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Mortgage Markets in the United States of America and Europe

The authors provide a brief overview of the characteristics of the different housing financing systems of the two continents. The varying, but everywhere important role of housing in household savings is analysed separately as well. At the same time, they point out the interdependence between the factors of modern money based upon credit and the wealth effect that can be related to housing. Finally, they highlight the thoughts – stable savings rate, liquidity, rational housing policy – that should, perhaps, be considered by the Hungarian financial policy-makers as well.

It is common knowledge that there is a significant difference between the financial systems of the Old World and the New World. Capital market financing is more developed and therefore more decisive in America, while bank financing continues to be typical in Europe. Data for 2007 make it perfectly clear: the capital market amounted to 375 per cent of GDP in the United States of America, and only to 311 per cent in the euro area. At the same time, stock market capitalisation equalled 165 per cent of GDP in the United States of America, but it reached only a mere 81 per cent in the euro area. The underlying reason is that Europe traditionally prefers bank financing, where a relatively high ratio of household savings and the financing of the operation of companies mainly from loans are typical. The question arises whether the usual, established divergent financial structures and institutional systems influence today's economic developments in individual regions, and if so, how and through what transmissions.

Recently published analyses clearly show that the evolution of the international money market crisis is closely linked to the bursting of the earlier real estate market bubbles analysed by many. However, the crisis had different impacts in terms of time, space and strength in the various regions. It is widely known that it was the strongest in the United States of America. Consequently, it is worth comparing the real estate financing practices in the United States of America and in the less affected Europe. And, considering that the most important and at the same time politically most sensitive area of real estate financing is the housing market, it is worth focusing on it.

HOME CREATION IN THE USA: HISTORICAL ROOTS OF MORTGAGE FINANCING

A mortgage loan is a basic form of housing financing in both regions. However, significant differences are observed in this field, resulting precisely from the general differences between the financial systems. Exactly these differences may explain the variances in households' indebtedness, the various roles of securitisation, and ultimately they even help answer the question regarding the crisis. (The differences are shown in *Chart 1*)

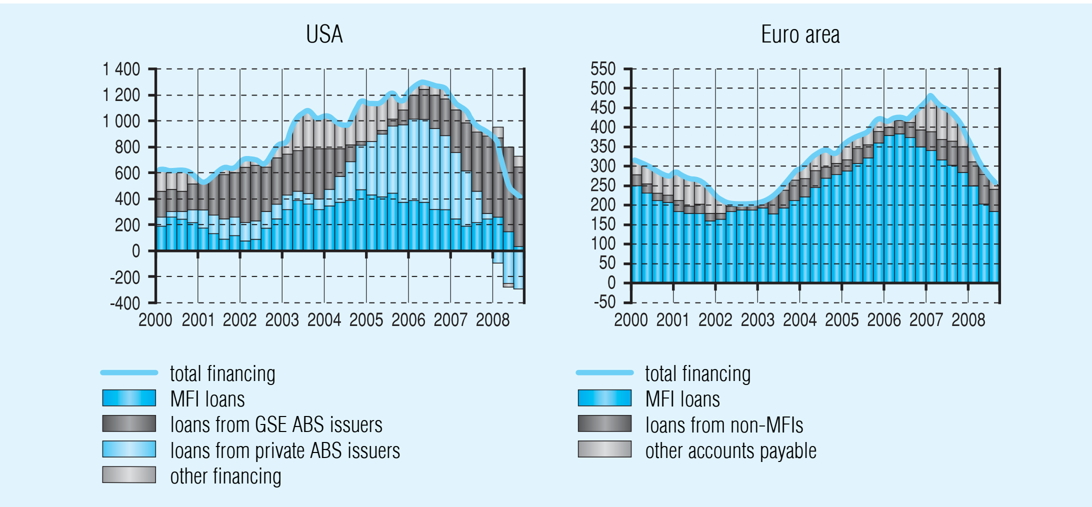
The peculiarity of the American system is primarily the existence of government-sponsored enterprises (ECB, 2009d). Namely, in 1934, following the Great Depression, the National Housing Act was adopted in order to prevent the masses of housing creditors from getting into a completely impossible financial situation. The relevant implementing institution, the Federal National Mortgage Association (FNMA), was established in 1938. However, the Federal Association was privatised in 1968; since then it has been known as Fanny Mae. By means of funds raised with advantageous conditions through its own-issued securities, its objective is to enable companies that actually provide mortgage financing to have access to refinancing at an acceptable price. Passing on – by means of negotiable instruments – the loans that finance real assets, their 'transformation' is called *securitisation*. Mortgage-backed securities (MBS) are also called *pass-through* schemes because they direct specific income flows to investors.

However, when the government sold Fannie Mae, at the same time it established another state-owned company as well, nicknamed Ginnie Mae. Its declared economic policy task was to provide safer refinancing for the housing financing of mainly the lower- and medium-income social strata. Ginnie Mae guarantees to investors that it will pay the loan repayments and interests on the mortgage-backed securities of the issuers that it has accepted in a timely manner. It means that Ginnie Mae does not sell or buy mortgage-backed securities, but provides guarantee if the loans of the institutions accepted by it are acknowledged and approved as desirable instruments of the government's housing policy by the Federal Housing Administration (FHA), the Department of Veteran Affairs (DVA), the Rural Housing Service (RHS) or the Office of Public and Indian Affairs of the Department of Housing and Rural Development. The intention is clearly visible that the Administration wants to

Chart 1

FINANCING OF HOUSEHOLDS

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



Source: ECB (2009c), p. 77

facilitate the access of certain social strata, mainly those with low earnings, taking account of their income, to housing under preferential conditions. For this, of course, funds that can be obtained with better conditions have to be collected for the borrowers. Therefore, it has to be assumed, and has to be achieved, that investors buy sufficient quantities of mortgage-backed securities as well, which provide relatively modest yields. (The target group comprises mainly those for whom safety is more important than the magnitude of yields.) The explanation for the marketability of the securities lies precisely in this: in view of their quasi state guarantee, these low-interest securities are very safe. The reason is that even if the debtors fail to pay, investors will receive their income, which consists of the instalment and the interest. Namely, in the event that the issuer is unable to perform, Ginnie Mae intervenes, because it has to pay to the investors for the funds received in any case.

By establishing Ginnie Mae, the Administration implemented a one-off investment. It was assumed that the institution would support itself on the guarantee fees until an economic downturn takes place when masses of borrowers of housing loans become unable to meet their payment obligations. Then, however, pursuant to its statutory obligation, the state has to honour the liabilities. (And this is exactly what happened on the occasion of the crisis in 2008.)

Moreover, another, although privately owned, institution that serves a similar purpose was also founded in 1970. It is the Federal Home Loan Mortgage Corporation, also known as Freddie Mac. Freddie Mac bought up the mortgages on the secondary market, financing the transaction by selling the mortgage-backed securities it issued. It gained an especially significant role in providing funds for savings banks (credit unions), which provided mortgage loans in the primary market. However, the market considered both Fannie Mae and Freddie Mac essentially to be government-sponsored enterprises (GSE), although only Ginnie Mae was an expressly public enterprise. Their role in the mortgage market became really important and decisive at the time of the savings bank crisis in the eighties.

The then crisis of the savings banks restructured the whole US mortgage market. Until the end of the seventies these banks extended long-term mortgage loans with fixed interest rates, which they provided mainly from short-term, but stable and low-interest deposits. However, the interest rate levels that increased because of the inflation – in view of the interest ceiling of deposits – resulted in a leakage of funds from the savings banks. Savers invested their money in instruments that had higher yields. (Essentially this is what was called disintermediation, i.e. a process aiming at the elimination of intermediary institutions.) This, in turn, resulted in a serious shortage of funds and then a shortage of capital at the savings banks, which was only exacerbated by some improvident investments following the bank deregulation. Then their mortgage loans were taken over by the central institutions of the mortgage market, thus they remained able to provide further loans at a lower deposit/loan ratio as well. As they had transferred their fixed-rate outstanding loans, they were no longer sensitive to the rising interest rates either.

Accordingly, fixed-rate mortgage loans were either transferred to the government sponsored enterprises, or they were purchased by private institutions that also issued similar asset-backed securities (ABS). These institutions that implemented large volumes of 'securitisation' had been and remained much less regulated than banks, which played a major role in the diffusion of the present financial crisis.

The importance of Freddie Mac was increased by its creating the first collateralized mortgage obligation (CMO) in 1983. It meant the forming of bond tranches where only a certain part of the money flows originating from the common financing pool assigned to a tranche provides cover. Therefore, the organisation of a market like this is reminiscent of the secondary market of government securities, and in fact it is also directly related to it: for example, it is operated by the same dealers, active and passive repo transactions can be concluded the same way etc. These initiatives achieved great success, and by 1985 the turnover of the market exceeded that of the New York Stock Exchange (Kohn, 2003).

These financial innovations that play an important role in the supply of the modern US capital market with funds have become determinants in the financial crisis that has developed by now. It is worth pointing out how important the role of politics was in the development and shaping of the mortgage market. Considering that they collect local savings, the US legislature put the banks under an obligation to spend a portion (10 per cent) of their funds on local financing in any case. One of the expedient solutions is the satisfaction of households' demands, as they are local, accordingly the law is also complied with. And, as we have seen, since the state and semi-state institutions provided implicit guarantee, lenders also extended their activity towards the population with less high income with a relatively high level of courage. It was particularly true in those periods when interest rates became very attractively low as a result of the global liquidity abundance, and even the poorer strata of the population wanted to realise the American dream, i.e. having a home of their own.

However, on the occasion of the current crisis, privately-owned institutions were obliged to acknowledge that they would be placed under state supervision, because by accepting subprime clients they had accumulated such high losses of capital that they needed assistance from the state. In the US practice, this measure is called *conservatorship*, which actually means placing under supervision, i.e. practically speaking a looser form of nationalisation.

FINANCING OF HOME CREATION IN EUROPE; THE GERMAN EXAMPLE

On our continent home financing is typically based on direct banking relationships. Here the financial cover was raised by 'building societies' and then by the combination of banks that provided long-term mortgage loans.

According to the German example, those who wish to have a home of their own collect the initial amount through the advantageous and state-subsidised method of a building society. For this, they receive a favourable borrowing opportunity from the building society, and then the initial amount and the loan together are accepted as one's down payment by the mortgage bank that provides long-term financing. Building societies receive state subsidy as well to raise funds with more advantageous conditions. Mortgage banks, in turn, usually raise funds by issuing mortgage bonds. Obviously, as a result, interest rate fluctuations in the international money market seriously affected this sector as well. Therefore, it is not by chance at all that following the outbreak of the current crisis, Hypobank, the large mortgage bank was the one that ran into the biggest trouble. The advantage of a building society is that its members are seriously compelled to save, as they simultaneously have to pay the rent and the instalments to the building society. When this tough period is over for the – usually young or middle-aged – client, then (s)he does not pay much more as instalment than the rent was. Accordingly, there will be some kind of harmony between rents and instalments. Consequently, by the time the debtor has paid the instalments protracted for several decades, (s)he may reach retirement age. At this point, however, a substantial amount of income becomes available, as the rent and instalment no longer have to be paid. Accordingly, elder people, even if their pension is a little bit lower than their labour income was, do not have to significantly reduce their standard of living. Discernibly, there is a long-term conception behind this institutional system, which takes into account the life and income cycles of the population. Naturally, this scheme is able to function without problems only if inflation is low, because increasing interest rates would make the initial burdens much heavier, and thus the whole building society model would be unable to operate properly. Consequently, there must be harmony among economic, social and monetary policies. Therefore, it is clear why the German monetary policy – and thus the most important economic factor of the euro area – insists on maintaining low inflation to such an extent. Of course, we do not want to claim that this is the only reason for the anti-inflationary monetary policy objective of the European Central Bank, but it seems indisputable that the aspect of real estate financing is also very important in it. Nevertheless, the home ownership rate in Germany is much lower than, for example, in Hungary following the political transformation; this was especially true after the municipality-owned flats had been sold. It means that it is not a problem to rent a flat in Germany, as the supply is sufficient, and people can afford it from their salaries. The underlying explanation is that the German social security system essentially covers only those who earn wages or salaries. Entrepreneurs operate their own saving schemes as well, within, or as a part of, which very many people put their savings in residential real estate that they sublet on a long-term basis. Consequently, the supply of tenement flats is rich, sufficient and affordable for most of the population. No wonder that mainly only those with a higher income strived for home ownership; fortunately, in the current crisis the specific German financing model mitigated insolvency problems in Europe.

HOUSEHOLD WEALTH AND CONSUMPTION LEVEL

As it is widely known, the money of modern economy is money based upon credit. It is created with credit, and ceases to exist upon its repayment. Textbook examples usually mention the case when the aim of borrowing is the financing of enterprises. Of course, money can be borrowed not only for expanding production or for investment, but for consumption as well. In this case, consumption is brought forward at the expense of our future incomes. However, the decisive portion of loans to households is used for purchasing real estate, which is an important element of private property, while the remaining part of loans is spent on increasing current consumption expenditures. The principle of 'proprietary solicitude' requires banks to provide loans with adequate prudence and against appropriate collateral. The possibility of a mortgage is self-evident in housing financing. On the other hand, in the case of consumer credit, the bank usually examines the potential borrower's income situation, the security of his/her sources of income etc. In developed markets, however, not only buying real estate from a loan, but also the opposite of it, i.e. borrowing and using the real estate as collateral also occurs. This, in fact, means that the savings embodied in the property are used up in the present, if, for example, no sufficient savings are available for future repayments. A very concrete example of this is the so-called *reverse mortgage* pension scheme. It means that by changing the ownership of the real estate to an annuity, elderly citizens also allow companies specialising in this business to obtain ownership.

Reverting to bank loans, the crucial point is always the value of the real estate that is pledged as a collateral of the loan. The most important thing of course is how this real estate value will change as a result of the demand and supply conditions in the market. This is why it has become a popular form of increasing current consumption that in view of and having an increased collateral value, the mortgage loan is raised to or replaced by one of a higher amount. And as the property has already been mostly paid for, the free part of the increased loan amount can even be spent on consumption. Therefore, ultimately, the same dwelling – as collateral – plays a decisive role either when it is used as collateral for purchasing housing, or when consumer credit is provided with real estate as collateral.

Normally, the bank is repaid the loan with interest, as the money is usually received, even if the property has to be sold for it. Except if real estate prices start to fall, i.e. an earlier real estate bubble bursts. If, for some reason, masses of borrowers become unable to repay their respective debts, banks are also compelled to sell the real estates by auction, one after the other, because prices in this case decline sharply, resulting in increasing losses for those creditors that wait for too long. This was practically the case at the beginning of the crisis in 2008. However, the magnitude of the problem caused by the collapse of real estate prices largely depends on the financing system and the level of institutional development of the given economy.

TYPICAL RELATIONSHIP BETWEEN HOUSEHOLDS' WEALTH AND CONSUMPTION LEVEL

Household wealth primarily consists of financial investments and real estate wealth (housing wealth). The value of housing wealth as a proportion to disposable income is much higher in the euro area than in the United States of America, while in terms of financial wealth the situation is just the reverse.

At the same time, the indebtedness of European households with its rate of 60 per cent lags far behind the more than 100 per cent ratio of the United States of America. In the euro area, the ratio of net wealth to disposable income increased from the level of 530 per cent in 1999 to 640 per cent in 2007. The increase in wealth to be invested in one's own home played a decisive role in the developments in households' net assets, as the ratio of the value of housing wealth to disposable incomes increased by some 4 percentage points between 1999 and 2007. During the same period, the ratio of indebtedness to disposable income also increased markedly, by 20 percentage points, from 40 per cent to 60 per cent. Accordingly, the increase in financial wealth amounted to half of the indebtedness at most, and this ratio displayed a much higher level of volatility in households.

The ratio of private consumption to disposable income is lower in general in the euro area than in the United States of America (ECB, 2009b). The traditions of household savings are significant in the euro area, while it is not so typical any longer – especially in recent decades – in the United States of America. Of course, in the 1980s and most of the 1990s, consumption grew together with the value of housing wealth in Europe as well. However, in recent years the European trend of consumption fell behind the upswing in real estate values, and thus co-movement with financial wealth has become more typical.

All in all, the correlation between consumption and housing wealth is not very strong in the whole of Europe either. Of course, there are significant differences among countries in terms of their housing wealth, and it also has to be taken into account that the developments in housing prices are closely linked to demographical trends as well, evidently through the generational demand. In addition, wealth effects, which stem from the developments in real estate prices, primarily affect those who already own a flat or house. The ratio of owner-occupied homes within the total population is a good approach for estimation. However, this ratio strongly varies on our continent; for example, it amounts to 44 per cent in Germany and to almost twice as much (83 per cent) in Spain.

The wealth effect also depends on the ratio of the given loan to the total value of dwellings. The higher this ratio, the greater the effect of the developments in real estate prices on the magnitude of further borrowing may be. The usual and average value of the coverage is around 80 per cent in Europe, i.e. banks provide this much credit compared to the value of the dwelling. However, it became only 60 per cent in Greece, while the borrowed amount may even exceed 100 per cent in the Netherlands. The difference may be explained by the sophistication of public guarantee systems or the lack thereof. Where one exists – see the Netherlands or Finland, for example – banks dare to lend in higher ratios as well. It is also important how easy or difficult it is to collect the debts from defaulting debtors through real estate auctions.

The costs of early repayment (i.e. earlier than laid down in the contract) and the possibility or exclusion thereof also play a role in the unfolding of the wealth effect. Since if it is possible to repay a loan from another loan, using the same real estate as collateral and paying reasonable fees and costs, the opportunity of additional borrowing resulting from the increase in real estate prices can be used for consumption as well. However, the differences across countries are remarkable in this respect as well. The wealth effect is also facilitated if selling real estate is relatively simple and cheap, as this is also a way to rapidly recover the savings from the real estate.

The indicator that summarises all these factors best is the change in the ratio of total housing loans to GDP, as it reflects the impact of several influencing factors. Within the euro area, this ratio ranges between 8 per cent in Slovenia and 68 per cent in the Netherlands. However, it can be established in any case that the ratio of lending for housing that threatens with possible mass insolvency is substantially lower in the euro area than in the Anglo-Saxon countries.

The effect of real estate prices on tenants is, of course, contrary to the interests of the owners. An increase in rents triggers a reduction of the consumption of the former, while the latter can spend more. Naturally, it also depends on the level of regulation of rents, and as something of the kind exists in most countries; this factor of the wealth effect can only prevail to a limited extent.

Surveys were conducted and estimates were made regarding the developments in marginal willingness to consume taking place as a result of an increase in wealth. Accordingly, it is 6–19 cents/dollar in the United States of America, 9 cents/dollar in Canada, 4 pence/pound in England, 2 cents/euro in Italy, i.e. an increase in wealth measured in one unit of the local currency adds this much to general consumption. Consequently, on the whole, this wealth effect is always greater in the country that has a more developed financial system. This is also one of the reasons why sensitivity to house price shocks is lower in the euro area, which insists more on traditional savings, than in the Anglo-Saxon countries, which are accustomed to a more developed, more modern and more sophisticated financial culture (ECB, 2009/a).

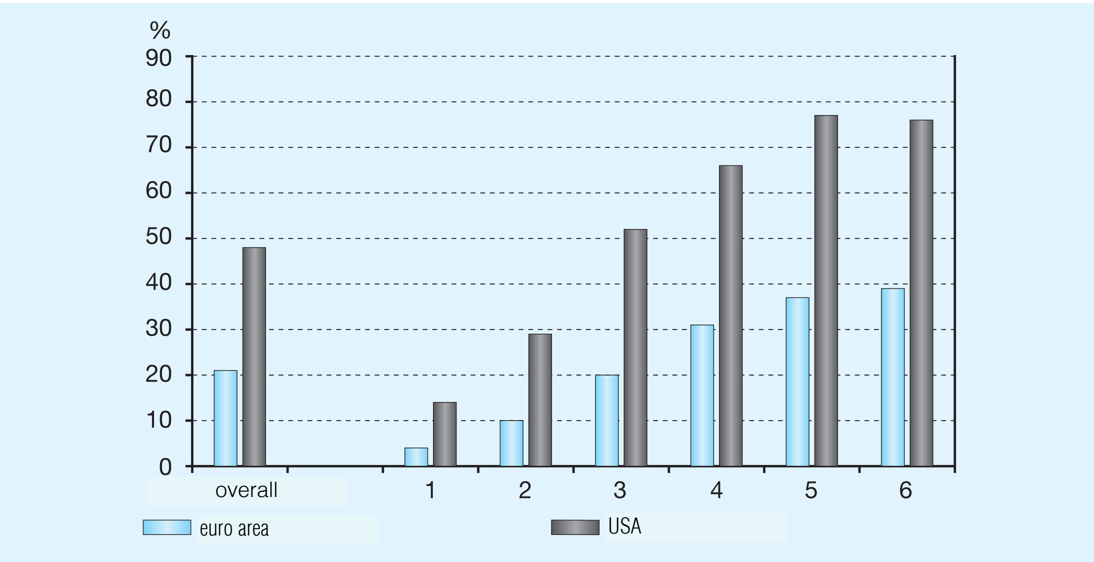
CHANGES IN THE FINANCING OF HOUSEHOLDS IN THE USA AND IN THE EURO AREA (2000–2008)

The debt level of households was already relatively high in both areas in the period under review. In the euro area, it was stable between 2000 and 2002, before increasing strongly between 2003 and 2007. By the beginning of the last quarter of 2008, household debt in the euro area amounted to 93 per cent of the disposable income, compared to 130 per cent in the United States of America. Accordingly, the data suggest a favourable financing situation and strengthening real estate market trends in Europe. Starting from the turn of 2007/2008, the debt level began to stagnate, in which the restraint of mortgage loans played an important part. (This was already closely related to the crisis, as real estate prices had started to fall.) As a result of the convergence process, both inflation and interest rates declined in the euro area in the years preceding the crisis. Consequently, credit became cheaper, contributing to an increase in household debt.

Household debt is higher in the United States of America, which also means higher debt service. This is also shown by the fact that 48 per cent of US households had mortgage loans in 2004, while only 20 per cent had mortgage loans in the euro area in 2005. The deviation was observed in all income classes, but the difference between the indebtedness ratios of the highest and lowest income bands due to real estate was already fourfold. *(See Chart 2)* This and the fact that households in the United States of America have several other loans in addition to mortgage loans meant that they were much more vulnerable, and not only financially. Between 2004 and 2007, experts observed further involuntary replacement and renewal of mortgage loans among the poorest, which by then was already related to rescheduling. Earlier, fixed-rate mortgage schemes had been widespread in the United States of America as well, but in the period between 2004 and 2007 indexed, variable rate conditions with low initial interest rates gained more and more ground. This was based on the unlimited trust in the boundless increase in US real estate prices. The decline was partly triggered by the fact that lending simply came to a sudden halt, and thus further investment could no longer be financed.

Chart 2

SHARE OF HOUSEHOLDS WITH MORTGAGE DEBT BROKEN DOWN BY INCOME LEVEL



Note: according to number of inhabitants belonging to income categories; the categories increase by 20 per cent each, each of the last two include the upper 10 per cent of the population.

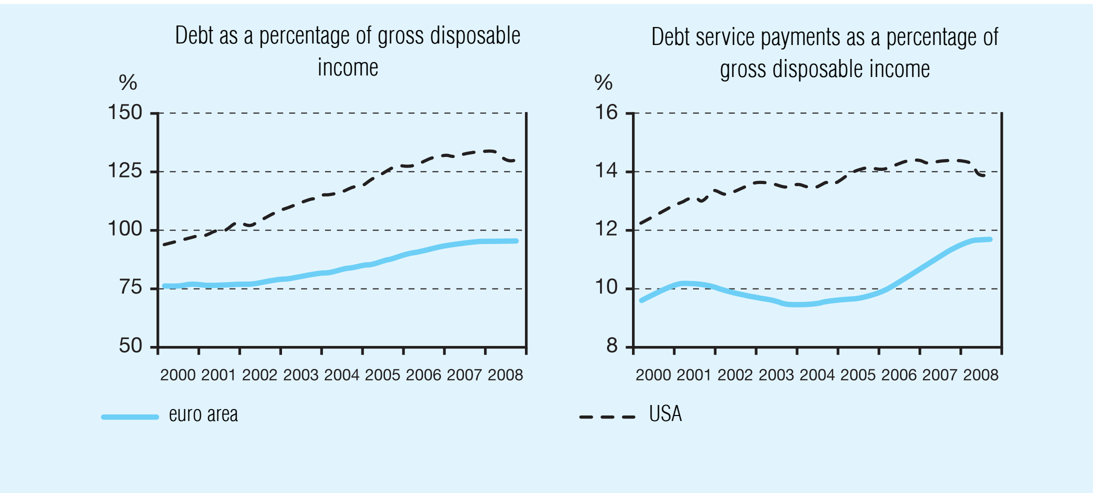
Source: ECB (2009c), p. 75

By contrast, in the euro area the significance of the withdrawal of lending became much lower on average, despite the fact that flexible-rate mortgage loans in some countries that had experienced a real estate boom played an even greater role than in the United States of America. Overall, however, risk exposure of households was still higher in the USA. This is especially well justifiable with and discernible from the developments in savings rates: while the personal income benchmark had been around a stable 13–15 per cent in the euro area since 2000, in the United States of America it stagnated around a mere 4 per cent or even sank below that in certain years. *(See Chart 3)* It means that in the period of benign business conditions the average increase in households' net wealth in the euro area could exceed that in the USA. The data also reveal that while households in the euro area as a whole got stuck in a net lending position, households in the USA found themselves in a net borrowing position. (However, the ratio of liquid financial instruments to debt was higher in the United States of America, which may have helped more people to survive.)

Real estate financing was on the wane in the euro area between 2000 and 2003, while it was already stable in the United States of America. As a result of favourable changes in loan conditions all over the world, similar benign developments in economic activity took place in both areas between 2003 and 2006. However, between 2007 and the third quarter of 2008 the increase in real estate prices slowed down everywhere, the demand fell, and the availability of funds tightened, resulting in a decline in the financing of new constructions. In spite of the essentially very similar trends, many different phenomena were also observed. For example, bank loan financing reached its peak in the euro area as early as the beginning of 2006. By contrast, in the United States of America additional funds were provided to households by the government-sponsored housing loan institutions until 2003 and then by private equity-backed offerings between 2004 and 2006. Together with the fall in real estate prices and the increase in interest rates they only exacerbated the evolving financial crisis. From the second quarter of 2008 on, the direction of private offerings reversed, and from then only the government-sponsored

Chart 3

HOUSEHOLD DEBT AND DEBT SERVICE PAYMENTS



Source: ECB (2009c), p. 75

Fannie Mae and Freddie Mac programmes tried to maintain the financing of households, albeit without much success.

The direction of the process of securitisation of loans was also similar in both regions, but with different magnitudes and ratios. Although the annual transactions doubled every year between 2003 and 2006, they amounted to a mere 3 per cent of GDP in the euro area, compared with 17 per cent in the USA.

Accordingly, households' debt level was high in both areas in the period under review. It had been stable in the euro area between 2000 and 2002, but increased strongly between 2003 and 2007. It reached its peak by the beginning of the last quarter of 2008, i.e. the already mentioned 130 per cent in the United States of America, compared with the level of 93 per cent in the euro area. The then data still promised a favourable financing situation and strengthening real estate market trends, but not for long.

CLOSING THOUGHTS

Fixed-rate mortgage schemes had been widespread in the United States of America earlier. In the period between 2004 and 2007, adjusted variable rate conditions with a low initial rate became increasingly popular; they were based on the unlimited trust in the boundless increase in real estate prices. One of the reasons for the decline was that lending came to a sudden halt, and thus further investment could not be financed the same way any longer. By contrast, the withdrawal of lending was of much less importance on average in the euro area. Overall, however, households in the United States of America were still more exposed to risk, which is mainly proven by the developments in savings rates: while the indicator had been around a stable 13–15 per cent in the euro area since 2000, in the United States of America it was a mere 4 per cent. The data also reveal that while households in the euro area found themselves in a net lending position, households in the USA got into a net borrowing position. However, fortunately for a part of the US population, the ratio of financial instruments to debt remained relatively high there. And this high liquidity saved millions of middle-class Americans who overborrowed in the period of lending for housing that fulfilled the American dream of the previous decade.

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