

ARTICLES

THE EXTERNAL FINANCING OF HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS: A COMPARISON OF THE EURO AREA AND THE UNITED STATES



This article compares the external financing of households and non-financial corporations in the euro area and the United States in the period from 2000 to the third quarter of 2008, with a focus on the period of the financial turmoil. The extent to which the external financing of households and non-financial corporations in the euro area is based on banks (which refers here to the origination and holding of bank loans) is much greater than in the United States, where non-bank lenders (such as government sponsored enterprises and private issuers of asset-backed securities) and market-based financing (including securitisation, whereby bank loans are removed from banks' balance sheets) play a more important role. With respect to the period of the financial turmoil, which started in mid-2007, the growth of the external financing of households and non-financial corporations in both economic areas has declined. With respect to non-financial corporations, bank financing gained importance in both economic areas in the period of the financial turmoil. In the case of US non-financial businesses in particular, this is likely to be related to problems encountered by banks in off-loading loans via loan sales and securitisation. While bank credit standards and the cost of financing of non-financial corporations have tightened considerably in both economic areas, there were no clear indications as at the third quarter of 2008 that quantitative credit restrictions for euro area non-financial corporations have played a substantial role in shaping financial developments.

I INTRODUCTION

The structure and development of the external financing of households and non-financial corporations in the euro area and the United States is, first, closely connected with the structure of the financial system in the respective economic areas. As the euro area financial system is more bank-based, loans on the balance sheets of banks have a much greater importance in the euro area than in the United States in the external financing of households and non-financial corporations. Second, external financing delivers interesting insights about the need for this financing in the context of economic developments, household disposable income and saving ratios, and corporate profit and investment developments. Third, the structure of external financing provides information about the relative importance of financing instruments and about financial innovation, such as the growing importance of securitisation in recent years prior to the start of the financial turmoil in mid-2007, and the decline in such financing alternatives thereafter.

The financial turmoil had an impact on the external financing of households and non-financial corporations as some financing alternatives practically dried up and questions

arose regarding impediments to access to financing. In this context, it is of interest to compare the extent to which the worldwide financial turmoil has affected external financing in economic areas with different financial structures, such as the euro area and the United States.

The dominant role of banks in financing and the smaller scale of securitisation activities in the euro area have limited the scope for re-intermediation and possible substitution into bank lending from non-bank and market-based funding in the wake of the financial turmoil, compared with the situation in the United States. Moreover, lower household debt levels and higher saving ratios should make euro area households less dependent on external financing for sustaining consumption and less sensitive to variations in asset values. By contrast, non-financial corporations in the euro area could be more susceptible to changes in financial conditions, despite debt levels broadly comparable to those of the non-financial business sector in the United States, given that they have relied on net borrowing to finance investment to a greater extent than their US counterparts.

Therefore, analysing financial positions and financing developments is important in order to understand to what extent the crisis has affected

the household and non-financial corporate sectors in the two economic areas. Furthermore, since changes in the financing patterns of both households and non-financial corporations have occurred since the start of the financial turmoil, this article examines two periods, i) from 2000 to mid-2007¹ and ii) from mid-2007 to the third quarter of 2008 (the last period for which comprehensive data are available for the euro area). Hence, this article does not take into account financing developments after the intensification and broadening of the financial crisis from September 2008.

Against this background, this article mainly focuses on external financing flows of households and non-financial corporations in the euro area and the United States and compares their significance and changes over time. The article first presents a short overview of some of the main features of the capital markets in the euro area and the United States (Section 2). Section 3 investigates the financial situation, financing structure and financing developments with respect to the household sector in the euro area and the United States. Section 4 presents the corresponding analysis with respect to non-financial corporations. Section 5 concludes.

2 THE FINANCIAL SYSTEM IN THE EURO AREA AND THE UNITED STATES

The external financing structure of households and non-financial corporations is connected with the structure of the financial system, namely the importance of bank financing (which refers here

to the combination of originating and holding bank loans) versus market-based financing (which includes the option to sell loans, which have been originated by banks, to non-banks or securitise them). Overall, capital markets related to the private sector are somewhat larger in the United States than those in the euro area (see the table), amounting to 375% of GDP in 2007, compared with 311% of GDP in the euro area. The euro area has traditionally had a largely bank-based financial system, with loans to the private sector that remain on banks' balance sheets amounting to 145% of GDP in 2007. By contrast, in the United States bank lending (with loans being originated and held by banks) to the private sector is much less important, and amounted to 63% of GDP in 2007.

While euro area stock market (quoted shares issued) and corporate bond market (debt securities issued by the private sector) capitalisations have increased in the past decade, to stand at 85% and 81% of GDP respectively in 2007, these markets are still considerably smaller than those in the United States, where the market capitalisations amounted to 144% and 168% of GDP respectively in 2007.

The more market-based system in the United States reflects long-standing disintermediation over previous decades, while the largely bank-based system in the euro area has changed in

¹ For a comparison with the period from the mid-1990s to 2002, see the article entitled "Developments in private sector balance sheets in the euro area and the United States" in the February 2004 issue of the Monthly Bulletin.

The size of capital markets related to the private sector in the euro area and the United States

(percentages of GDP; end of year)

	euro area		United States	
	1998	2007	1998	2007
capital market related to the private sector	200	311	300	375
<i>of which:</i>				
quoted shares issued	63	85	145	144
debt securities issued by the private sector	45	81	107	168
bank loans to the private sector	92	145	49	63

Sources: BIS, DataStream, ECB, Eurostat, IMF, World Federation of Exchanges and ECB calculations.

Notes: The size of capital markets is defined as the sum of the stock market capitalisation (quoted shares issued), bank loans granted to the private sector and debt securities issued by the private sector. Figures may not add up due to rounding.

recent years.² The rapid growth of securitisation markets and a surge in syndicated lending activity in the euro area, until the slowdown owing to the financial turmoil which started in mid-2007, led to a stronger market orientation on the part of the euro area banking sector. Financial innovation, including in particular the option to raise funds through securitisation processes,³ had a favourable impact on the funding costs of banks. These developments blurred the traditional distinction between a bank-based and a market-based system. Moreover, banks were able to grant additional loans without increasing leverage due to the option to sell assets in the context of true-sale securitisation, at least to the extent that this allowed the assets to be removed from their balance sheets (“derecognised”). In turn, this kind of financing influenced the pricing of bank loans and contributed overall to easier credit availability in the euro area economy in recent years prior to mid-2007. This was mirrored by an increasing gap between bank loans granted to the private sector and deposits from the private sector (the so-called funding gap). Nevertheless, those deposits remained the main funding source for the euro area banking sector.

In line with the largely bank-based financial system in the euro area, the external financing of euro area non-financial corporations consists to a large extent of loans originated and held by banks. In the United States, loans from non-bank providers and market-based external financing are considerably more important than in the euro area. The importance of non-bank loans reflects the larger role of securitisation and syndicated loan activity compared with the euro area. The larger role of securitisation in the United States may be driven partly by accounting standards that allow bank loans which are sold to non-banks during a securitisation process to be derecognised from banks’ balance sheets more easily than in the euro area. A similar picture emerges for the external financing of households. In both currency areas, banks are the main originator of financing for households. However, the spectrum of institutions that exists in the United States to take over loans originated by banks is considerably larger than

in the euro area. These institutions were created for the purpose of enhancing the availability and reducing the cost of credit to certain sectors of the economy, with the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac), in particular, being tasked with promoting home ownership. The enhancement of the credit supply stems from an implicit government guarantee that allows these two agencies to enjoy a lower cost of capital in order to fund their activities, which involve purchasing, guaranteeing and securitising mortgages. In addition to government sponsored enterprises, there exists in the United States a broader set of private issuers of asset-backed securities compared with the euro area. These issuers are in many cases linked to banks and have increased in size and importance since 2004, in part as a reaction to tighter capital requirements and greater balance sheet controls applied to government sponsored enterprises, but also due to regulatory changes leading to an acceleration in the growth of off-balance-sheet activities of banks and higher leverage ratios.

At the same time, on a worldwide scale, the move from a traditional “originate to hold” model to what is sometimes called an “originate to distribute” model was accompanied by an insufficient pricing of risk, easing in underwriting standards and increased reliance on complex and opaque credit instruments. These instruments proved fragile under stress, particularly in the context of the financial turmoil which was triggered by the sub-prime crisis in the United States. The drying-up of some markets since the start of the financial turmoil, related to the greater risk aversion of investors, led to a rebound in bank financing as a share of the total external financing of private borrowers, in particular non-financial corporations, both in the euro area and in the United States (see Sections 3 and 4).

2 See the article entitled “The role of banks in the monetary policy transmission mechanism” in the August 2008 issue of the Monthly Bulletin.

3 For more details, see the article entitled “Securitisation in the euro area” in the February 2008 issue of the Monthly Bulletin.

A COMPARISON OF THE EURO AREA ACCOUNTS WITH THE INTEGRATED MACROECONOMIC ACCOUNTS OF THE UNITED STATES

Euro area accounts

The euro area accounts (EAA) present a comprehensive overview of economic and financial developments in the euro area, broken down by institutional sector. The EAA are the implementation of the integrated economic accounts described in the System of National Accounts 1993 (SNA93) and the European System of National and Regional Accounts (ESA95). The EAA distinguish five institutional sectors in the non-financial accounts (non-financial corporations, financial corporations, general government, households and non-profit institutions serving households, and the rest of the world). In the financial accounts, the financial corporations sector is subdivided into monetary financial institutions (MFIs), insurance corporations and pension funds (ICPFs) and other financial intermediaries (OFIs). The EAA provide a full description of all transactions between economic agents in a given period, from income generating transactions to financial transactions, as well as other changes in assets and the financial balance sheet. The accounts are nearly fully reconciled: uses (including changes in financial assets) are equal to resources (including changes in liabilities) for all flows and stocks in the system and there are no statistical discrepancies regarding the financial corporations, general government and rest of the world sectors.

The EAA have been published at a quarterly frequency since June 2007, and time series are available from the first quarter of 1999. The accounts are jointly compiled by the ECB and the Statistical Office of the European Communities (Eurostat). While the compilation of the non-financial accounts is the shared responsibility of the two institutions, the ECB is responsible for the compilation of the financial accounts.

Integrated macroeconomic accounts of the United States

The Board of Governors of the Federal Reserve System (FRB) has published tables of flow-of-funds account (FFA) data at a quarterly frequency since 1959. These tables cover the transactions reported in the capital account (savings and capital expenditures), as well as financial investment and financing of institutional sectors. The Bureau of Economic Analysis (BEA) produces the national income and product accounts (NIPA), which focus on macroeconomic aggregates but also provide breakdowns by institutional sector and transaction, as well as the international transactions accounts (ITA).

Although the NIPA, FFA and ITA together provide most of the economic accounts described in the SNA93, these data are not fully integrated and show some inconsistencies. Since 2006 the BEA and the FRB have jointly published annual data called the “integrated macroeconomic accounts of the United States” (SNA-USA), describing the full sequence of accounts. However, the SNA-USA are not reconciled across transactions and sectors. They also differ in some respects from the SNA93 framework, for instance in the delineation between the non-financial corporation and household sectors. In the United States, all sole proprietorships and partnerships are part of the non-financial non-corporate business sub-sector. Moreover, this sub-sector, which forms part of the non-financial business sector, includes individuals in their capacity as receivers of rental income. Therefore, in order to be consistent with the SNA93 (and comparable to the EAA) part of this sub-sector would need to be allocated to the household sector.

Comparability of the system of accounts in the two currency areas

The EAA financial accounts present the MFI sector, which is shown consolidated for most of the transactions, together with the OFI and ICPF sectors. In the SNA-USA, the total financial corporation sector is presented, while a more detailed breakdown is available in the FFA. The EAA MFI sector broadly corresponds to four financial sub-sectors in the FFA that are not consolidated, namely the central bank, commercial banking, savings institutions and credit unions sub-sectors.

In terms of asset coverage, the EAA do not yet provide estimates for non-financial assets by sector, contrary to the SNA-USA and the FFA. Some further differences exist in the definition of general government investment and non-financial assets as regards certain types of defence expenditure. Moreover, the SNA-USA and FFA data do not include inter-company loans or inter-company equity holdings, whereas the EAA do. The latter difference is particularly relevant in the case of equity purchases related to mergers and acquisitions, which may result in negative equity issuance in the US data when financed by debt.

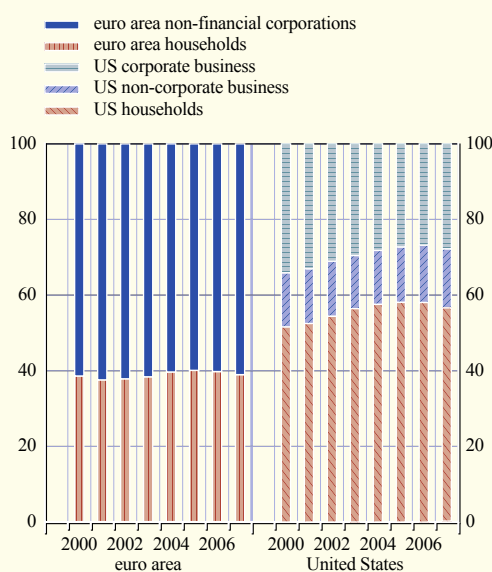
The different classifications of non-corporate business also affect the comparability of debt data. The chart shows the debt of the various sectors as a share in the total debt of the private non-financial sectors of the two economic areas. The fact that debt incurred by certain non-corporate business units is classified as part of the debt of the business sector implies a lower figure for US household debt (and a higher figure for US business sector debt) than the amount calculated in a way that is methodologically comparable to the way in which the EAA household debt is calculated. The area in the chart which corresponds to the total debt of the non-corporate business sector provides an upper limit to such difference.

To be fully comparable, the corporate debt figures for the two economic areas should also be corrected for differences in the valuation of debt securities: in the EAA, debt securities are valued at market prices, whereas in the US FFA they are valued at the nominal value adjusted for accrued interest. Similarly, unquoted equity is valued at the book value in the US data, while current value estimates are provided in the EAA.

In the quarterly data some additional differences exist between the US statistics and the EAA. For example, the NIPA and FFA employ a concept of “net personal disposable income” that is slightly different from the European “net disposable income” concept, as it includes interest payable and current transfers payable. These items are entered in the accounts as part of “personal outlay”, a broader category than the SNA93 definition of individual final consumption. Moreover, the FFA treat household consumer durables

Breakdown of the debt of the private non-financial sectors in the euro area and the United States

(percentages)



Sources: ECB and Board of Governors of the Federal Reserve System.

as non-financial assets, whereas the NIPA exclude them from gross fixed capital formation (creating an inconsistency between the two sets of US data also).

For the purposes of this article, the SNA-USA data have been adjusted to make them comparable to euro area data to the extent possible. In some cases, however, adjustments have been made to EAA data, rather than the US data, when the converse adjustment was not possible. Specifically, EAA data on inter-company loans and corporate equity have been consolidated. Finally, the different sector delineations and instrument valuations have not been harmonised, as no information is available to enable such adjustments to be made.

3 EXTERNAL FINANCING OF HOUSEHOLDS IN THE EURO AREA AND THE UNITED STATES

This section examines the overall financial situation of households in both economic areas and then describes the main features of the financing structure of households and its development in the euro area and the United States over the past decade. In addition, external financing flows are analysed over that period, with a focus on the period of financial market tensions since mid-2007. Due to methodological differences described in detail in the box above, differences between the two currency areas, for example in terms of debt levels or debt service burdens, may be even more pronounced than is visible in the data.

FINANCIAL SITUATION

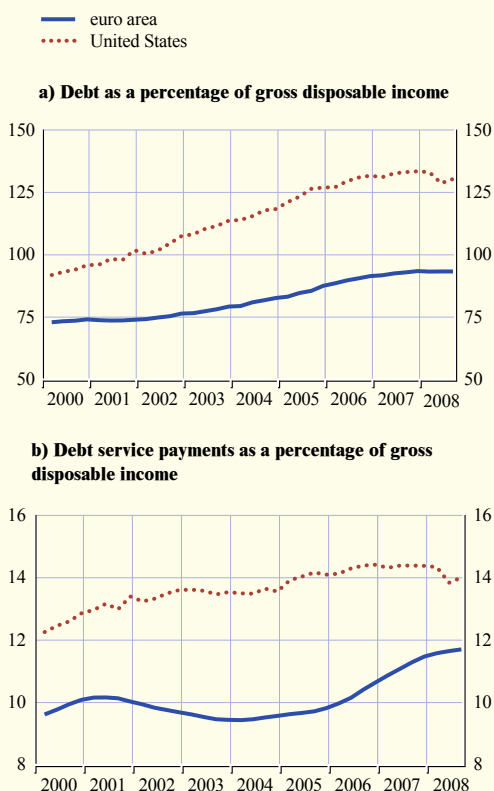
In both currency areas, household debt levels (defined as outstanding debt relative to gross disposable income) have remained elevated in recent quarters, with household debt in the United States, however, at considerably higher levels. Debt levels in the euro area increased in particular in the period between 2003 and early 2007, after a period of stable debt levels between 2000 and 2002 linked to the end of the “new economy” boom and the subsequent worsening of the economic situation. In the third quarter of 2008 the household debt level in the United States stood at 130% of disposable income – considerably above the level in the euro area, which was 93% in the same period (see Chart 1). Differing debt levels in the two currency areas may give some insights about different needs for deleveraging and thus different financing developments in

the future. However, “sustainable” debt levels are difficult to derive theoretically and a proper assessment of debt levels measured at the macro level should be complemented by a distributional analysis at the micro level. Unfortunately, the data required for such an analysis are not available for the most recent years and with a suitable frequency. The increase in debt levels in the period 2003-2006 mainly reflected favourable financing conditions, strong housing market dynamics and a robust economic outlook. Household indebtedness levelled off in 2007 and 2008. This development occurred due to moderating loan dynamics on account of increases in interest rates and later due to the start of the financial market turmoil triggered by the sub-prime crisis and leading to moderating house prices – in the United States and some euro area countries house prices even declined. This levelling-off occurred on the back of moderating mortgage debt in both currency areas. Mortgage debt is by far the largest component of household debt: in the third quarter of 2008 it accounted for 75.9% of the total debt of US households, whereas MFI mortgage loans comprised 63.6% of the outstanding debt of the euro area household sector in the same period.

Changes in household debt levels may hide structural changes that allow households to assume a higher debt level without necessarily incurring a higher debt service burden (measured in terms of debt service payments as a percentage of gross disposable income). In the case of the euro area, such structural changes in past years have also been associated with the process of convergence towards lower inflation and interest rates in a number of countries in the context of the introduction of the euro.

Chart 1 Household debt and debt service payments

(percentages)



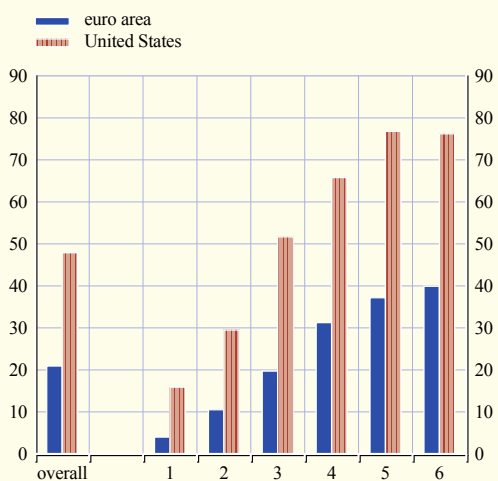
Sources: ECB, Board of Governors of the Federal Reserve System and Eurostat.

The higher debt level in the United States compared with the euro area is also reflected in a higher debt service burden (see Charts 1a and 1b).

However, the higher debt level and debt service burden in the United States on a macro level in part reflect the considerably larger share of households with mortgage debt, which, based on micro data (see Chart 2), was approximately 48% in 2004, compared with only 20% in the euro area in 2005 (although the dispersion in the latter currency area was wide). This can be observed across all income categories and, according to data from 2004 in the United States and 2005 in the euro area, was particularly pronounced in the case of the lowest income

Chart 2 Share of households with mortgage debt broken down by income level

(percentages)



Sources: Survey of Consumer Finances for the United States (2004) and ECB calculations for the euro area using the EU Statistics on Income and Living Conditions (2005).

Note: Income levels refer to percentiles of the population: 1: 0-20; 2: 20-40; 3: 40-60; 4: 60-80; 5: 80-90; 6: 90-100.

category, where the share of US households with mortgages was four times larger than in the euro area.

Thus, on the one hand, the difference between household debt burdens in the United States and the euro area is considerably narrower when only households with a mortgage are considered. On the other hand, however, the considerably larger share of low income households with mortgage loans in the United States in 2004 points to greater vulnerability of households compared with the euro area. A further increase in mortgage loans among lower income households can be assumed for the period between 2004 and 2007, when, in particular, the sub-prime segment of the mortgage market grew strongly, not least in the context of US government initiatives to increase the home ownership rate, especially for lower income households, but also due to an incentive structure in the financial system that increasingly favoured fees generated through loan securitisation as a source of revenue. The increase in the financing of mortgages of lower income households in the United States was accompanied in

2004-2007 by the development of a number of products that further increased the sensitivity of households to changes in house prices and interest rates. Whereas traditionally in the United States mortgage debt had been based on fixed rate mortgages, in the years between 2004 and 2007 the growth of the sub-prime market led to the increasing importance of adjustable rate mortgages, “teaser” rates (i.e. rates for adjustable rate mortgages that are very low for an initial period), interest only mortgages and negative amortisation mortgages (i.e. loan payments during a period that are less than the interest charged over that period). A number of such products, which relied heavily on the assumption of constantly increasing house prices, substantially contributed to triggering the financial turmoil when house prices started to moderate. Finally, the greater vulnerability of US households to developments in house prices also stems from the fact that mortgage equity withdrawals (i.e. the decision by consumers to borrow money against the value of their houses) have played an important role in recent years in financing consumption.

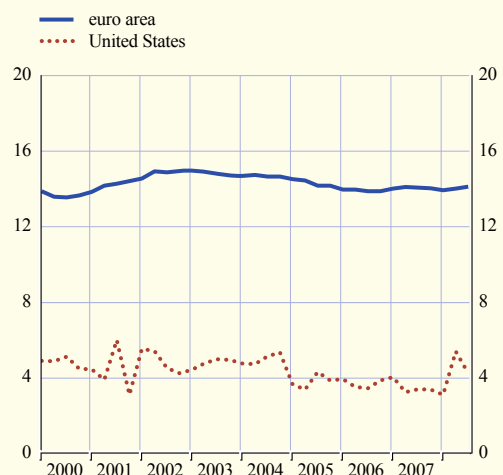
By contrast, mortgage equity withdrawals on a euro area-wide level have continued to be of relatively low significance in recent years. However, in some euro area countries, flexible mortgage interest rates have traditionally played a greater role than in the United States, implying higher sensitivity of households with such contracts to changes in interest rates.

Thus, overall, taking into account the distribution of debt among income categories, the relevance of mortgage equity withdrawals for consumption and the interest rate features of mortgage contracts described above, households in the United States remain more vulnerable than those in the euro area. This is particularly significant in the light of the differences in the saving ratio levels of households in the euro area and the United States (a measure of household savings divided by household gross disposable income). As shown in Chart 3, saving ratios in the euro area, although declining, have remained at levels of between 13.5% and 15% in the

period since 2000, whereas the saving ratio for US households has been around 4% in this period. All else being equal, this implies that the net wealth (i.e. total assets minus total liabilities) of households has increased considerably faster in the euro area compared with the United States. Furthermore, when looking at net lending and net borrowing figures in both currency areas, it becomes visible that between 2000 and 2008 households in the euro area were net providers of funds, whereas households in the United States were net borrowers. At the same time, the ratio of total financial assets (i.e. gross financial wealth) to debt was higher for households in the United States than for those in the euro area, putting the different saving ratios somewhat into perspective. Finally, in the euro area debt service capacity continues to be primarily determined by income developments, while US households’ financial positions are more directly affected by the value of houses as collateral and are also more sensitive to adverse stock price developments in view of the composition of their asset holdings (in the euro

Chart 3 Standardised household saving ratios

(percentages of gross disposable income)



Sources: ECB, Board of Governors of the Federal Reserve System, Bureau of Economic Analysis and ECB calculations. Note: US data have been adjusted to enable a comparison to be made with the euro area. This has been done by excluding net investment in consumer durables from saving and by excluding personal interest payments and current transfer payments from disposable income.

area asset holdings are dominated by deposits and insurance products).

FINANCING STRUCTURE AND FINANCING DEVELOPMENTS

On a stylised basis, the dynamics of household financing in the euro area and the United States were relatively similar between 2000 and the third quarter of 2008 (see Chart 4). In the period between 2000 and early 2003 household financing declined in the euro area and remained relatively stable in the United States, reflecting the economic slowdown following the end of the new economy boom with its favourable financing conditions for households in both currency areas. In the period 2003-2006 developments were similar in both currency areas, reflecting the credit boom based on favourable financing conditions, expectations of robust output growth and low levels of interest rates. In the period between 2007 and the third quarter of 2008 a moderation in house price inflation, accompanied by weaker housing demand and a weaker supply of housing financing, led to moderating financing flows in both currency areas. However, despite these comparable stylised developments, considerable differences can be observed when looking in detail at financing sources, as shown in Chart 4. In particular, loan financing by euro area households had already peaked in early 2006, in line with the peak in the housing cycle and increases in interest rates, and, until the third quarter of 2008, showed no sign of a significant additional impact from the financial turmoil. Moreover, in the euro area MFI loans continued to provide by far the bulk of financing.

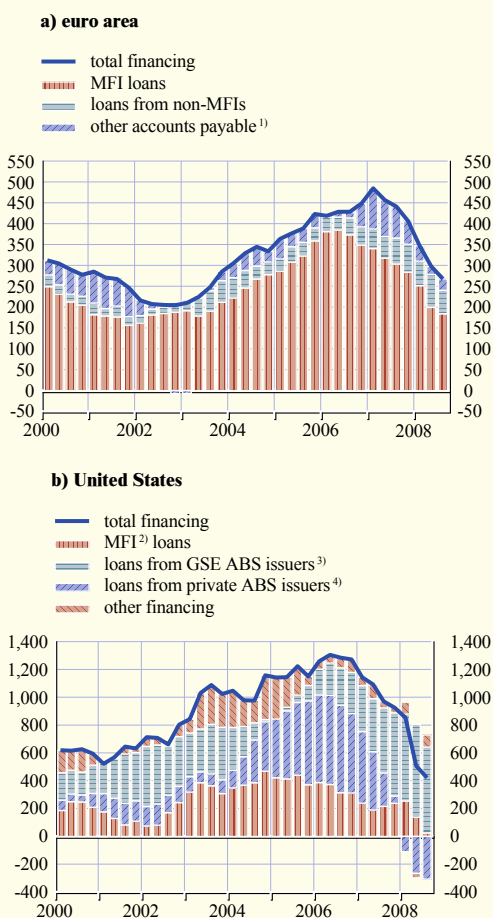
For households in the United States, the chart reveals the importance of government sponsored enterprises in household financing, in particular in the period 2000-2003. However, in 2004 new regulatory limits on those enterprises (i.e. greater capital requirements and balance sheet controls) reduced their importance in the external financing of households. Private issuers of asset-backed securities stepped in, and, due to reasons described in Section 2, their importance

as a source of financing for households sharply increased in the period 2004-2006. A considerable number of these issuers were less regulated non-depository institutions, in many cases acting as subsidiaries of investment banks.

However, with house prices declining and interest rates increasing, the sub-prime crisis triggered the financial market turmoil, during

Chart 4 Financing of households

(four-quarter cumulated transactions in billions of local currency units)



Sources: ECB, Board of Governors of the Federal Reserve System and ECB calculations.

1) Also includes trade credit and net liabilities of financial derivatives.

2) Commercial banks, savings institutions and credit unions.

3) Loans from government sponsored enterprises (GSEs) and from agency and GSE-backed mortgage pools.

4) Loans from private asset-backed securities issuers.

which the market for privately issued residential mortgage-backed securities dried up. This led to a moderation in financing for households from late 2006 to early 2008, which declined at roughly the same speed as it had grown between 2004 and 2006. Furthermore, in the second and third quarters of 2008 financing via privately issued mortgage-backed securities made a significant negative contribution to the external financing of households (i.e. reducing their total external financing). At the same time, as the “originate to distribute” model of bank lending proved to leave more risks than previously thought with banks that originated the loans, banks did not compensate for this fall in the supply of financing to households by private issuers of asset-backed securities, so that in the third quarter of 2008, on an annual basis, virtually only government sponsored enterprises (mainly Fannie Mae and Freddie Mac, which, since 7 September 2008, have been under the conservatorship of the Federal Housing Finance Agency) contributed positively to household financing. Overall, external financing flows to households declined in the third quarter of 2008 to one-third of their level at the peak in 2006, and halved between the second and third quarters of 2008, reflecting the intensification of the turmoil.

The overall dynamics of household financing in the euro area between 2000 and mid-2006 were relatively similar to the developments described for US households. In particular, from 2003 to late 2006 annual transactions related to the external financing of households doubled – the same size of increase as that observed for the United States. Loan securitisation developed rapidly, although on a considerably smaller scale than in the United States (expressed as percentages of GDP, loan securitisation constituted around 3% in the euro area at its peak in 2006, compared with 17% in the United States), and made a positive contribution to the financing of households, in particular mortgages,⁴ from 2003 to 2006. At the same time, loans originated and retained by MFIs remained by far the largest source of external financing for euro area households throughout

the period. Notably, from the start of the financial crisis in mid-2007 to the third quarter of 2008 financing flows of households halved compared with their peak in 2006 in the euro area, whereas they declined to one-third in the United States in the same period. Newly available data for the United States for the fourth quarter of 2008 suggest that annual external financing transactions (annual flows) fell significantly compared with the third quarter, and even turned negative. This reflects negative annual flows up to the end of 2008 in all sub-components except for loans provided by government sponsored issuers of asset-backed securities (mainly Fannie Mae and Freddie Mac). MFI loans remained the main source of financing for households in the euro area throughout the period of the financial turmoil. MFI loan flows to households were maintained during the turmoil possibly in part due to the fact that MFIs could undertake retained securitisation activities. Such activities refer to loan securitisation processes whereby the created securities are bought back by the MFI, often in order to receive liquidity from the ECB, a feature that gained further importance when the ECB changed to fixed rate operations with full allotment for the provision of liquidity in October 2008. This option may thus have eased the strains for euro area MFIs that stemmed from the fact that market-based securitisation has moderated considerably since August 2007.

4 FINANCING OF NON-FINANCIAL CORPORATIONS IN THE EURO AREA AND THE UNITED STATES

This section describes the overall financial situation of non-financial corporations in the euro area and the United States and then examines the main features of the financing structure of non-financial corporations and its development over the past decade. In addition, external financing growth is analysed over that period, with a focus on the period of the financial

⁴ For a quantitative analysis, see Charts 1 and 2 of the article entitled “The role of banks in the monetary policy transmission mechanism” in the August 2008 issue of the Monthly Bulletin.

market tensions that commenced in mid-2007. It should be borne in mind that there are some methodological differences in the data for the non-financial sectors across the two economic areas, as described in the box above.

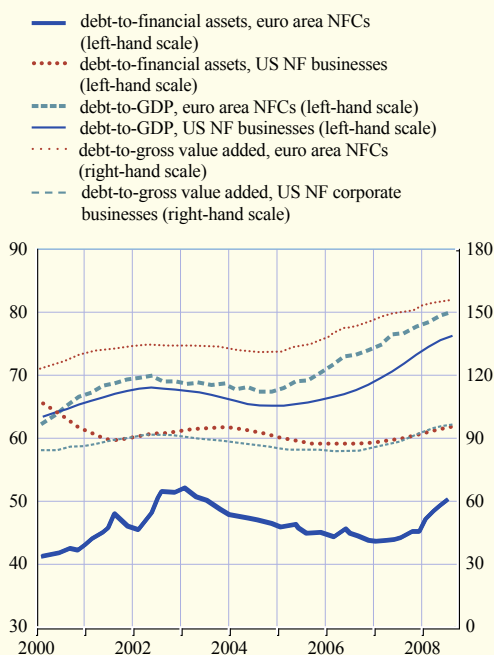
FINANCIAL SITUATION

In recent years non-financial corporations in both the euro area and the United States have accumulated a considerable amount of debt, leading debt-to-GDP ratios to increase to historically high levels. In the euro area the ratio stood at 80% in the third quarter of 2008 and in the United States it stood at 76% for the non-financial business sector⁵ (see Chart 5).⁶ Hence, debt ratios of non-financial corporations were broadly similar in the two economic areas. As the level of saving of US non-financial businesses has been higher or broadly equal to their level of capital formation, the net borrowing of non-financial businesses in the United States has been close to zero in recent years. Consequently, the rise in the level of their debt was mainly related to financial investment (mergers and acquisitions)⁷ and share buybacks. By contrast, in the euro area, non-financial corporations have had greater recourse to net borrowing to finance both capital formation and financial investment – the latter increasing in particular in 2005-2006 in the context of mergers and acquisitions. Unlike in the United States, share buybacks on the part of euro area non-financial corporations have been limited in the past decade.

As a consequence of the significant acquisition of financial assets by non-financial corporations, their debt-to-financial assets ratios remained overall far more stable than debt-to-GDP ratios in both economies. In the United States, the debt-to-financial assets ratio of the non-financial business sector was somewhat higher (61.4% in the third quarter of 2008) than that of euro area non-financial corporations (50.7% in the same quarter). However, the ratio of euro area non-financial corporations was broadly similar to that of US non-financial

Chart 5 Debt ratios of non-financial corporations (NFCs) in the euro area and the United States

(percentages)



Sources: Bureau of Economic Analysis, Board of Governors of the Federal Reserve System and ECB.

Note: The US non-financial (NF) corporate business sector is not directly comparable to euro area non-financial corporations (NFCs) as the former does not include unincorporated businesses.

corporate businesses (49.9% in the third quarter of 2008), which may indicate that larger enterprises in particular have accumulated considerable holdings of financial assets in the past decade.

- The US non-financial business sector is the most comparable sector to the euro area non-financial corporate sector. However, it includes sole proprietorships and partnerships, which in the euro area are part of the household sector.
- Ratios relating to non-financial corporations, such as the ratio of their debt to their gross value added, are not directly comparable between the euro area and the United States. For the United States, this ratio can only be calculated for the non-financial corporate business sector, which, in contrast to the euro area non-financial corporate sector, does not include unincorporated non-financial businesses.
- When one company takes over another and clearly establishes itself as the new owner, the purchase is called an acquisition. From a legal point of view, the acquired company ceases to exist, the buyer "swallows" the business and the buyer's stock continues to be traded. A merger happens when two companies, often of about the same size, agree to go forward as a single new company rather than remaining separately owned and operated. Both companies' stocks are surrendered and new company stock is issued in its place.

The favourable economic situation between 2003 and mid-2007 led to an increase in the generation of internal funds (gross saving and net capital transfers) by non-financial corporations in the euro area and the United States (see Chart 6). From mid-2007 to the third quarter of 2008 the generation of internal funds by non-financial corporations in both economic areas declined, reflecting the deterioration of the general economic outlook. In the same period, the ratio of internal funds to GDP stood at similar levels for non-financial corporations in both economic areas. Moreover, developments in the internal funds of euro area non-financial corporations contributed together with growing capital formation to an increase of broadly 1 percentage point in their net borrowing, which stood at 3.0% of GDP in the third quarter of 2008. In the United States, by contrast, the net borrowing of non-financial businesses was broadly stable and close to zero from the fourth quarter of 2006 to the third quarter of 2008, as both internal funds and capital formation

decreased in that period. Thus, on average, US non-financial corporations have financed their gross capital formation out of retained earnings.

FINANCING STRUCTURE AND FINANCING DEVELOPMENTS

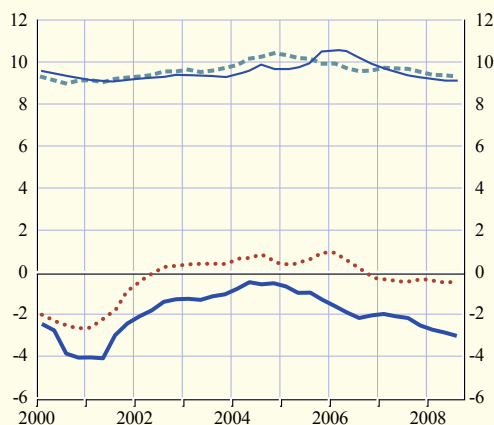
With respect to the external financing structure of euro area non-financial corporations, bank-based financing has traditionally played an important role for non-financial corporations in the euro area. MFI loans are the main source of external financing. In the period 2000-2003 they accounted for an average of 37% of total external financing (based on annual flows). Between 2004 and the second quarter of 2007 bank financing accounted for an average of 63% (see Chart 7).⁸ But these high levels of bank financing probably also reflected the favourable conditions for bank loan financing compared with other sources of external financing. Loans from other financial intermediaries (OFIs)⁹ also gained importance, especially in the period from 2006 to the first half of 2007, reaching a peak of 11% of the external financing of euro area non-financial corporations in the second quarter of 2007. This indicates that securitisation and syndicated loan activity played an increasing role in this period. Debt securities issued and net equity issued (netting equity issuance with the acquisition of equity) by non-financial corporations accounted for 11% and 0.5% respectively of their total external financing on average from 2000 until the second quarter of 2007, indicating the limited importance of market-based financing for euro area non-financial corporations.

By contrast with the euro area, US non-financial businesses generally rely to a much larger

Chart 6 Saving and net borrowing of non-financial corporations (NFCs) in the euro area and the United States

(percentages of GDP)

— net lending (+) / net borrowing (-), euro area NFCs
 net lending (+) / net borrowing (-), US non-financial businesses
 - - - gross saving and net capital transfers, euro area NFCs
 — gross saving and net capital transfers, US non-financial businesses



Sources: Board of Governors of the Federal Reserve System and ECB.

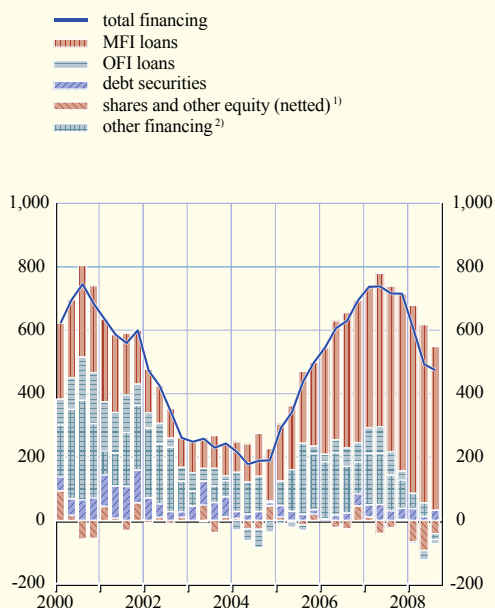
Notes: Net lending (+) / net borrowing (-) broadly equals gross saving and net capital transfers minus gross capital formation.

⁸ For the purposes of the comparison with the United States, external financing of euro area non-financial corporations is defined as loans (excluding intra-euro area inter-company loans), debt securities issued, net equity issued (equity issued minus the acquisition of equity), other accounts payable and pension fund reserves. The exclusion of intra-euro area inter-company loans and the netting of equity assets bring the definition more in line with the definition of external financing of non-financial businesses in the US flow-of-funds accounts.

⁹ Other financial intermediaries include financial vehicle corporations (FVCs).

Chart 7 Breakdown of the financing of non-financial corporations in the euro area

(four-quarter moving sum of transactions; EUR billions)



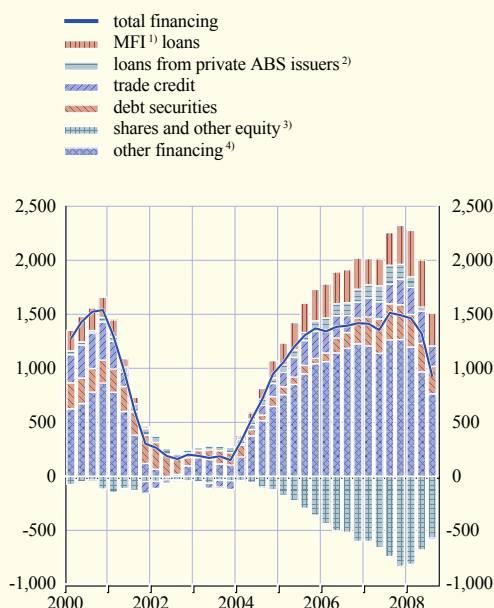
Source: ECB.

1) In order to increase the comparability to the United States, shares and other equity have been “consolidated” by netting out non-financial corporations’ equity investment.

2) “Other financing” includes other accounts payable and financing through direct pension commitments. In order to increase the comparability to the United States, inter-company loans have been “consolidated” by netting out intra-euro area loans granted by non-financial corporations.

Chart 8 Breakdown of the financing of non-financial businesses in the United States

(four-quarter moving sum of transactions; USD billions)



Source: Board of Governors of the Federal Reserve System.

1) Commercial banks, savings institutions and credit unions.

2) Loans from private asset-backed securities issuers.

3) Net issuance of shares and other equity minus net acquisition of shares and other equity.

4) No further breakdown is available.

extent on non-bank sources of financing (see Chart 8). Bank financing (loans originated and held by banks) contributed in part negatively (based on annual flows) in 2002 and 2003 to the external financing of US non-financial businesses (i.e. reduced their total external financing). In the period from 2004 to the second quarter of 2007 bank financing amounted on average to 18% of the external financing of US non-financial businesses (based on annual flows) while, in the period of the financial crisis, i.e. between the third quarter of 2007 and the third quarter of 2008, it accounted for 29%. Compared with the euro area, financing via the issuance of debt securities forms a more significant part of the external financing of non-financial businesses in the United States (accounting for 32% of external financing from 2000 to the second quarter of 2007). By contrast, the net

issuance of equity has been negative for US non-financial businesses in the entire period under review, related to equity acquisitions in the context of share buybacks and mergers and acquisitions activity.

Loans from private asset-backed securities issuers have gained considerable importance in the past few years, accounting for 11% of the external financing of US non-financial businesses in the third quarter of 2007. In addition, “other financing” accounts for a very large fraction of external financing, which leads to some uncertainty in the interpretation of the US data. According to data for the US non-financial corporate business sector, loan syndication has become increasingly important in external financing in recent years, accounting for 15% of the external financing of this sector in 2007. Most syndicated lending activity has

been conducted by issuers of asset-backed securities according to information from the US flow-of-funds accounts. In the third quarter of 2008, however, the share of syndicated loan activity dropped to 8%, based on annual flows.

In order to investigate developments in the external financing of non-financial corporations in the euro area and the United States, emphasis is given to developments in the different financing instruments, especially in the period of the financial market turmoil.

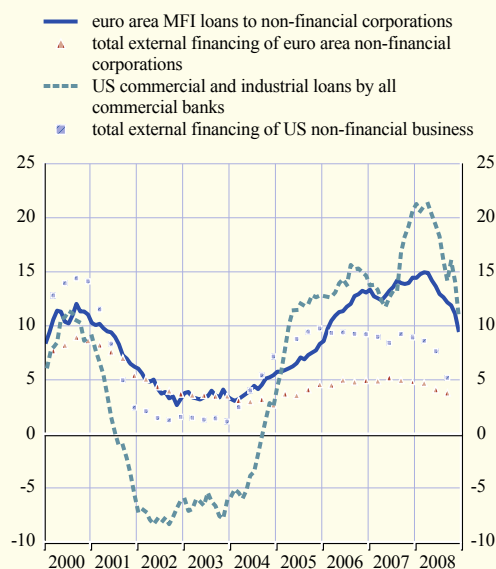
In the euro area, the annual growth rate of the total external financing of non-financial corporations stood at 3.8% in the third quarter of 2008 and was therefore considerably below the annual growth rate of MFI loans to non-financial corporations, which stood at 12.2% in the same quarter (see Chart 9). This may hint at potential substitution effects between different sources of external funding, driven by the financial market tensions, tending towards much greater reliance on MFI loans.

The relatively less reliance on equity compared with loan financing on the part of non-financial corporations in the period 2004-2008 is likely to be related to the considerably lower real cost of debt financing for non-financial corporations. In addition, an increase in the use of securitisation, whereby loans were derecognised from banks' balance sheets, and the sale of loans on the secondary loan market in recent years, have given additional scope to banks to grant loans to non-financial corporations under competitive conditions compared with alternative sources of external financing for non-financial corporations. The period from 2003 to mid-2007 was also characterised by a strong build-up of internal funds which also contributed to the lower growth of equity.

Looking at the period from the start of the financial market tensions in mid-2007, bank loans grew strongly until the first quarter of 2008 in both the euro area and the United States.

Chart 9 External financing of non-financial corporations in the euro area and the United States

(annual percentage changes)



Sources: Board of Governors of the Federal Reserve System and ECB.
Note: External financing includes total financial liabilities.

In the euro area, MFI loans to non-financial corporations have gained further importance, accounting for an average of 95% of the external financing of euro area non-financial corporations, while external financing via other instruments has declined considerably. First, OFI financing of euro area non-financial corporations has dropped significantly in the context of the financial turmoil. In the third quarter of 2008 OFI loans contributed negatively to the annual external financing flows of euro area non-financial corporations, indicating a decline in securitisation and syndicated loan activity. Second, the issuance of debt securities by euro area non-financial corporations decreased to a share of 4.8% in the external financing of non-financial corporations on average from the third quarter of 2007 to the third quarter of 2008. Third, the negative net equity financing (annual flows) in the first three quarters of 2008 was a result of both a decrease in equity issued by euro area

non-financial corporations and an increase in the acquisition of equity.

In the United States the temporary acceleration in recorded loan growth was substantially affected by re-intermediation, as banks brought securitised assets back onto their balance sheets, while the scale of such effects has been much more limited in the euro area. In addition, substitution effects resulting in a greater reliance on bank loans in the context of the financial market tensions, with the market environment having become more difficult for debt securities issuance, are likely to be more significant in the United States owing to the greater importance in external financing of debt securities issued by US non-financial corporations than those issued by euro area non-financial corporations. In addition, US accounting standards allow bank loans that are sold to non-banks during a securitisation process to be removed from banks' balance sheets more easily than in the euro area, which would also facilitate the re-intermediation of loans. At the same time, bank loans are considerably less important as an external financing instrument for non-financial corporations in the United States than for those in the euro area.

In addition, a substantial reduction in funding provided by other sources (including hedge funds) can also be observed in the United States in recent quarters. This probably reflects a decrease in mergers and acquisitions and leveraged buyout activities, and potentially a considerable reduction in funding sources for such activities, in line with the significant decline in syndicated loans witnessed in the first half of 2008. This reduction in funds is mirrored somewhat by a less negative net contribution of shares and other equity to overall financing. Although both items are linked to some extent (via the funding of share buyback programmes), the less negative net contribution of shares and other equity to overall funding may also reflect demand factors of non-financial corporations, as such buyback programmes are considerably less attractive in an environment of reduced profitability. In the fourth quarter of 2008, for

which so far only US data are available, the annual growth in the external financing of US non-financial businesses dropped further, to 4.3% (from 5.5% in the third quarter). This was mainly due to a considerable decrease in transactions (annual flows) in bank loans to non-financial businesses. Such developments reflect the slowdown in economic activity as well as tighter credit conditions.

5 CONCLUSION

This article compares the structure of and developments in the external financing of households and non-financial corporations in the euro area and the United States. One of the main differences between the two economic areas is that the financial system in the euro area is largely bank-based, whereas in the United States market-based financing and financing by non-banks (directly and via loan sales and securitisation after origination by banks) plays a much larger role.

With respect to external financing developments in the period of the financial turmoil since mid-2007, the pace of growth of the external financing of households and non-financial corporations has declined in both the euro area and the United States. In the case of households in the United States, this decline is partly due to moderating demand but also reflects the fact that the market for private issuers of asset-backed securities dried up during the period of financial turmoil and banks could not act as complete substitutes, as the risk contained on banks' balance sheets for securitised loans was bigger than previously thought. In addition, the increased risk of borrowers related to the decline in asset values may have also contributed to a lower willingness of banks to grant loans. Within the euro area, the moderation of flows in household financing was sharp, but predated the onset of the financial turmoil, and has so far been considerably less pronounced than that seen in the United States. This is likely to be linked to the fact that household financing is less dependent on non-MFI sources of funding in the

euro area and, in particular, there is less reliance on loan securitisation. Moreover, the opportunity for MFIs to undertake retained securitisation activities in order to create collateral for ECB liquidity operations may have helped to maintain a certain financing flow. For non-financial corporations in both economic areas, bank loans have become increasingly important in relation to their total external financing since the start of the financial turmoil. In the case of US non-financial businesses in particular, this may be related to problems in derecognising such loans via loan sales and securitisation, given that those markets have partly dried up. While bank credit standards and the cost of financing of non-financial corporations in both economic areas have tightened considerably, there were no clear indications as at the third quarter of 2008 that quantitative credit restrictions for euro area non-financial corporations had played a substantial role in shaping financial developments.