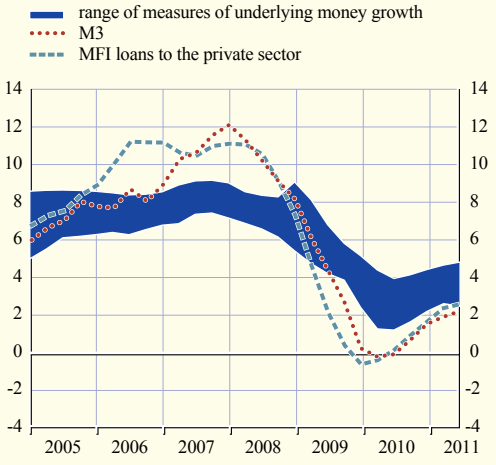
Box 1

DRIVING FORCES BEHIND RECENT MONEY AND LOAN DYNAMICS

The annual growth rates of the broad monetary aggregate M3 and loans to the private sector remained broadly unchanged in the second quarter of 2011 and in July. This suggests that the pace of underlying monetary expansion has stabilised at a moderate level in recent months. This assessment is supported by the regularly monitored range of measures quantifying underlying money growth, the bounds of which remained broadly unchanged in the second quarter of the year (see Chart A). Overall, signals from monetary developments suggest that risks to price stability are balanced over the medium term. In addition, the levelling-off in the underlying pace of monetary expansion is also visible in MFI lending to households, the largest component of MFI lending to the private sector. Indeed, between March and July 2011 the annual growth rate of loans to households originated by MFIs (i.e. adjusted for sales and securitisation), which is the relevant measure for gauging developments in funding obtained by households from MFIs, remained broadly unchanged.

Chart A M3 and underlying M3

(annual percentage changes)



Sources: ECB, ECB calculations.

MFI loans to households and the narrow monetary aggregate M1 have both exhibited relatively reliable leading indicator properties for business cycle developments. This box presents insights that can be drawn from a detailed analysis of these indicators with regard to the current cyclical momentum of the euro area economy.

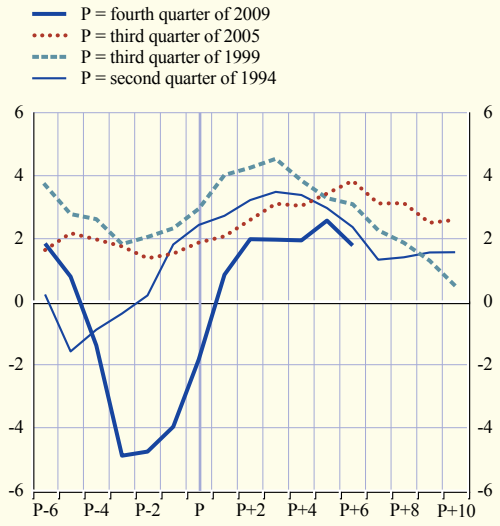
Forces driving developments in M1

M1 has exhibited strong fluctuations over the last 12 quarters. In the third quarter of 2008 the annual growth rate of M1 stood at 0.6%, before surging to 12.3% in late 2009 and falling back to 0.9% in July 2011. Since the early 1990s fluctuations in M1 growth have been of much greater amplitude than those seen in nominal GDP growth. Thus, a given pace of M1 growth cannot simply be mapped into a corresponding pace of GDP growth. At the same time, the annual growth rate of M1 deflated using the GDP deflator has exhibited good leading indicator properties for economic activity, mainly as regards turning points (i.e. peaks and troughs in the annual growth rate of real GDP).[1] On average, peaks and troughs in the annual growth rate of real M1 lead corresponding turning points in annual real GDP growth by three to four quarters. Chart B shows developments in annual real GDP growth during previous episodes around major peaks in real annual M1 growth.

1 For details, see the box entitled "The informational content of real M1 growth for real GDP growth in the euro area", *Monthly Bulletin*, ECB, October 2008.

Chart B Real GDP growth around major peaks in real M1 growth

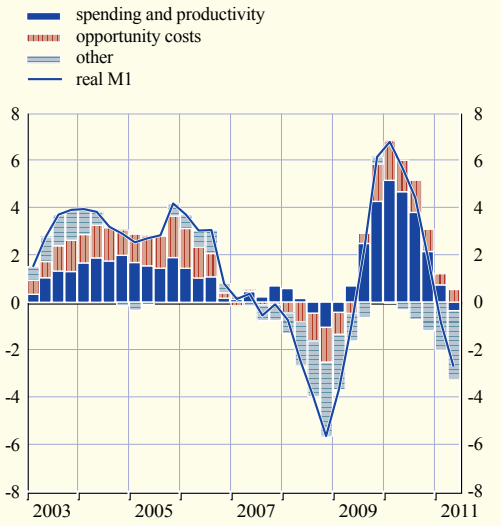
(annual percentage changes)



Sources: Eurostat and ECB.
Notes: Turning points for real M1 growth are identified by applying the Bry-Boschan algorithm to the annual growth rate series. Period "P" represents a quarter in which a peak in real annual M1 growth is identified, followed by a major decline in that growth rate.

Chart C Driving forces behind developments in real M1

(annual percentage changes; contributions in percentage points)



Source: ECB estimates.
Note: This breakdown of the annual growth rate of real M1 is based on an average growth rate of 4.6%.

The strong increase in M1 growth following the collapse of Lehman Brothers was accompanied by a sharp decline in short-term interest rates, pointing to the presence of a "liquidity effect" and suggesting that portfolio adjustment took place as the opportunity cost of holding M1 declined. Indeed, in recent years financial innovation has led to the increased use of M1 assets in portfolio management. Nonetheless, M1 assets largely represent money balances held for transaction purposes. Thus, the relationship between M1 holdings and actual and intended spending should (in principle, at least) be relatively close. Indeed, the typical co-movement of narrow money and economic activity would seem to support this notion that developments in M1 are transaction-related. Accordingly, the current deceleration in annual M1 growth would seem to indicate a somewhat slower pace of economic activity in the euro area over the coming quarters.

A breakdown of M1 growth into its underlying driving forces provides more information about the dynamic relationship between M1 and GDP. Chart C breaks annual real M1 growth down into the contributions stemming from disturbances to spending preferences of the private sector and to productivity as well as disturbances to the level of opportunity costs.[2] This chart shows that disturbances to spending preferences and productivity have contributed significantly to M1 growth over most of the period since 2003. According to this breakdown, changes in the level of opportunity costs do contribute to M1 growth, but have been of secondary importance recently. While, to a significant extent, M1 growth between early 2009 and late 2010 reflected changes in

2 The breakdown is based on a four-variable time-varying parameter VAR model allowing for stochastic volatility in the residuals estimated by means of Bayesian techniques. Structural disturbances are identified using economically meaningful sign restrictions. The model comprises real GDP, the GDP deflator, a short-term money market interest rate and the narrow monetary aggregate M1 deflated using the GDP deflator.

spending preferences and productivity, the marked slowdown observed in the last four quarters has also been influenced by other factors, shifts in money demand being one example.

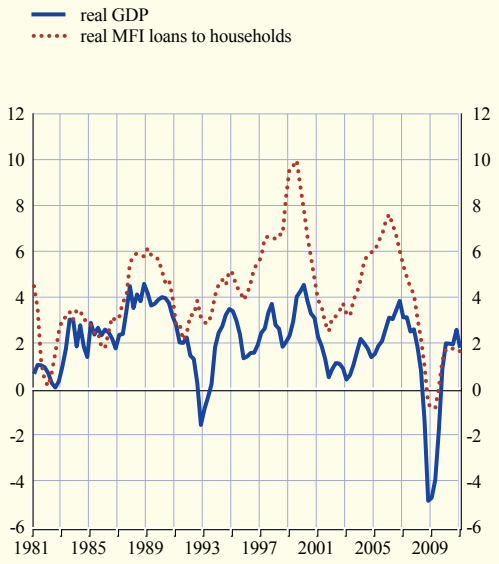
Forces driving developments in loans to households

MFI lending to households deflated using the GDP deflator exhibits a significant degree of co-movement with real GDP growth with a lead of up to one quarter (see Chart D).[3] This renders loans to households helpful in assessing the current pace of economic activity. Over the past four quarters real household loan growth has been lower than real GDP growth. On average, real household loan growth outpaced real GDP growth by a factor of 2.2 in the 20 years before the financial crisis. Currently, this would imply an annual growth rate of 4% for real loans to households. Instead, that growth rate currently stands at around 1¾%. However, mere cross-temporal comparison of levels of growth does not account for differences in the evolution of the main determinants of credit – e.g. bank lending rates, credit standards and the level of indebtedness of the household sector. Euro area banks' lending rates for households have increased in recent quarters but, when compared with pre-crisis levels for the euro area as a whole, they remained relatively attractive in the period up to July. According to information from the euro area bank lending survey, banks have retained tight credit standards following the financial crisis in 2008. Moreover, while debt-to-income ratios have declined somewhat in recent quarters, household indebtedness remains elevated in a number of euro area countries, with the adjustment of such ratios likely to dampen future credit growth. At the same time, the

3 For details, see the box entitled "Loans to the non-financial private sector over the business cycle in the euro area", *Monthly Bulletin*, ECB, October 2009.

Chart D Real MFI loans to households and real GDP

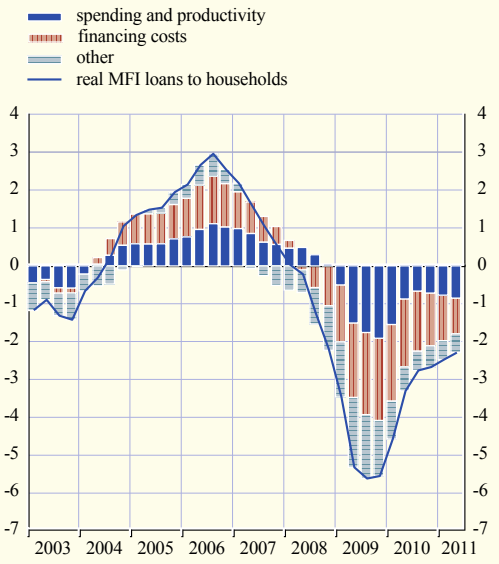
(annual percentage changes)



Sources: Eurostat and ECB.

Chart E Driving forces behind developments in real MFI loans to households

(annual percentage changes; contributions in percentage points)



Source: ECB estimates.
Note: This breakdown of the annual growth rate of real MFI loans to households is based on an average growth rate of 4.4%.

annual growth rate of loans to households has also been boosted by government subsidy schemes introduced in certain countries. A breakdown of growth in MFI loans to households suggests that, currently, spending preferences, productivity and financing conditions are all dampening developments in loans (see Chart E).[4] The negative contribution stemming from disturbances to spending preferences and productivity has recently increased again, after declining rapidly between late 2009 and late 2010, suggesting that factors affecting economic activity are again having a dampening impact on loans.

Looking at data for the euro area as a whole may mask effects resulting from heterogeneous developments in individual countries. An important contributing factor to the weak loan growth at the euro area level stems from the fact that loan growth at the country level has shifted towards countries that have historically shown relatively low elasticities of loans to GDP. In addition, higher financing costs, tighter credit standards and the need to correct indebtedness levels in countries that were major contributors to growth in the pre-crisis period are likely to weaken the relationship between credit and GDP dynamics in these countries and, therefore, also at the euro area level. Furthermore, the impact that the sovereign debt crisis has had on banks' funding conditions is likely to exacerbate cross-country heterogeneity in borrowing conditions. This is likely to dampen future euro area credit growth and economic activity.

Conclusion

Household credit growth is somewhat weak relative to current output growth when compared with developments in previous periods of economic recovery. To a certain extent, this mirrors the stabilisation observed in the household debt-to-GDP ratio in recent quarters, although that ratio remains elevated. Moreover, against the background of the sovereign debt crisis, rising financing costs and tight credit standards are likely to increase the debt burden and thus further increase the need for deleveraging. These effects will, in particular, dampen credit growth in countries which previously had high levels of borrowing.

Slow growth in MFI loans to households, and particularly the fact that the annual growth rate of the narrow monetary aggregate M1 has declined sharply to stand at low levels, points to a moderation of economic growth in the euro area in the next few quarters. This outlook, which is based on monetary indicators with reliable leading indicator properties for economic developments, is consistent with that derived on the basis of business cycle indicators for the euro area (see Box 7 entitled "The recent slowdown in economic growth in the euro area").

4 The breakdown is based on a model framework similar to that employed in the case of M1. However, this model comprises real GDP, the GDP deflator, a short-term money market interest rate and loans to households deflated using the GDP deflator.