debt variables (from register sources) and indicators of economic distress (based on subjective opinions of respondents).[10] Based on a number of macroeconomic scenarios taken from the Bank of Finland's macroeconomic model, the number of distressed households and their aggregate debt are simulated. This allows for a mapping of the macroeconomic scenarios that feed into the policy analysis with forecasts of distress in the household sector, thus enabling the central bank to gain a consistent picture of the overall effects of the different scenarios it considers in its analysis. The simulations indicate that the credit risk of banks in Finland due to household loans is relatively low at the present juncture. However, in the case of a coincidence of large and persistent adverse shocks to unemployment, interest rates and housing prices, even household loans could become a threat to financial stability.

1.5 RESEARCH ON RETIREMENT INCOME AND CONSUMPTION AND PENSION REFORMS

The dramatic ageing of populations in the euro area could have substantial consequences for the behaviour of aggregate consumption.

9 For a detailed definition, see Statistics Canada (http://www.statcan.ca/english/spsd/).

10 The data are provided by Statistics Finland. They are collected for constructing statistics on income distribution and for the EU Statistics on Income and Living Conditions. Because approximately 3,000 households participate in the survey for two consecutive years, a part of the dataset can be used for panel estimation.

For a thorough understanding of future developments, it is important to revert to micro data on consumption of the elderly. There are in particular two stylised facts that are regularly reported in empirical studies. First, the elderly show positive discretionary saving rates, which are furthermore often increasing with age (e.g. Börsch-Supan, 2001). This finding has been labelled the *savings puzzle*. Possible explanations include the bequest motive and that the elderly perceive larger uncertainty, e.g. due to health risks. The second argument is in line with the findings of Kennickell and Lusardi (2004) that precautionary savings, while relevant across all household types, are particularly important for older households. Second, consumption drops at the time of retirement, a pattern that is difficult to reconcile with the life-cycle hypothesis, and has therefore been called the *retirement consumption puzzle*. While this finding could cast doubt on rational forward-looking behaviour of economic agents, other explanations can come into play too. For instance, retired households have considerably more leisure, which can be used to purchase goods more efficiently, or to substitute home production for purchased goods. Alternatively, uncertainty about the timing of retirement can cause such effects. Unanticipated early retirement, e.g. due to health problems or unemployment, affects life-time income, and should therefore lead to a reduction in consumption. To shed light on this, survey data are particularly useful. Smith (2004), using data from the BHPS, finds that among the group of respondents who retired at the expected age, about 75% experienced no decline in food spending, suggesting that the retirement consumption puzzle is not the norm when looked at from the micro perspective. In a similar vein, Miniaci et al. (2003) and Hurd and Rohwedder (2005) find no retirement consumption puzzle for Italy and the Netherlands, respectively, mainly due to an increased use of leisure in home production.

Ageing furthermore puts the established pay-as-you-go social security systems under pressure, and increases the need for more own provision of retirement income through private savings. This raises the issue of how pension reforms affect macroeconomic outcomes. According to the standard life-cycle hypothesis, a change in expected pension benefits should lead to a one-to-one change in private wealth (Feldstein, 1974). While empirical analyses do indeed find a crowding-out of discretionary wealth by pension wealth, the rate is considerably smaller than one-to-one (however see, e.g., Attanasio and Brugiavini, 2003, who find strong substitutability between discretionary and pension wealth in the Italian Survey of Household Income and Wealth (SHIW)).[11] A number of reasons have been put forward to explain this finding, such as bequest motives, liquidity constraints or uncertainty surrounding future reforms. An important possibility relates to the role of information, whereby economic agents might not fully and immediately understand how a reform will affect their benefits. As a matter of fact, Bottazzi et al. (2006) provide evidence using the Italian SHIW that the relationship between private wealth and perceived pension wealth depends on the extent to which workers are informed about their pension wealth. For better informed workers, there is indeed a substantial offset between private wealth and perceived pension wealth.

In a similar vein, financial literacy has been found to be important for the choice of pension schemes. Using data from the DNB Household Survey (DHS), van Rooij et al. (2007) find that Dutch employees prefer defined benefit pension plans (under which pension benefits are guaranteed) over defined contribution schemes (with regular contributions, and the ultimate pension benefits depending on total contributions paid and the return earned on the invested contributions). This coincides with respondents expressing doubts about their financial skills and reporting a high level of risk aversion with regard to pension issues. Furthermore, van Els et al. (2004) find that a large number of respondents in the DHS show a substantial lack of knowledge about their personal pension

11 Changes in pension schemes also affect retirement age (see, e.g., Friedberg and Webb, 2003).

arrangements. These findings suggest that changes in pension schemes towards plans where risk and responsibility are shifted from employers to employees should be accompanied by measures that improve financial literacy.

A related issue concerns the vulnerability of reformed pension schemes. Adverse developments such as a stock market crash can affect the performance of pension funds substantially. Studies of sustainability of pension schemes in the presence of such shocks and of the effects on the different segments of the population can benefit from the availability of survey data. To give an example, simulation analyses such as the one of the Dutch pension system by Kakes and Broeders (2006) or of the demographic development in Italy by Ando and Nicoletti-Altimari (2004) can provide more reliable results if they incorporate information on household heterogeneity. Ando and Nicoletti-Altimari, for instance, apply the Italian SHIW data to a demographic model, and run a number of simulations to study the evolution of aggregate income, savings and asset accumulation in the future.

In order to assess adequacy of saving for retirement and the potential for asset meltdown, it is quite important to know the level and composition of assets with which households enter retirement, both across the Atlantic and in different countries within Europe. Internationally comparable surveys allow such analysis and pose methodological challenges. Christelis, Georgarakos and Haliassos (2007) document and study sources of international differences in asset holdings (stocks, private businesses and homes) in the US, England, and 11 continental European countries, using newly available and internationally comparable household-level data for people aged 50 and above. The authors uncover a rich and often surprising pattern of differences in market conditions facing households of given characteristics in different European countries and in the US. This suggests that there is considerable room for further harmonisation of the institutional and policy framework governing asset and labour markets within Europe and across the Atlantic. Population-wide surveys can shed additional light on these issues, by allowing examination of asset and debt behaviour over the entire life cycle.

Several European countries, like Italy, the Netherlands or Spain, have established tax incentives that promote the participation in supplementary pension funds with the aim to complement pension income. For assessing the effectiveness of those tax incentives, it is important to know who uses the tax-favoured products and, furthermore, whether the tax incentives increase household savings or merely lead to a reshuffling of portfolios away from other products into those covered by the tax incentives.

Poterba, Venti and Wise (1995) use several cross-sections of the SCF to document that US households with access to a tax advantage did not diminish their holdings of non-tax-favoured assets relative to households without access to a tax advantage. They infer that tax advantages generate substantial new saving. In contrast, Gale and Scholz (1994) use the SCF and estimate the degree of substitution between tax-favoured and non-tax-favoured saving, modelling explicitly the presence of contribution limits, and document little new saving, a tentative conclusion shared in the assessment of Hubbard and Skinner (1996) or the literature summary in Bernheim (2002). In the United Kingdom, Attanasio, Banks and Wakefield (2004) also infer that there are only small amounts of new saving. Tiseno and Paiella (2005) use data from the Italian SHIW, and find that households who hold tax-favoured products are on average older and wealthier, and have more liquid portfolios; they also find a relatively small effect on new savings. Ayuso, Jimeno and Villanueva (2007) combine information from Spanish tax records and expenditure surveys around the introduction of those incentives to document that the amount of new saving created is lower among households close enough to retirement, which are most likely to use those products, but higher among prime-age households.

1.6 RESEARCH ON ACCESS TO CREDIT AND BORROWING CONSTRAINTS

A large strand of literature on consumption dynamics attempts to explain the relevance of credit constraints. Apart from being of theoretical importance,[12] this research also provides interesting insights for policy-makers, such as on the welfare costs of these constraints and their role in the monetary policy transmission mechanism.

The micro literature on borrowing constraints generally uses a *priori* information about individuals to divide them into i) those who are likely to be constrained, and ii) the rest. Standard theory implies that consumption growth of the former group is sensitive to past income, whereas the spending of the latter households should approximately follow a random walk (after controlling for demographics and precautionary savings). The early work of Zeldes (1989) and Runkle (1991) used the amount of liquid assets and homeownership as proxies for whether individuals are likely to be credit-constrained.[13] As these proxies are rather noisy, the findings of these two studies are mixed: while Zeldes (1989) reports that a significant portion of the population is affected by liquidity constraints,[14] Runkle (1991) finds no evidence thereof, and ascribes much of the previously reported evidence to the aggregation bias.

More recent literature (e.g. Jappelli, Pischke and Souleles, 1998, and Guiso, Jappelli and Terlizzese, 1996) uses potentially more informative indicators of liquidity constraints based on direct questions about whether the affected household "was either 'rejected' or 'discouraged' from applying for a credit" (Crook, 2006, p. 80). Jappelli, Pischke and Souleles (1998) augment data on food consumption and income from the US PSID with SCF measures of liquidity constraints, and report (p. 260) that the "excess sensitivity coefficients for the constrained group are two to ten times as large as those found by splitting the sample". However, they also find that only relatively few households may be facing binding liquidity constraints. In related work, Guiso, Jappelli and Terlizzese (1996) investigate the effects of income risk and liquidity constraints on portfolio choice in the Italian SHIW dataset. Their main findings are that, in accordance with the theory, investors reduce their holdings of risky assets when income risk increases or when they are subject to liquidity constraints.

Overall, the evidence on the importance of liquidity constraints based on these conventional tests of excess sensitivity is mixed. The generic problem of the literature is that liquidity constraints may be difficult to detect even if they truly exist. Reasons for this include, as pointed out by Jappelli and Pistaferri (2000), data limitations (measurement issues, small time dimension of the existing panels), econometric issues (lack of good instruments for income, omitted variables) and the complex channels through which liquidity constraints can interact with precautionary savings.

Understanding whether household borrowing (the probability of getting a new loan and the amount of borrowing requested) is affected by changes in the cost of borrowing is crucial to assess if households are rationed in the credit market. In the presence of liquidity constraints, credit volumes should be affected less by changes in the interest rate than by changes in maturity or credit limits (a longer maturity decreases the size of the monthly payment, allowing the consumer to assume a larger amount of debt; Attanasio, Goldberg and Kyriazidou, 2000). However, estimating the response of household borrowing to the cost of debt with aggregate data faces the problem that aggregate interest rates tend to move

12 The work on liquidity constraints is helpful for addressing the so-called "excess sensitivity puzzle", the fact that consumption growth in data is sensitive to the income predicted with past information, which contradicts the key implication of the permanent income hypothesis model of Hall (1978) that consumption follows a random walk.

13 Jappelli, Pischke and Souleles (1998) argue that as many as 80% of those consumers that are characterised by Zeldes (1989) as the constrained low-wealth sample may actually have access to credit.

14 Zeldes (1989) reports that the annual (food) consumption growth of the liquidity-constrained group (two-thirds of the sample) is 1.7% higher than it would have been in the absence of constraints.

with many other aggregate variables which have a separate effect on total borrowing themselves.

There have therefore been several attempts to estimate how changes in the cost of debt affect household borrowing, using household surveys. Micro data usually contain cross-sectional variation in the cost of borrowing, e.g. through differences in tax deductibility of loan repayments, or through targeted incentives to borrow created by public subsidies. Maki (2001) uses the abolishment of tax deduction of consumer borrowing in 1986 in the US, and provides evidence that households substituted consumer loans by mortgages almost on a one-to-one basis. Hendershott et al. (2003) document that increases in the cost of borrowing (through the removal of the deductibility of mortgage interest rate subsidies in the United Kingdom) resulted in a drop of loan-to-value ratios. Jappelli and Pistaferri (2007) study a tax reform in Italy that eliminated the incentive to borrow among rich households, and find weak effects on the probability of getting a mortgage. Martins and Villanueva (2006) use the removal of a Portuguese programme that subsidised mortgage borrowing, and estimate an elasticity of the probability of getting a mortgage to changes in the interest rate between -1.3 and -2.8.[15]

It is safe to say that liquidity constraints in many economies do exist (see, e.g., Guiso, Jappelli and Terlizzese, 1994, for evidence from Italy) and substantially affect the amounts that constrained households are able to borrow.[16] While estimation of their effects on the macroeconomy is difficult and subject to considerable uncertainty, household-level data provide an overall picture of the financial circumstances of households and allow a sharper analysis of borrowing constraints, financial hardship and the inability to smooth income shocks.

1.7 RESEARCH ON FINANCIAL INNOVATION, CONSUMPTION SMOOTHING AND PORTFOLIO SELECTION

Financial innovation can have a profound effect on personal spending and the amount and structure of household assets and liabilities. While some of these effects (e.g. liquidity constraints) have been discussed in more detail in the sections above, the focus here is on the extent to which the developments in financial markets, through the access to new assets or lower transaction costs, improve i) consumption smoothing and ii) portfolio selection.

Financial markets help households in moving consumption across time and in insulating their spending from income shocks. Consequently, it can be expected that consumption in economies with more advanced capital markets will generally be less responsive to shocks. Jappelli and Pagano (1994) and, more recently, Chiuri and Jappelli (2003) find cross-country evidence that indicators of capital market imperfections are important determinants of differences in saving rates across OECD countries; e.g., in countries where the downpayment required to purchase a home is low, consumption tends to be high.

Dynan, Elmendorf and Sichel (2006), using the US PSID data, report that the reaction of spending to income shocks has fallen by about a half since 1985. In addition, they also find that the response of consumption to negative income shocks is larger than to positive ones, and that the response to negative shocks has fallen more than the response to positive shocks.[17] Gerardi, Rosen and Willen (2007) develop a test to determine whether and how much the efficiency of the US mortgage markets has increased over time. Using PSID data they investigate how well buying a house predicts future income. They find that the income-forecasting ability

15 While this significant interest rate elasticity is indirect evidence against strict borrowing constraints, it is compatible with an arguably more realistic case in which young and poor households are actually able to borrow but at a higher cost.

16 A related strand of research attempts to estimate the amount of unmet credit. Cox and Jappelli (1993) report that in the US SCF data, an average respondent among the 17.3% of constrained households possessed only 57% of the credit it wished to have. Duca and Rosenthal (1993), accounting for selection bias, find (in the same data) that the average constrained household, with the household head aged under thirty-five years, had only 48% of its desired debt.

17 Both findings are consistent with the existence of liquidity constraints.

of buying a home more than doubled between 1969 and 1999 and detect a discrete jump in the mid-1980s. These results suggest that mortgage markets have become better at providing funds for house purchases to individuals who expect high income. Gerardi et al. (2007) attribute most of this improvement to the deregulation of the savings and loan industry in the early 1980s.

The volume edited by Guiso, Haliassos and Jappelli (2002) summarises much of what we know about portfolio selection in five of the countries for which satisfactory data are available (the US, the UK, Italy, Germany and the Netherlands).[18] The country chapters document the variation in the composition of household portfolios, both across countries and across households within each country. There is ample evidence that the structure of portfolios depends on age, wealth and household characteristics. The volume also highlights a number of changes in the portfolio structure and participation rates over time. Stockholding has clearly become more widespread over time but large cross-country differences remain. These appear to be driven primarily by different participation rates of the wealthy households across countries. A major factor in increasing stock market participation has been a surge in indirect holdings through financial intermediaries such as mutual funds and retirement accounts. This development had at the same time an effect on diversification, in the direction of more diversified asset holdings. Generally, risk-taking has also increased over time; however, as already pointed out above, risk-taking still remains strongly correlated with wealth. Monitoring further changes in portfolio behaviour is particularly relevant for an assessment of the impact of financial innovation.

In addition, while some of these studies are helpful in documenting the overall improvement in efficiency in financial markets, an important issue for future research is the possibility of adverse effects of financial innovation on some households. The recent financial turmoil has shown that some households (and some lenders) underestimate the risks associated with high indebtedness, such that they may face severe financial distress once the macroeconomic conditions become less favourable. Future research in this area will likely provide valuable insights for policy-makers.

A crucial topic for central banks relates to the estimation of money demand in micro data. The research on this topic is so far limited to only a few papers which use the Italian SHIW – the only existing dataset with good information on households' holdings of cash and the frequency and size of cash withdrawals. The seminal work of Attanasio et al. (2002)[19] investigates how transactionary money demand is affected by financial innovation (introduction of ATM cards) and estimates the welfare costs of inflation. Using the classic Baumol-Tobin framework, Attanasio et al. (2002) find interest-rate (semi) elasticity of between -0.3 (for non-ATM users) and -0.6 (for ATM users), values consistent with the theoretical model. In addition, they report that the welfare costs of inflation are relatively small (less than 0.1% of consumption), potentially reflecting the fact that much of M1 in Italy bears interest. New work by Alvarez and Lippi (2007) generalises this framework to allow for the possibility of withdrawing cash at random times at a low cost. Using cohort-level data calculated from the SHIW, their estimates of money demand and the dead-weight cost of inflation are in line with Attanasio et al. (2002). In addition, they report that the interest-rate elasticity of demand for money has fallen due to lower costs of money withdrawals and, consequently, a weakening precautionary motive.

1.8 RESEARCH ON WEALTH INEQUALITY

High and rising wealth inequality is a well-known stylised fact in most advanced economies: a small fraction of the population holds most net worth.[20] Because financial assets

18 For an interesting summary of the relevant determinants of household portfolio behaviour, see Haliassos (2006).
19 The new paper of Lippi and Secchi (2007) updates and extends Attanasio et al. (2002).
20 This is particularly true in the US, where the top five percent of the population owns 57 percent of net worth (see Kennickell, 2006).

of many less wealthy people consist only of cash and checking accounts, the inequality of risky assets and in particular business equity is even more pronounced. At the same time, many of the richest people are entrepreneurs and hold most of their assets in their own enterprises.

Economic behaviour of the top few percent of the population is important for the dynamics of aggregate wealth and the capital stock. In addition, policy-makers may also be interested in wealth heterogeneity because of its link with economic well-being: while economies with the most extreme inequality are clearly not the most successful economically, as Bernanke (2007) points out, the strong US economic growth over the past several decades has been associated with an increase in inequality. Third, it may be interesting to investigate the role of the tax system in shaping inequality and the trade-off between allowing as much economic opportunities as possible and preventing extreme polarisation of the wealth distribution.

The existing research on wealth distribution is mainly concerned with describing wealth inequality in different countries, and how it has changed over time (Brandolini et al., 2004; Kennickell, 2006; Herrala, 2007). For Italy, wealth inequality is found to have risen steadily during the 1990s, with the increased concentration of financial wealth being an important factor in this development. Also in Finland, which remains one of the countries with the most evenly distributed wealth, inequality has become more pronounced between 1987 and 2004. The survey of the empirical literature on wealth distribution in OECD countries by Davies and Shorrocks (1999) finds that wealth is more unequally distributed than income. Since the distribution of inherited wealth is much more unequal than that of wealth in general, inheritance is widely recognised as playing a major role in generating wealth inequality, especially at the upper end of the wealth range. Entrepreneurs constitute a large fraction of the very rich, and models that explicitly consider the entrepreneurial saving decision can match the data much better (Cagetti and De Nardi, 2005).

Comparisons of wealth inequality in different countries are still rare (see Bover, Martínez-Carrascal and Velilla, 2005, and Davies et al., 2007) but very interesting because they show how wealth composition varies across countries even at similar income levels due to institutional differences. Bover (2007) investigates the role of household demographics in accounting for differences in the distribution of household wealth between Spain and the US. The results show that household structure affects the comparison between the two countries differently across the distribution. Differences in household demographics account for most of the differences between the two countries in the lower part of the distribution, but mask even larger differences in the upper part of the distribution. Since comparable data on wealth are hardly available, most studies investigate only a few countries. Ex-post harmonisation such as in the Luxembourg Wealth Study can unfortunately not fully resolve the comparability problem.

A number of research questions, many of them being of direct relevance for central banks, can be analysed once reliable data on the wealth of private households are available. Issues that can then be addressed relate, for instance, to the relationship between wealth distribution and growth, the importance of savings in comparison to wealth transfers (gifts and inheritances), or the issue of wealth mobility.

2 USE OF HOUSEHOLD FINANCE AND CONSUMPTION SURVEY DATA IN POLICY-MAKING

This section summarises how results from household finance and consumption surveys feed into policy-making within those central banks that already conduct such surveys. For each country, a brief overview of the survey structure is provided, followed by information on the way and the frequency at which survey results are used to inform policy; finally, each country part gives a few examples where survey data proved particularly beneficial for the analysis of pressing policy issues.

2.1 UNITED STATES

After World War II, there was great concern in the US about the state of consumer demand. Would the economy slide back into depression as a result of insufficient demand, would "pent-up demand" from the austerity of wartime overwhelm markets, or would both demand and supply adjust appropriately to sustain growth? To gain information to support policy decisions, the Federal Reserve Board (FRB) initiated some small surveys of its own and provided funding to support the efforts of George Katona and others to use survey research to understand the psychology of consumers and their willingness and ability to take on debt. The focus on debt has remained a constant interest in the FRB survey work since that time.

Encouraged by the success of these relatively modest surveys, in 1962, the FRB undertook a wealth survey that in broad outlines was much like the current SCF. The survey collected extensive information on assets and liabilities and included an over-sample of wealthy households. The purpose of the survey was to gain a richer understanding of household portfolios and the implications of that structure for the transmission of monetary policy, as well as to examine the role of debt in households' balance sheets.

After a re-interview with the respondents to the 1962 survey a year later, no subsequent waves of that survey were completed. The oral history of the time suggests that the termination of this project was due more to the limitations of computing power and its indirect effects on the timeliness of data production than a lack of interest in the data. Indeed, the FRB continued to support smaller surveys on consumer behaviour and it fielded a moderately large survey of consumer credit in 1977.

In the early 1980s, there was renewed interest at the FRB in gathering fresh information on consumer credit combined with interest in other parts of the government, including both other financial regulators and other agencies interested in tax policy, pensions and a variety of other topics for which consumer balance sheets are relevant. From those pooled interests, the 1983 SCF was developed under the leadership of FRB staff, but using outside expertise in a variety of areas to design the survey. That survey was particularly influential at that time for the detailed information it provided on the beginning of the great expansion of facilities for consumer borrowing. Use of the other balance sheet items provided important insights into the distribution of effects of monetary policy changes as they filter through the household sector. A small follow-up to this survey in 1986 was closely examined to understand potential effects of the steep decline in the stock market in 1987.

The widely recognised success of the SCF in the late 1980s generated sufficient support within the FRB for revising the survey to deal effectively with a broad array of topics of relevance to the FRB. As well as continuing its mission to gather detailed information on consumer credit and data to support the study of monetary policy transmission, the survey expanded its scope particularly in areas relevant for the study of bank regulation, deposit insurance, consumer protection and saving behaviour. The survey has been a continuing monitor of the diversity of financial markets accessed by consumers and this has had important effects on decisions related to bank competition policy. Although the survey is not readily associated with

deposit insurance reform, at many stages it has provided critical information on the structure of household deposits that was unavailable from any other source. Among other things, a project merging macroeconomic data with SCF data was undertaken to decompose aggregated saving rates by income groups to determine the underlying patterns of change in the national household saving rate.

Today the SCF is a routine part of US national statistics. It is widely used to understand and illustrate effects of past policies and to simulate the potential effects of possible monetary, fiscal and regulatory policies. It is also an important input into other more aggregated statistics, including the flow of funds accounts and the consumer credit series. It is the most authoritative source of information on household wealth, and as such it is an important factor in the interpretation of results from other data sources. It supports a large contingent of researchers in many areas, but particularly in finance, financial services, public finance and consumer protection.

2.2 GREECE

The key purpose of the Bank of Greece survey of household debt is to understand financial conditions of households and to examine their degree of indebtedness. The first wave was launched in 2002, the second followed at the end of 2005 and the third in the autumn of 2007. The survey asks about the demographic characteristics, income and wealth of households, as well as details regarding all categories of household borrowing. In the 2005 and 2007 surveys, questions about respondents' opinions on the difficulties encountered in servicing their loan obligations and in obtaining borrowing were also included.

The main results of the 2002 and 2005 surveys were published in bi-annual reports to the Greek Parliament, "Monetary Policy 2002-2003", and the Annual Report 2005.[21] The first results of the 2007 survey were published on the Bank of Greece website with a press release.[22] These surveys are the only statistical sources available which combine information on income, assets and liabilities of Greek households. The micro data have been used at the Bank of Greece to study household borrowing, the loan burden, the cost of servicing, factors that determine loan obligations and whether households service their debts properly.[23]

The insights from the survey have repeatedly informed the Bank's assessment of households' indebtedness and vulnerability and have been helpful for issuing guidelines for the approval of loan applications to commercial banks. They are also used in distributional studies, for example to estimate indicators of the functioning of credit markets and financial pressure in different groups of households.

The usefulness of the survey results for policy can be illustrated with the following example. Since 2001, when Greece entered EMU, the balance of outstanding bank loans to Greek households has been increasing at an average annual rate of about 30%. The bank penetration into the household sector has also risen significantly.[24] These developments have amplified concerns that households may be borrowing excessively and that the credit risk taken on by banks is high (although the balance of outstanding bank loans to households as a percentage of GDP remains below the euro

21 See http://www.bankofgreece.gr/en/publications/pdf/MonPolicy2002-3.pdf (Annex to Chapter VI: Greek households' borrowing and indebtedness: evidence from a sample survey of the Bank of Greece), as well as http://www.bankofgreece.gr/en/publications/pdf/Annrep2005.pdf (Appendix to Chapter VI: Borrowing and financial pressure on households: a household survey). The first results of the 2005 survey were also published on the Bank of Greece website in March 2006 with a press release and then presented in Simigiannis and Tzamourani (2007a).

22 See http://www.bankofgreece.gr/announcements/files/19.5.2008%20Daneismos%20noikokyrio%202008%20-%20Ereuna.doc

23 See, for example, Mitrakos, Simigiannis and Tzamourani (2005) and Simigiannis and Tzamourani (2007b).

24 Although the growth rates are generally falling, they are still high (2001: 40.4%; 2002: 32.2%; 2003: 28.5%; 2004: 30.2%; 2005: 31.4%; 2006: 25.3%). While this substantial expansion of household credit is in part due to the historically low interest rates, it mainly reflects the recent full liberalisation of this segment. This liberalisation has considerably enhanced competition among banks and increased bank penetration into this previously heavily regulated market.

Table 1 Distribution of indebted households per income group in Greece

Income groups (EUR)	Distribution of indebted households (percentages of households)			Contribution to total outstanding debt of sample (percentages of households)			Average outstanding debt (EUR)			Median of debt-to-income ratio (percentages)		
	2007	2005	2002	2007	2005	2002	2007	2005	2002	2007	2005	2002
up to 7.500	2.9	5.4	8.3	1.9	3.4	3.5	19,123	12,637	5,684	101.6	61.2	25.7
7,501-15,000	22.1	28.2	27.8	14.1	22.5	19	18,907	15,655	10,238	59.3	37.7	29.2
15,001-25,000	30.4	34.5	33.5	24.5	26.9	32.8	23,916	15,325	14,783	45.1	29.4	22.8
25,001-35,000	21.7	19	16.3	28.1	27.1	19.6	38,474	27,976	18,182	69.6	34.2	15.4
35,001+	22.8	12.9	14.1	31.5	20.1	25.1	41,151	30,597	25,898	33.9	28.1	11.0
Total[1)]							30,006	19,637	15,532	50.4	33.5	22.8

Source: Bank of Greece.
1) Amounts refer to all the households that have some type of loan.

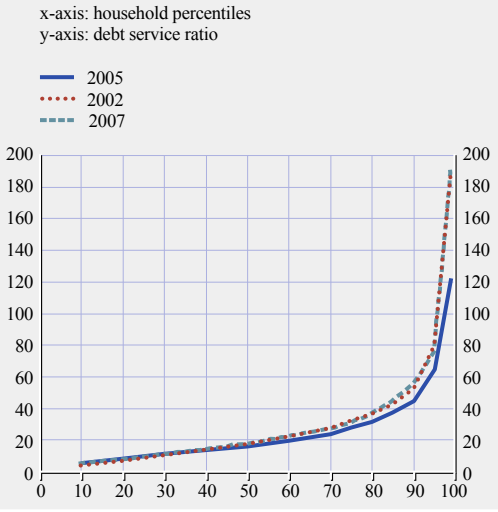
area average). Although aggregate data provide a general overview, only data at the household level allow an assessment of how financial distress is distributed. The 2005 survey data showed that, despite the large increase in bank loans to households between 2002 and 2005, the percentage of indebted households remained virtually unchanged. In contrast, in the 2007 survey the fraction of households that reported having outstanding loan obligations has risen compared with the results of 2005 (2007: 51.4%; 2005: 46.9%). Although this finding may be partly due to non-response, it suggests that further credit expansion took place primarily among already indebted households. This fact is consistent with the finding that the average indebtedness of households with credit card or housing loans has increased substantially.

In all three waves average household indebtedness increases with income and wealth (see Table 1). Specifically, the access of low-income households to the bank system remained limited in 2005 (5.4%) and decreased significantly in 2007 to 2.9% (from 8.3% in 2002). A similar trend is recorded in the second income group (2007: 22.1%; 2002: 27.8%). Conversely, the percentage of indebted households in the fourth and fifth-highest income groups (€25,001 to €35,000 and €35,000+) increased significantly especially in the highest income group, while it remained stable in all three waves for the medium income group (€15,001 to €25,000). The rapid credit expansion concurrently led to a higher average debt-to-income ratio for all income groups, as did their contribution to the total debt of the whole sample.

The analysis (using all three waves) shows that, for the vast majority of indebted households, the direct financial stress, measured with the debt-service costs, lies within limits generally considered acceptable and should not result in difficulties in the regular servicing of household loans. Furthermore, financial distress declined significantly in the period between 2002 and 2005 (see Chart 1). For example, for 80% of households in the 2005 survey (compared with

Chart 1 Cross-sectional distribution of the debt service-to-income ratio in Greece

(percentages)



Source: Bank of Greece.

75% in the 2002 survey), the debt-service costs did not exceed 32% of their income. However, by 2007 the debt service of loans had moved back to where it was in 2002, despite the fact that the outstanding balances of banking loans to households increased three times more in this period, while the interest rates in the main categories of loans to households do not differ. Consequently, the maintenance of a stable curve of debt service of loans might also be partly attributed to more effective credit risk management by commercial banks, in line with the guidelines of the Bank of Greece calling for the implementation of a longer-term and more forward-looking policy in this sector beyond the one that competition forces the banks to implement. At the same time, however, households should assess carefully their borrowing needs, and ensure that the amount of loans they are about to take up is in line with their debt-servicing capacity.

2.3 SPAIN

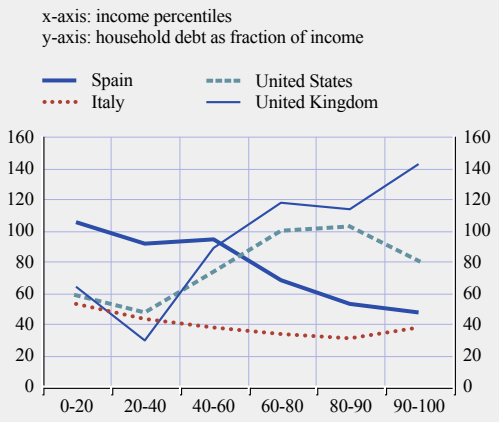
The Spanish Survey of Household Finances (EFF) was started in 2002.[25] Its main results are presented to the public in the form of Economic Bulletin articles. The report on the 2002 wave of the EFF focused on the distribution of assets and liabilities by age, income and employment status.[26] In addition, the article also computed the distribution of households' financial burden (i.e. the fraction of household income devoted to debt service) and the ratio of debts to total assets owned by the households. The results from the 2005 wave have been released in 2008. At the same time, EFF results are often referred to in public speeches by Banco de España officials. Between June 2005 and April 2007, different results from the 2002 wave were mentioned in at least 12 speeches of the Governor of the Banco de España or the Director of the Directorate General Economics, Research and Statistics. The audience included the Spanish Parliament, the Governing Council of the Banco de España and professionals. Given the recent developments in the Spanish credit market, issues related to household debt are often emphasised.[27]

In addition, the EFF is employed for policy-relevant research. Two important examples are i) the consumption response to changes in housing prices, which was discussed in detail above, and ii) an assessment of financially vulnerable households. With regard to the latter, aggregate levels of both indebtedness and wealth in Spain have grown substantially since 1999. However, aggregate statistics are not informative about the distribution of assets and liabilities across households. For example, aggregate data neither permit computing how many households are indebted, nor do they allow for an assessment of the implications of a rise in interest rates for indebted households. To understand the distribution of assets and debt, an article in the July 2005 Economic Bulletin of the Banco de España compared the magnitude and composition of wealth of US, Italian, British and Spanish households.[28] The document stresses two findings. First, the portfolios of Spanish households are very concentrated on housing wealth, in a way that is roughly constant over the income distribution. Second, while the overall ratio of outstanding debt to household income is very similar across all these countries, there is ample heterogeneity in the way debt-income ratios vary with income. While debt-income ratios decrease with income in Spain and Italy, the opposite happens in the United States or the United Kingdom (see Chart 2). This finding suggests that the group of households that would be most affected by an increase in interest rates differs across countries. Both facts are relevant for assessing the consequences of economic and

25 Micro data and related documentation are available at http://www.bde.es/estadis/eff/effe.htm.
26 http://www.bde.es/informes/be/boleco/2005/be0501e.pdf.
27 For instance, references to the financial vulnerability of Spanish households were made in a speech by the Director of DG Economics, Research and Statistics on 29 June 2005: "The assessment says that while the global situation of families is sound, microeconomic information indicates that a limited sector of households is potentially vulnerable and has either a high level of indebtedness in relation to their income or net wealth. For example, 3.7% of households have a debt-income ratio over 3." The implications of interest rate increases were addressed in speeches by the Governor of the Banco de España to the Congress Budget Office on 10 October 2006 and to the Congress Economics and Finance Commission on 24 April 2007.
28 Source: http://www.bde.es/informes/be/boleco/2005/be0507e.pdf.

Chart 2 Median household debt-income ratio in Spain

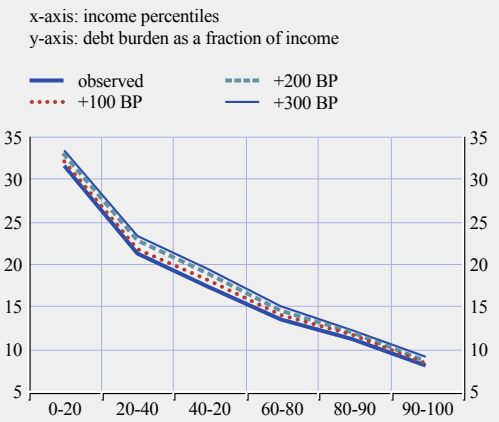
(by income quintile)



Source: O. Bover, C. Martínez-Carrascal and P. Velilla (2005), "The Wealth of Spanish Households: A Microeconomic Comparison with the United States, Italy and the United Kingdom", July 2005 Economic Bulletin of the Banco de España.

Chart 3 Interest-rate sensitivity of the debt burden in Spain

(median debt burden; by income quintile)



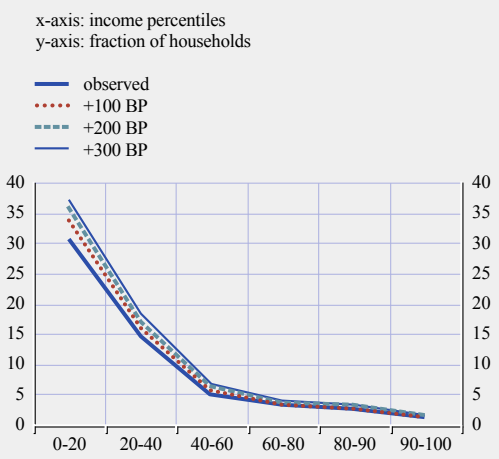
Source: Chart 5.3 in the 2005 Annual Report of the Banco de España entitled "Analysis by Income Segment of the Sensitivity of the Household Debt Burden to Interest Rate Increases".

financial developments, and were mentioned in the 2006 Financial Stability Report prepared by the Banco de España.

To obtain a quantitative assessment of the impact of rising interest rates on indebted households, a document in the 2005 Annual Report of the Banco de España uses the EFF to compute two measures of financial vulnerability among households with outstanding loans (see Charts 3 and 4). The first investigates by how much the income of each household would drop following various interest rate increases (100 basis points, 200 bp and 300 bp). The second captures the percentage of households whose financial burden exceeds 40% of income. On average, an interest rate increase of 300 bp leads to a 7.3% fall in the disposable income at the bottom of the income distribution, and to a much smaller decrease at the top. Similarly, among the bottom 20% of the income distribution, the fraction of households with a very high financial burden (above 40% of their disposable income) would increase from 30.7% to 37.2%. These estimates suggest a limited effect of interest rate increases on households' financial burden. However, as many households with a significant level of debt and a low income probably have a higher marginal propensity to consume, one might expect that the response of consumption to increases in financing costs would be somewhat greater than what the computations suggest.

Chart 4 Fraction of Spanish households whose debt burden exceeds 40% of income

(by income quintile)



Source: Chart 5.3 in the 2005 Annual Report of the Banco de España entitled "Analysis by Income Segment of the Sensitivity of the Household Debt Burden to Interest Rate Increases".

2.4 ITALY[29]

The Survey of Household Income and Wealth (SHIW) has been carried out by the Banca d'Italia since 1965 to acquire information on the economic behaviour of households. It was conducted yearly until 1984, and became biennial afterwards. Micro-level data are publicly available starting from the 1977 wave. The questionnaire has a permanent component, designed to collect core information on income, wealth, savings, payments and demographic data. In addition, the questionnaire contains a variable part with one-off questions and irregularly repeated sections focusing on specific phenomena. Recent examples are modules on: capital gains, inheritance, risk aversion, housework, intergenerational mobility, use of public services, social capital, capital, tax evasion, income and employment expectations, retirement expectations, financial choices and new technologies.

Following each SHIW wave, a report containing the main results of the survey is compiled; it usually becomes an important reference for the domestic political debate on the economic conditions of households.[30] Additionally, after each wave the Annual Report provides an updated picture of some relevant structural characteristics of Italian households.

29 This part of the note is largely based on the work of C. Biancotti and G. D'Alessio, "The use of micro-level data from the Bank of Italy's Survey of Household Income and Wealth: a focus on household finance", Banca d'Italia, available at http://www.bancaditalia.it/statistiche/indcamp/bilfait/docum.

30 See, e.g., Supplement to the Statistical Bulletin 2004: Survey on Household Income and Wealth, available at http://www.bancaditalia.it/statistiche/indcamp/bilfait/boll_stat.

Table 2 Composition of household financial assets in Italy[1)]

	1995					2004				
	Deposits or government securities	Bonds	Investment fund units	Shares	Other[2)]	Deposits or government Securities	Bonds	Investment fund units	Shares	Other[2)]
Proportion of holding households (percentages)										
Geographic area										
Centre and North	91.3	3.6	5.9	5.5	4.5	91.6	8.1	11.3	10.0	6.6
South and Islands	68.3	0.7	0.8	0.7	0.3	63.6	1.0	2.2	1.6	0.7
Annual disposable income										
1st quartile[3)]	59.7	0.5	0.2	0.4	0.3	58.4	0.5	1.0	0.4	0.5
2nd quartile[4)]	85.5	0.4	1.5	1.5	1.5	84.8	2.8	4.2	2.2	2.1
3rd quartile[5)]	94.4	2.3	3.8	3.0	3.0	91.7	7.0	8.4	7.2	5.4
4th quartile[6)]	97.9	7.7	11.8	11.3	8.1	95.7	12.8	19.8	19.5	10.7
Total	**83.7**	**2.6**	**4.2**	**3.9**	**3.1**	**82.7**	**5.8**	**8.4**	**7.4**	**4.7**
Composition of financial assets (percentages)										
Geographic area										
Centre and North	79.5	2.6	6.0	5.2	6.6	60.8	7.7	12.2	10.2	9.3
South and Islands	89.6	5.7	1.2	1.9	1.6	82.5	1.6	8.8	4.1	3.0
Annual disposable income										
1st quartile[3)]	95.7	1.5	0.5	1.9	0.5	93.2	1.3	3.1	1.6	0.8
2nd quartile[4)]	93.6	0.5	2.3	1.6	2.0	83.1	4.0	7.5	3.1	2.4
3rd quartile[5)]	90.7	1.6	3.3	1.6	2.8	73.1	5.8	8.0	6.2	6.8
4th quartile[6)]	74.5	4.1	6.9	6.5	7.9	53.4	8.3	14.8	12.6	11.0
Total	**81.1**	**3.1**	**5.3**	**4.7**	**5.8**	**64.1**	**6.7**	**11.6**	**9.2**	**8.3**

Sources: Bank of Italy, *Survey of Household Income and Wealth*.
1) Related to the population as a whole.
2) Includes equity in limited liability companies and partnerships, securities issued by non-residents and loans to cooperative societies.
3) Up to €11,900 in 1995 and up to €15,800 in 2004.
4) Between €11,900 and €18,500 in 1995 and between €15,800 and €24,200 in 2004.
5) Between €18,500 and €28,800 in 1995 and between €24,200 and €37,200 in 2004.
6) More than €28,800 in 1995 and more than €37,200 in 2004.

The household-level data collected in the SHIW are also widely used in policy-relevant research projects or as a tool for simulating the impact of policy measures via micro-simulation frameworks. Examples include the channels of transmission of monetary policy, the functioning of banking markets, the analysis of fiscal issues or pension reform.[31] Micro data are also used in connection with the compilation of financial and wealth accounts.

The relative importance of research fields and policy issues changes over time. In the early years, the research mostly concentrated on a few core subjects: income, savings, wealth and

31 The website of the Banca d'Italia has a section devoted to the SHIW, containing the official reports, papers, the bibliography of the papers that use the SHIW, downloadable micro data, questionnaires and other documents (http://www.bancaditalia.it/statistiche/indcamp/bilfait). Most documents are available in English.

Table 3 Household debt in Italy[1)]

	1995			2004		
	Total debt	of which: for house purchases	of which: consumer credit	Total debt	of which: for house purchases	of which: consumer credit
Proportion of indebted households						
Geographic area						
Centre and North	21.9	15.1	8.7	23.3	13.3	13.0
South and Islands	17.6	8.8	10.5	18.5	8.7	11.8
Annual disposable income						
1st quartile[2)]	10.5	4.7	6.4	9.6	3.5	6.6
2nd quartile[3)]	17.5	10.5	7.9	18.1	8.8	11.1
3rd quartile[4)]	25.9	16.4	12.7	26.9	14.0	16.7
4th quartile[5)]	29.2	21.6	10.6	32.5	20.9	16.2
Total	**20.5**	**13.0**	**9.3**	**21.8**	**11.8**	**12.6**
For indebted households: ratio of debt to assets[6)]						
Geographic area						
Centre and North	8.0	8.7	40.4	10.9	13.7	39.0
South and Islands	8.6	9.8	53.2	9.7	14.4	40.0
Annual disposable income						
1st quartile[2)]	10.4	15.4	60.4	25.3	32.4	102.0
2nd quartile[3)]	12.8	13.4	101.1	16.7	21.0	63.4
3rd quartile[4)]	10.1	11.2	53.8	13.7	19.9	49.5
4th quartile[5)]	6.0	6.5	27.6	7.8	10.0	25.3
Total	**8.1**	**8.9**	**43.5**	**10.6**	**13.8**	**39.3**
For indebted households: ratio of debt to annual disposable income						
Geographic area						
Centre and North	52.6	63.3	18.3	80.7	113.8	19.9
South and Islands	50.7	72.3	17.9	68.3	99.8	24.6
Annual disposable income						
1st quartile[2)]	125.1	249.5	31.2	165.2	393.7	36.3
2nd quartile[3)]	80.4	112.4	27.1	104.5	168.1	36.8
3rd quartile[4)]	57.7	76.0	19.4	96.7	159.4	22.7
4th quartile[5)]	38.9	45.7	13.4	60.0	79.0	14.8
Total	**52.2**	**65.0**	**18.2**	**77.9**	**111.0**	**21.1**

Source: Bank of Italy, *Survey of Household Income and Wealth*.
1) Related to the population as a whole. Figures below the 1st percentile and above the 99th percentile are set to those of the percentiles mentioned.
2) Up to €11,900 in 1995 and up to €15,800 in 2004.
3) Between €11,900 and €18,500 in 1995 and between €15,800 and €24,200 in 2004.
4) Between €18,500 and €28,800 in 1995 and between €24,200 and €37,200 in 2004.
5) More than €28,800 in 1995 and more than €37,200 in 2004.
6) Total debt and debt for house purchases are set in relation to total real and financial assets; consumer credit is set in relation only to financial assets.

fiscal policy. Subsequently, attention was paid to more specific themes, such as uncertainty, poverty, inequality or retirement plans. Currently, the research focuses on household finance, including issues such as asset allocation, uncertainty and risk aversion, market structure and imperfections, wealth accumulation, demand for credit, payment technologies and spatial interest-rate differentials.

As far as the composition of households' financial assets and debt is concerned, Italian households have over the last ten years increased their holdings of longer-term financial assets (see Annual Report, 2005). According to the SHIW, the proportion of families owning bonds, investment fund units or shares almost doubled, from under 9% to 16%. Differences in the composition of financial portfolios across income brackets and geographic areas have become more pronounced. While the top income quartile of households, which live predominantly in the Centre and North, holds around 36% of net worth in bonds, investment fund units and shares and a smaller part in deposits (Table 2), the bottom quartile invests more than 90% of their financial wealth in deposits and government securities. The rapid rise in the value of households' real estate and their greatly increased activity in the property market were mirrored in an increase in average debt per household, which, including mortgage loans and consumer credit, rose from €14,000 in 1995 to €27,000 in 2004. The proportion of indebted households increased only by just over one percentage point, however, to 22% (Table 3); the increase in borrowing was especially marked among households in the highest income quartile, which accounts for around 40% of total debt.

2.5 THE NETHERLANDS

The Household Survey of De Nederlandsche Bank (DHS), formerly known as the CentER Savings Survey (Tilburg University), is a panel dataset that started in 1993. De Nederlandsche Bank (DNB) has participated since 2002. Data are collected every year with an internet panel of more than 2,000 households. The data contain information about employment, pensions, housing, mortgages, income, assets, debts, payments, health, economic and psychological concepts, and personal characteristics. DHS data are unique in the sense that they allow the study of both psychological and economic aspects of financial behaviour.

The questionnaire has a permanent component, designed to collect core information on the financial behaviour of Dutch households, and a variable part with questions on specific issues. Recent examples of such issues include surveys on Europe, health insurance, counterfeit money, childcare and confidence in financial institutions. Following each DHS wave, DNB's Quarterly Bulletin provides an updated picture of some relevant structural characteristics of Dutch households. Issues addressed relate, for instance, to the financial behaviour of Dutch households (September 2003 and 2004), payment products as perceived by consumers (March 2005), financial stability (June 2005 and March 2006), confidence, happiness and the financial situation of households (September 2005), household saving behaviour (March 2006) and financial literacy (June 2006).

DNB's policy-makers and researchers have made extensive use of DHS data in the past five years. The survey has been used in 9 articles in the Quarterly Bulletin, 17 internal analytical notes and a large number of working papers, DNB occasional studies and publications in refereed journals. To give an example, a case study by van Rooij (2002) has shown that while a substantial number of households might be faced with mortgage payment problems in case of a housing crisis, the financial loss for the banking sector as a whole should be limited to a small fraction of the outstanding mortgage loans. The usefulness of the DHS results for DNB's policy can also be illustrated by the recent research on the wealth effects on consumption, the financial knowledge of Dutch households and their choice of pension schemes, intergenerational solidarity, perceptions of economic growth and inflation

and payment behaviour. Furthermore, the data are publicly available for scientific purposes, and external researchers make substantial use of them.

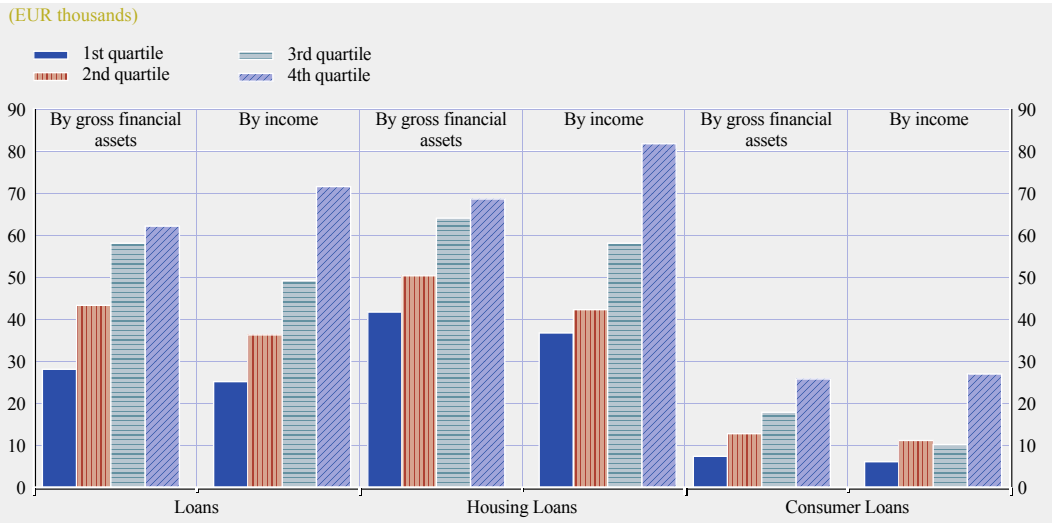
2.6 AUSTRIA

In the summer and fall of 2004 the Oesterreichische Nationalbank (OeNB) conducted a household survey of financial wealth, investment and debt. The survey's 87 questions covered the households' socio-demographic characteristics, assets, information sources about financial market topics and approaches to financial market issues. The report of Beer et al. (2004), which received much interest both within the Bank and outside (in ministries, parliament and research institutions), summarises the main results of the survey.

The data are used in the OeNB's Financial Stability Report to put the aggregate statistics in perspective. For assessing the risks of household debt to financial stability, it is important to know the debt concentration within the household sector and the ratio of debt to income and assets at the household level. Beer and Schürz (2007) document that loans are in particular taken up by high-income and wealthy households, a relationship that is especially pronounced for foreign currency loans (denominated mostly in Swiss francs). From the perspective of financial stability, the Austrian micro data show that a considerable fraction of loans was taken up by households that can rely on reserves in the case of adverse events such as a rise in interest rates for variable rate loans, an unfavourable development of exchange rates for foreign currency loans, or a drop in income. In a similar vein, the analysis of stock market risks should take into account that only a minority of relatively wealthy/high-income households have invested in equities.

However, the fact that the high proportion of foreign currency housing loans is subject to quite considerable exchange rate risk is of particular concern for the OeNB and is therefore currently analysed in more depth in cooperation with the Swiss National Bank (Beer et al., 2007). Apart from discussing why households demand such loans and banks supply them, the aim is to figure out what are the characteristics of households that have taken up such loans.

Chart 5 Average loan size of indebted households in Austria



Source: OeNB.

Financial literacy of households has recently become a topic of growing importance for central banks. The Austrian survey contains good information on this topic and can therefore be used for assessing and suggesting how to improve financial capabilities of households. According to a recent study (Fessler et al., 2007), personal attitudes towards financial issues (e.g. risk orientation, propensity to invest in complex financial products and to shop around, self-confidence in financial matters) are affected by education, income and age. Respondents with a higher level of income and education tend to have greater confidence in their financial knowledge and skills. However, most respondents do not devote many resources to the choice of financial products. Relatively few households own risky financial products, and those which do usually rely on the advice of their banks. Furthermore, about a half of the respondents only seldom compare offers of financial services. One of the main findings is that future efforts directed towards improving financial literacy should pay special attention to the differences between financial attitudes and actual financial behaviour.

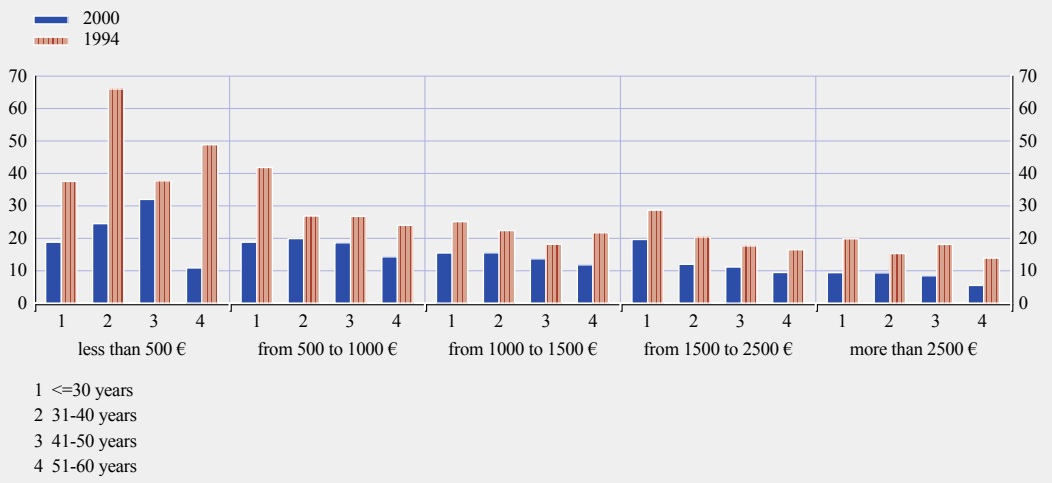
2.7 PORTUGAL

In the early 1990s, the Banco de Portugal (BdP) encouraged the National Statistical Institute (NSI) to conduct a survey of Portuguese households' wealth and debt (*Inquérito ao Património e Endividamento das Famílias*, hereafter IPEF), recognising the importance of acquiring information on the distribution of wealth and debt across households. The IPEF was launched in 1994 as an additional module of the Employment Survey, allowing the information on the wealth and debt of households to be linked with information on their income and socio-demographic characteristics. In the second and third waves, which were carried out in 2000 and 2006/2007, the IPEF was attached to the Income and Expenditure Survey.

The IPEF has been the only statistical source collecting information on income, expenditure, financial assets, real assets and debts of Portuguese households at the micro level. The data obtained from the survey have been used to study the heterogeneity of households' debt, debt burden and portfolio composition,

Chart 6 Debt burden as a fraction of disposable income in Portugal, by monthly income and age

(percentage)



Source: Banco de Portugal.

depending on several characteristics such as income, education levels, age or region of residence.

Because of the relatively long time interval between the waves (six years), the information in the IPEF is primarily of a structural nature. However, the results of the data analysis still proved useful for policy-makers (after all, the underlying motivation to implement the IPEF was the recognition that a better knowledge of distributional aspects of household wealth and debt is highly policy-relevant).

The main results of the IPEF waves are presented in articles in the Economic Bulletin of the BdP. Based on concerns at the time about insufficient savings slowing down economic growth, the Economic Bulletin article analysing the results of the first wave (Dias, 1996) focused on the distribution of household wealth and portfolio composition. The strong and rapid rise in aggregate household debt during the 1990s (from 36% of disposable income in 1995 to 85% in 2000, reflecting both the decrease of interest rates and changes in the supply side of the credit market) raised sustainability concerns.

A study of the IPEF data proved particularly valuable in that regard. Chart 6 presents data on households' debt burden in 1994 and in 2000, broken down according to household monthly income and age of the reference person.[32] The chart shows that there was a considerable decline in the average debt burden for all the categories of age/income considered. The survey data thus imply that the rise of household indebtedness at the aggregate level was not achieved at the expense of increased leverage at the individual level. Instead, they suggest more widespread opportunities for households to smooth consumption over the business cycle. This finding was also important for understanding why private consumption kept growing after EMU accession, in particular during the slowdown in economic activity after 2000.

In between the waves, the data were also used for interpreting macroeconomic developments and assessing financial stability. Corresponding analyses were presented, e.g. in the Annual Report and the Financial Stability Report. Following the second wave in 2000, aggregate household indebtedness has continued to rise steadily. Moreover, judging from aggregate statistics, the emergence and widespread marketing of new financial investment products may recently have caused significant changes in the portfolio composition of Portuguese households. Therefore, a more up-to-date picture of the financial situation of households at the micro level is of utmost importance, especially with regard to the segments that may have recently assumed greater risks. The field work of the third IPEF wave finished in late 2007; preliminary results were published in Farinha (2007).

32 For details see L. Farinha (2004), "Households' debt burden – an analysis based on microeconomic data", Banco de Portugal Economic Bulletin, June.

ANNEX

THE EUROSYSTEM HOUSEHOLD FINANCE AND CONSUMPTION NETWORK

This paper was drafted by the Eurosystem Household Finance and Consumption Network, chaired by Caroline Willeke and Michael Ehrmann. The list of members of the Network at the time was as follows:

Isabelle de Greef	Banque Nationale de Belgique/Nationale Bank van België
Pierrick Stinglhamber	Banque Nationale de Belgique/Nationale Bank van België
Ulf von Kalckreuth	Deutsche Bundesbank
Tobias Schmidt	Deutsche Bundesbank
Markus Grabka	DIW Berlin/SOEP
Mary J. Keeney	Central Bank and Financial Services Authority of Ireland
Martina Lawless	Central Bank and Financial Services Authority of Ireland
Aisling Menton	Central Bank and Financial Services Authority of Ireland
Calliope Akantziliotou	Bank of Greece
Theodoros Mitrakos	Bank of Greece
Panagiota Tzamourani	Bank of Greece (up to July 2007)
Cristina Barceló	Banco de España
Olympia Bover	Banco de España
Ernesto Villanueva López	Banco de España
Frédérique Savignac	Banque de France
Patrick Sevestre	Banque de France
Cédric Houdré	INSEE
Ivan Faiella	Banca d'Italia
Stefano Iezzi	Banca d'Italia
Eliana Viviano	Banca d'Italia
Stephan Haroutunian	Central Bank of Cyprus
Thomas Mathä	Banque centrale du Luxembourg
Karen Caruana	Central Bank of Malta
Christopher Pace	Central Bank of Malta
Henriëtte M. Prast	De Nederlandsche Bank
Corry van Renselaar	De Nederlandsche Bank
Federica Teppa	De Nederlandsche Bank
Maarten van Rooij	De Nederlandsche Bank
Christian Beer	Oesterreichische Nationalbank
Pirmin Fessler	Oesterreichische Nationalbank
Martin Schürz	Oesterreichische Nationalbank
Luísa Farinha	Banco de Portugal
Matej Brelih	Banka Slovenije
Uroš Geršak	Banka Slovenije
Matjaž Jeran	Banka Slovenije
Irena Komprej	Banka Slovenije
Risto Herrala	Bank of Finland
Jouko Vilmunen	Bank of Finland
Juha Honkkila	Statistics Finland

Jean-Marc Museux	Eurostat
Riccardo Bonci	European Central Bank
Michael Ehrmann	European Central Bank, Chairperson
Trevor Fitzpatrick	European Central Bank
Magnus Forsells	European Central Bank
Ramón Gómez-Salvador	European Central Bank
Elke Hahn	European Central Bank
David Lodge	European Central Bank
Sébastien Pérez-Duarte	European Central Bank
Carlos Sánchez Muñoz	European Central Bank, Secretary
Patrick Sandars	European Central Bank
Frauke Skudelny	European Central Bank
Jiri Slacalek	European Central Bank, Secretary (starting March 2008)
Panagiota Tzamourani	European Central Bank (as of July 2007)
Philip Vermeulen	European Central Bank, Secretary (until February 2008)
Caroline Willeke	European Central Bank, Chairperson
Bernhard Winkler	European Central Bank
Martin Zeleny	European Central Bank
Luigi Guiso	European University Institute, Florence
Michael Haliassos	Johann Wolfgang Goethe-Universität Frankfurt
Arthur Kennickell	Board of Governors of the Federal Reserve System

The Eurosystem Household Finance and Consumption Network (HFCN) is a network consisting of survey experts, statisticians and economists of the ECB, the Eurosystem national central banks and a number of national statistical institutes and research institutes. The HFCN has been mandated by the ECB Governing Council to implement the Eurosystem Household Finance and Consumption Survey (HFCS), to serve as a forum for research with the survey data and to take care of the development of the HFCS.

The HFCS covers micro-level information on manifold households' decisions with regard to holding real and financial assets, taking debt, risk attitudes, employment, income, pensions, intergenerational transfers, gifts, consumption and savings. Data collection is expected to start as early as in 2009 in a number of euro area countries. It is expected that anonymised euro area micro data on household finance and consumption will also be made available to the research community in the future.

The HFCS will be conducted at a national level, with countries striving for harmonisation on the survey 'output side' by reporting a set of output variables which have been commonly defined. The so-called 'core' output variables are delivered by all participating countries. In addition, a set of non-core variables are defined and countries can freely decide to collect (some of) them in their surveys, such that this can be done in a standardised way and allows for cross-country comparability. The HFCN also developed a blue-print questionnaire to be used primarily by the countries implementing the HFCS for the first time.

The blue-print Eurosystem questionnaire consists of two main parts: one targeted at the household as a whole and the other at individual household members. The block covering household-level questions encompasses real assets and their financing, other liabilities/ credit constraints, private businesses, financial assets, intergenerational transfers and gifts,

and consumption and saving. Questions to individuals cover demographics, employment, future pension entitlements and income. In addition to these questions there are standardised questions to determine the respondent responsible for the household questionnaire, 'the financially knowledgeable person', and also questions to be answered by the interviewer related to the appearance and location of the dwelling (to provide the so-called 'para-data'). More information is available at www.ecb.europa.eu/home/html/researcher_hfcn.en.html.

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