Box 5

EURO AREA INVESTMENT IN THE CURRENT DOWNTURN

Investment has made a significant contribution to the severe downturn in euro area economic activity since early 2008. In order to shed more light on the outlook for investment and the risks surrounding it, this box analyses the factors which have influenced euro area investment since the beginning of the 1990s. It also focuses on the two previous periods of downturn, at the beginning of the 1990s and in the early 2000s.

Following the difficulties faced by major financial institutions and ultimately the bankruptcy of Lehman Brothers, the negative effects of the financial turmoil on confidence increased in autumn 2008. Companies downscaled expectations of future demand and sharply reduced inventories, while world trade contracted strongly. Investment declined more rapidly, falling at a rate of above 4% on a quarterly basis in both the last quarter of 2008 and the first quarter of 2009.

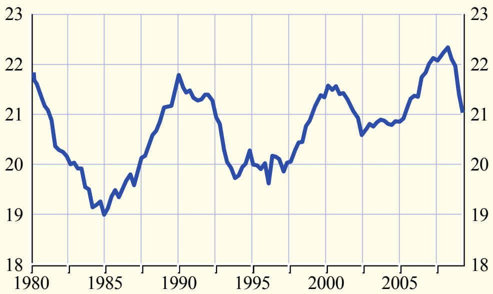
Given that the decline in investment was larger than the fall in overall activity, the investment share of GDP decreased – a normal feature at this point in the cycle – from 22.3% in the first quarter of 2008 to 21.0% in the first quarter of 2009 (see Chart A). In terms of components, the deceleration was broadly based among the main components (construction, transport equipment, and metal products and machinery) for which data are available at the euro area level (see Chart B).

Taking a longer-term perspective, the current retrenchment in investment appears to be unprecedented since at least the beginning of the 1990s.[1] In addition to the current decline, two other periods can be identified in which there were significant falls in investment. In the first, which lasted from the beginning of 1992 until the end of 1993, investment declined by 10%

1 Some caution is required when analysing euro area series over a relatively long period, as they are subject to several changes, in terms of composition and also in terms of compilation, including the introduction of chain linking in euro area national accounts.

Chart A Investment share in GDP over the long term

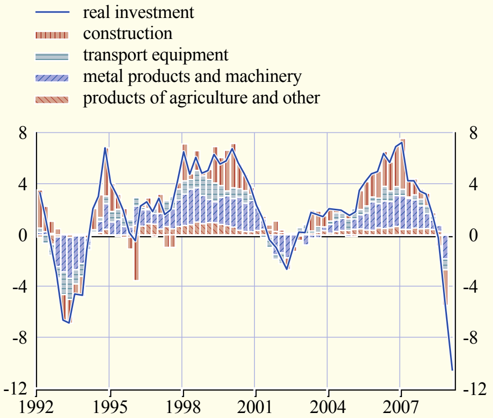
(percentages)



Sources: Eurostat and ECB calculations.

Chart B Annual growth in euro area real investment and contribution from components

(annual percentage changes; percentage points)



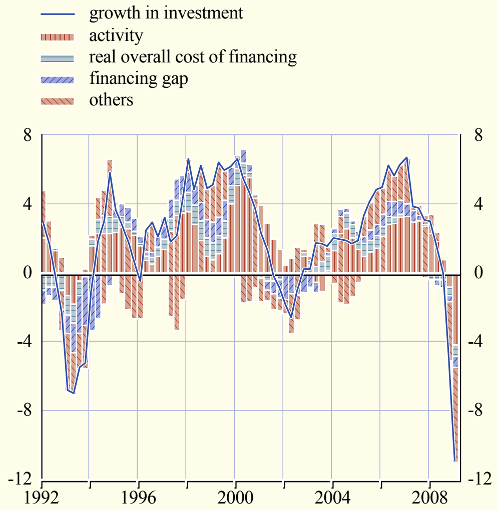
Source: ECB calculations based on Eurostat.
Note: The latest observations are for the first quarter of 2009 for the total and the fourth quarter of 2008 for the components.

from peak to trough. In the second, from the beginning of 2001 until the beginning of 2002, it declined by 3% from peak to trough. These periods were both characterised by a marked weakening in overall activity in the euro area, albeit of different magnitudes.

As each of these periods had their own unique characteristics, the conclusions that can be drawn from such historical comparisons are rather limited. A simple estimated macroeconomic framework to model investment growth is used to provide a better understanding of these developments. In such a framework, investment can be assumed to constitute a constant share of GDP in the long run, but in the short to medium run, it is affected by overall demand (without investment), changes in the real cost of financing, and the "financing gap".[2] A proxy for the real cost of financing can be calculated by weighting the cost of different sources of financing (equities, debt securities and MFI loans) on the basis of their amounts outstanding, corrected for valuation effects and deflated by inflation expectations.[3] The financing gap can be measured as the difference between capital expenditure and what is financed by funds generated internally. As an indication of external financing needs, a larger financing gap is expected to weigh on investment in the short run.[4] Such a framework makes it possible to estimate the contribution of each factor to total investment growth, as represented in Chart C.

Chart C Estimated contribution to annual investment growth

(annual percentage changes; percentage points)



Sources: Eurostat and ECB calculations.
Notes: The component labelled "other" combines a dummy variable for the period 1992-93, the residuals and the lasting impact of initial conditions. The latest observation is for the first quarter of 2009.

According to this analysis, a large part of the slowdown in investment is accounted for by the reduction in overall demand. This may not be surprising, given the severity of the current downturn and the tendency for investment to react strongly to changes in activity in the short run.[5] This result is also supported by the European Commission surveys on limits to production, which show that lack of demand is the main factor limiting production. The real overall cost of financing is also estimated to have made a negative contribution since the end of 2007. Indeed, before declining more recently, until the last quarter of 2008, the real overall cost of financing for non-financial corporations had edged up. This was the result of an increase in the cost of market-based financing linked to higher corporate bond yields and to an increase in the premium demanded by investors for investment in equities against the background

2 For more details on the equation underpinning the analysis, see Box 1 in the article entitled "Business investment in the euro area and the role of firms' financial positions" in the April 2008 issue of the Monthly Bulletin. The equation has been updated to incorporate the latest data. It has been estimated using data from 1991 to 2008.

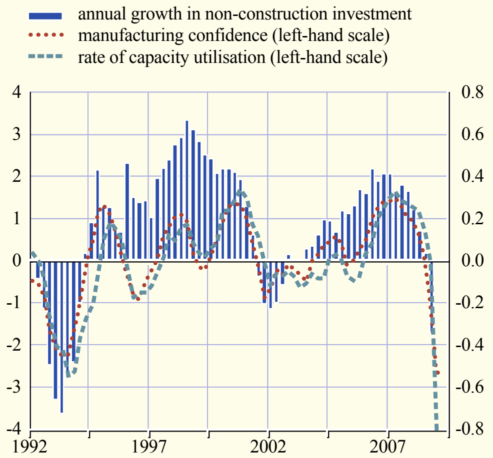
3 For more details on the indicator of the cost of financing, see Box 4 in the March 2005 issue of the Monthly Bulletin. A certain degree of caution is warranted in using this indicator owing to important caveats related to its construction, such as the implicit assumption that there is no financing at variable rates or the high degree of uncertainty surrounding the measure of cost of equity financing. Given that this indicator has only been available since 1998, long-term government bond yields are used to extend the indicator prior to this date.

4 Several reasons are advanced in the literature to explain this negative relationship. For instance, information asymmetry may result in collateral requirements on the part of the borrower or external funds may imply additional costs.

5 As with most reduced form single equations estimated in the literature, the short-term elasticity of investment to activity is above one.

of the financial turmoil. The financing gap has started to play a negative role recently, following the pronounced decline in profits. Based on historical experience, this latter effect is likely to intensify over the coming quarters. Indeed, in the two earlier episodes of downturn, profits declined by more than investment, thereby increasing the financing gap, despite the reduction in capital expenditure. Looking ahead, data on earnings expectations provided by financial market analysts suggest that non-financial firms' earnings per share will remain in negative territory for some time.

Chart D Non-construction investment and related indicators



Sources: European Commission, Eurostat and ECB calculations.
Note: Data are de-meaned and standardised over the period from the first quarter of 1992 to the fourth quarter of 2008.

Being relatively simple, the analysis is subject to many caveats relating to the specification of the model and the precise definition of the financial variables used. For example, the model neglects the role that shifts in risk aversion, changes in the degree of uncertainty or changes in credit supply conditions can have on investment. These omissions may account for the large unexplained component of investment decline in 1992-93, as well as more recently.

Until the first quarter of 2009, a large part of the decline in euro area investment was driven by the severe downturn in overall activity. Looking ahead, the latest indicators suggest that investment is likely to remain depressed, possibly lagging the economic upturn (see Chart D). This outlook is also reflected in the June 2009 Eurosystem staff macroeconomic projections, where euro area investment is projected to decline by between 10.1% and 12.3% in 2009, well below the projected decline in euro area GDP.