THE LATEST EURO AREA RECESSION IN A HISTORICAL CONTEXT

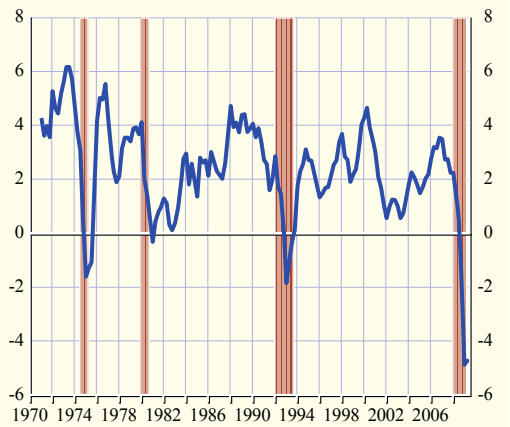
The latest downturn has been the most severe in the euro area since the Great Depression in the 1930s. Given that the latest recession has been characterised by a period of financial distress, it differs from more "standard" recessions. This article summarises the key features of this recession in the euro area, and then examines the evolution during past recessions of key macroeconomic variables for both a synthetic euro area aggregate and OECD economies since 1970 (a period for which a complete dataset is widely available). Past experience of financial crises and also the global nature of the latest downturn suggest that the euro area economy is likely to recover only gradually. However, uncertainty is likely to remain high along the path to economic recovery.

1 INTRODUCTION

In 2008 the euro area entered a particularly deep recession, which has become the most severe in the area or, before 1999, for a synthetic euro area aggregate, since the Great Depression in the 1930s. Indeed, the deterioration in euro area real GDP growth has been by far the sharpest and deepest since 1970 – a period for which a complete dataset is widely available (see Chart 1). The factors leading to this recession are many, but one key distinguishing feature has been the continuing financial crisis, following a series of excesses in asset markets around the globe. This crisis undoubtedly contributed strongly to the rapid onset of a broad-based downswing, in both geographical and sectoral terms. Given the size of the contraction in activity, there has been considerable uncertainty regarding the likely future trajectory of euro area activity. In such a context, it is useful to examine how the current situation compares with previous recessions and how recoveries have historically tended to take shape.[1]

Chart 1 Euro area real GDP growth

(annual percentage changes)



Sources: ECB calculations based on Eurostat data/ECB's area-wide model database from G. Fagan, J. Henry and R. Mestre, "An area-wide model (AWM) for the euro area", *Economic Modelling*, vol. 22 (1), January 2005, pp. 39-59.
Note: Areas shaded red reflect euro area recessions as defined by the Euro Area Business Cycle Dating Committee of the Centre for Economic Policy Reseach (CEPR).

This article summarises the key features of the latest euro area recession, and then examines the evolution during past recessions of key macroeconomic variables for both a synthetic euro area aggregate and OECD economies since 1970. In examining these past episodes, the article differentiates between recessions that can be characterised as involving financial crises and more standard cyclical downturns. Financial crises are periods in which financial institutions and corporations face great difficulties in meeting their financial obligations on time, possibly accompanied by a large number of defaults.

The patterns observed in these historical episodes may provide a useful reference for understanding the evolution of macroeconomic indicators in periods of recovery. Although these patterns may be illustrative, there are several limitations to this analysis. Foremost among these limitations is the fact that history is unlikely to ever fully repeat itself, given the unique character of past recessions and recoveries. Indeed, structural changes over time, along with differing shocks to the economy, mean that the most recent downturn has many special features not shared with previous historical episodes. That said, drawing empirical regularities from the behaviour of various macroeconomic

1 This article is based on the data available up to 15 October 2009.

aggregates during past recoveries can provide some context, and even some guidance, for the shape that a recovery might take.

The article is organised as follows. First, the characteristics of the most recent euro area recession are presented in the following section, highlighting widespread difficulties in foreseeing its intensity. Second, the latest euro area downturn is compared with past recessions, both for a synthetic euro area aggregate and for OECD economies (identifying specific periods of distress in these economies), going back to the 1970s. On the basis of these comparisons, some broad conclusions are drawn on the likely shape of the recovery.

2 ANALYSING THE LATEST EURO AREA RECESSION

The latest euro area recession has been particularly marked in terms of the speed and depth of the downturn in economic activity. These features, however, have not been exclusive to the euro area – in fact, by many measures, the world economy has faced its most severe crisis since the Great Depression in the 1930s. Several forces have contributed to this marked contraction in euro area and global activity. Notably it has involved a combination of macroeconomic factors, developments in financial markets and significant deficiencies in the regulatory and supervisory architecture, which prepared the ground for a financial crisis. The financial system as it worked over the decade leading up to the crisis – with its inappropriate incentives and overly complex products, and with global imbalances as its macroeconomic backdrop – involved an excessive degree of risk-taking. Following a housing boom in most industrialised economies, house prices declined sharply, several weaknesses were exposed and investors suddenly lost confidence, as a wave of panic spread. After years of exceptional risk appetite and high profits, the pendulum swung the other way, as markets became extremely sensitive to financial risk, affecting prices across all asset classes.

Activity in the euro area had grown strongly over the period 2005-07. By the middle of 2009, however, euro area real GDP was about 5% below its peak at the beginning of 2008.[2] Initially the downturn was stronger in the United States, where it was triggered by the need for a correction of the excesses in the US housing market. However, the euro area macroeconomic indicators were also already signalling some slowing in activity when the financial turmoil started in August 2007. In the event, the euro area cycle largely followed that of the United States, broadly in line with past experience (see Box 1).

2 Defining and dating recessions is not straightforward. For example, the Euro Area Business Cycle Dating Committee of the Centre for Economic Policy Research (CEPR) judged in early 2009 that the latest euro area recession had started in January 2008. Euro area real GDP, however, started to decline only in the second quarter of 2008, a development which appeared at the time to partly reflect some correction of the strong growth in the preceding quarter.

Box 1

LINKING THE CYCLICAL DYNAMICS OF THE EURO AREA TO THOSE OF THE UNITED STATES: HISTORICAL REGULARITIES DRAWN FROM COMPARISONS WITH PAST CYCLES

This box reviews some empirical research on the economic linkages between the United States and the euro area. Overall, there is strong evidence that economic activity in the US and euro area economies have been highly interrelated over the last 40 years. Comparisons with past cycles suggest some historical regularities that characterise the cyclical dynamics of both economic

areas. First, while activity in the United States and that in the euro area generally co-move, euro area cycles tend to lag those of the United States. Second, despite strong co-movements, the adjustment dynamics are different in these two areas: the US economy tends to recover quickly after being hit by sharp cuts in demand, while the euro area countries have historically had milder downturns and slower rebounds. Third, US shocks have tended to become global over time, being transmitted to the rest of the world in general and to the euro area in particular. These three key empirical regularities identified by economic research are elaborated in more detail below.

Co-movements, leads and lags

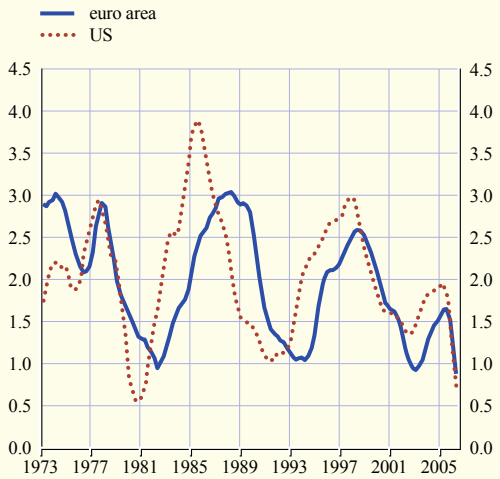
Economic activity in the United States and that in the euro area (measured in terms of GDP per capita) have been co-moving over the last 40 years (see Chart A). Descriptive evidence suggests that the US business cycle leads that of the euro area and that fluctuations in these two economies take place around a common trend. These two stylised facts have been confirmed by economic research.

First, using a parsimonious bivariate VAR model for US and euro area GDP, Giannone and Reichlin (2006) show that there have been systematic linkages since 1970 between economic activity in these two economies, with GDP in the euro area generally lagging behind its US counterpart by around four quarters.[1] Dees and Vansteenkiste (2007) also show that the US cycle leads that of the euro area, but find that US downturns are transmitted faster to the euro area than upturns.[2] On average, it takes two quarters for a downturn in the United States

1 See D. Giannone and L. Reichlin, "Trends and cycles in the euro area: how much heterogeneity and should we worry about it?", ECB Working Paper No 595, 2006.
2 See S. Dees and I. Vansteenkiste, "The transmission of US cyclical developments to the rest of the world", ECB Working Paper No 798, 2007.

Chart A Growth in GDP per capita

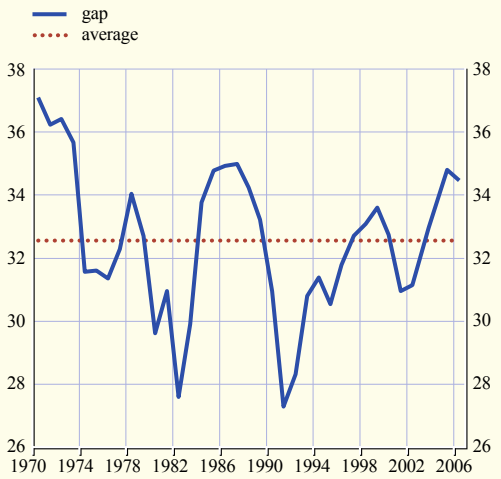
(annual percentage changes; quarterly data; five-year centred moving averages)



Sources: Eurostat and the US Bureau of Economic Analysis.

Chart B Gap between GDP per capita in the United States and in the euro area

(percentage points; five-year centred moving averages)



Source: Giannone, Lenza and Reichlin, 2009.
Notes: The chart reports the difference between the log levels of GDP per capita in the United States and in the euro area in the period 1970-2006.

to be transmitted to the euro area, whereas it takes six quarters for an upturn to spill over. These estimates have held on average in the past, but each recession episode is of course somewhat different in terms of its lags, depth and length.

Second, Giannone and Reichlin (2005) and Giannone et al. (2009) show that real GDP per capita in the United States and in the euro area share a common trend.[3] The level of euro area real GDP per capita has been on average about 30% lower than its US counterpart and the gap between the two areas has been mean-reverting around such a value (see Chart B). Granger causality tests also provide evidence that the gap in the growth rates does not drive future US growth but helps explain growth in the euro area. This confirms the apparent "unilateral" nature of the relationship.

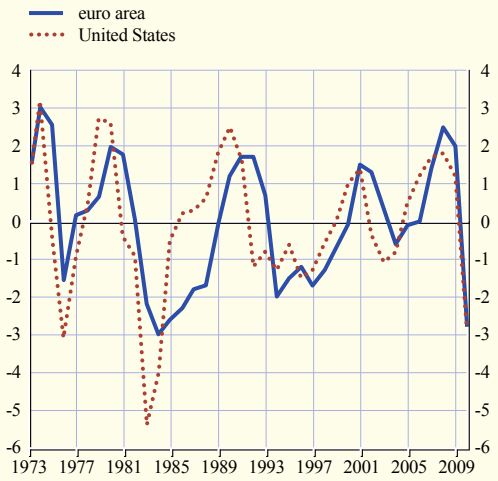
Real cycle correlation and cyclical adjustment differences

The two stylised facts mentioned above suggest that when GDP in the euro area and the United States deviate from the long-run relationship, adjustment occurs more rapidly in the United States, while the euro area catches up more slowly. This is confirmed by Duval et al. (2007), who find that in euro area countries the initial impact of common shocks on the output gap is smaller, but output gaps are more persistent, than in the United States (see Chart C).[4] Therefore, the US economy tends to recover quickly after being hit by sharp decreases in demand, while the euro area countries have historically had milder downturns and slower rebounds.

Overall, while there is also evidence of a specific component to the business cycle of each economic area,[5] the US and euro area real cycles nonetheless remain highly correlated. In fact, co-movements also occur between US activity and a measure of rest of the world activity. These co-movements do not necessarily simply reflect the transmission of US idiosyncratic shocks and might instead represent the impact of shocks that are more global in nature. Globalisation forces have contributed to such an increase in business cycle synchronisation.

Chart C Output gaps

(output as a percentage of its estimated potential level)



Source: European Commission (AMECO).
Notes: The euro area series refers to the 12 countries belonging to the euro area in 2005. The 2009 figures for the euro area and the United States are European Commission forecasts.

3 See D. Giannone and L. Reichlin, "Euro area and US recessions, 1970-2003", in L. Reichlin (ed.) *Euro area business cycle: stylized facts and measurement issues*, CEPR, 2005 and D. Giannone, M. Lenza, and L. Reichlin, "Business cycles in the euro area", ECB Working Paper No 1010, 2009.

4 See R. Duval, J. Elmeskov and L. Vogel, "Structural Policies and Economic Resilience to Shocks", OECD Economics Department Working Paper No 567, 2007.

5 For instance, Stock and Watson (2005) provide evidence of the emergence of two cyclical groups, namely the euro area and English-speaking countries. See J. Stock and M. Watson, "Understanding Changes in International Business Cycle Dynamics", *Journal of the European Economic Association*, 3(5), 2005, pp. 908-1006.

Globalisation and the transmission of cyclical dynamics

Increased trade and financial integration has led to international business cycle synchronisation in the post-war period. Several studies show an increase in synchronisation over time, indicating that globalisation promotes international economic linkages and heightened business cycle correlations.[6]

Dees and Saint-Guilhem (2009) find evidence that US cyclical developments have become more global and increasingly persistent over time.[7] This might be partly explained by the increasing role of indirect effects – either via third countries or through further transmission within each economy – that make US cyclical developments more global.

In particular, recessions that originate from the United States tend to be severe and often accompanied by a synchronised and protracted global downturn. Moreover, globally synchronised recessions last longer and result in higher output losses than unsynchronised ones.[8] Finally, it appears that global trade flows tend to fall significantly when the United States is also in recession.

6 See, for instance, M.A. Kose, C. Otrok and C.H. Whiteman "International Business Cycles: World, Region and Country-Specific Factors", *American Economic Review*, 93 (4), 2003, 1216-1239 and M.J. Artis, and T. Okubo "Globalization and Business Cycle Transmission", CEPR Discussion Papers 7041, 2008.
7 See S. Dees and A. Saint-Guilhem "The role of the United States in the global economy and its evolution over time", ECB Working Paper No 1034, 2009.
8 See IMF, "From Recession to Recovery; How Soon and How Strong?", *World Economic Outlook*, April 2009, Chapter 3.

More generally, the slowdown quickly became global in scope. Contributing to this was the fact that, despite the financial crisis, oil prices rose to historical highs in mid-2008, significantly dampening macroeconomic activity. The situation worsened markedly in the summer of 2008, when governments were forced to provide substantial aid to several financial institutions in the United States and in the euro area. It escalated even further in September 2008. In the aftermath of the collapse of Lehman Brothers, financial markets seized up, interbank lending froze, credit spreads spiked and confidence collapsed. Given the growing integration among economies, these effects spread rapidly around the globe, amplifying an already marked deceleration in the pace of activity. Confidence worsened abruptly across virtually all sectors and regions in what appeared to be a generalised panic. As expectations about future economic activity were scaled down severely, aggregate demand declined strongly, triggered by a massive destocking and a fall in investment spending, which contributed to an unusually large contraction in global trade (see Box 2). In parallel, household saving ratios rose as households reacted to both lower asset values and a more uncertain environment. Eventually, with its high degree of openness and sizeable manufacturing sector, the euro area economy was hit particularly hard. Within the euro area, countries which had experienced a pronounced housing boom suffered particularly acutely.

Box 2

FACTORS UNDERLYING THE GLOBALLY SYNCHRONISED NATURE OF THE LATEST DOWNTURN

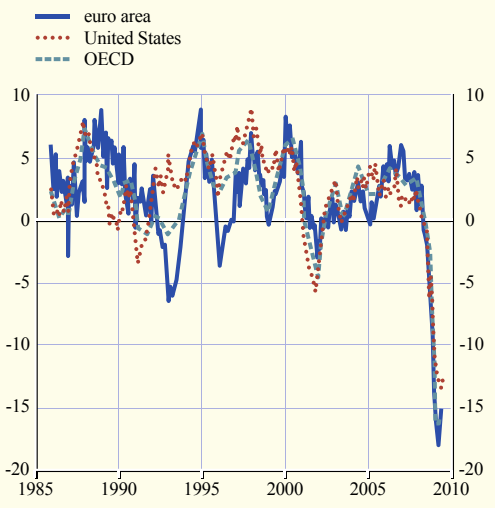
Prior to the onset of the latest global downturn, a widely held view was that the global economy could "decouple" from the downturn in the United States, given the specific US nature of the shock. Indeed, at the beginning of the financial crisis in mid-2007, emerging markets did not seem to be strongly affected. However, subsequently, the global economic recession became very severe and the global cyclical dynamics became highly synchronised with those of the United States. While the shock initially originated from the United States, it has acted as a trigger for vulnerabilities that were common across countries and regions, including high levels of leverage and an under-pricing of risk. The shock was, therefore, global in nature and its transmission triggered a synchronised downturn. Several factors had been fostering such a development. This box attempts to provide an account of four particularly important factors: the synchronised fall in manufacturing output and world trade; international supply chains and the contraction in world trade; synchronisation and financial markets; and confidence linkages.

The synchronised fall in manufacturing output and world trade

There was an exceptionally strong correction in industrial activity (see Chart A) in the latest recession. The combination of housing market corrections, households' balance sheet adjustments and difficulties in short-term financing all contributed to the collapse of demand for durable goods (particularly in the car industry), which account for a large share of manufacturing output. The worldwide inventory adjustment process further aggravated the dynamics of the downturn, leading to a severe and synchronised contraction in industrial production.

Chart A Industrial production

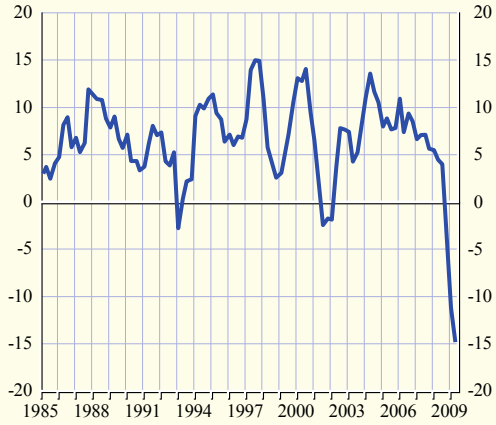
(annual percentage changes)



Sources: Eurostat and Federal Reserve System.

Chart B World import volumes

(annual percentage changes)



Sources: IMF, Netherlands Bureau for Economic Policy Analysis (CPB) and ECB staff calculations.

This also led to a very strong trade adjustment, with the fall in world trade occurring at a pace without precedent since the Second World War (see Chart B). World trade fell by 17% between October 2008 and May 2009, returning to 2005 levels within the span of a few months.

International supply chains and the contraction in world trade

Although the sharp contraction in world trade at the end of 2008 and at the beginning of 2009 was partly related to special factors, such as the shortage of trade finance, the increased presence of global supply chains in international trade may have acted as an additional propagation mechanism. In the event of shocks with a large global content, increasingly complex international supply chains can magnify the impact on activity through a sharper contraction in trade, as goods are now manufactured via complex, international networks, so that countries have increasingly become nodes in international supply chains.

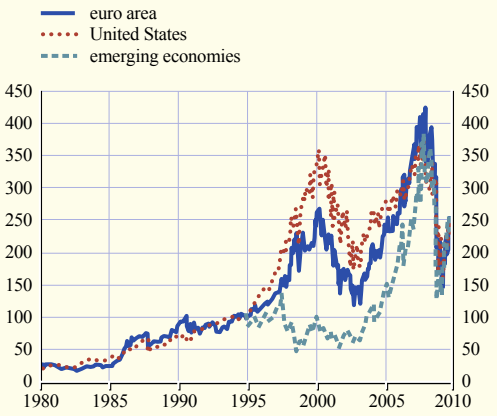
Supply chains might have actually aggravated the recent trade collapse. With access to finance drying up, buyers generally seem to have become more restrictive in providing finance along the supply chain. In doing so, they may have caused interruptions or bottlenecks in the supply chain, thereby also harming the production, cash flow, financial plans and exports of downstream producers. Furthermore, the downsizing of production by (or even bankruptcy of) some large global players, which are often monopsonist buyers of specialised products, may have left smaller and less diversified suppliers of such products in a difficult situation.[1]

Synchronisation and financial markets

Financial markets have also become more interlinked over time, as indicated by an increase in the gross volume of capital flows and in the diversity of their composition along with the increasing correlation of equity markets (see Chart C). In the current episode in particular, financial innovation allowed US mortgages to be converted through securitisation into asset-backed securities, which were partly sold to international investors, without the ratings of these products fully reflecting their inherent risks. This allowed US-specific risks to be spread globally, leading to a particularly strong transmission of US mortgage-related credit problems to the rest of the world.[2]

Chart C Stock market price indices

(1 January 1995 = 100)



Source: Datastream.

1 For instance, a fall in car sales in Germany is accompanied by a 2.2 times larger fall in purchases of inputs from many other sectors (see Deutsche Bundesbank, "The macroeconomic repercussions of a decline in demand for cars, taking into account the inter-sectoral integration of production", Monthly Report, February 2009).

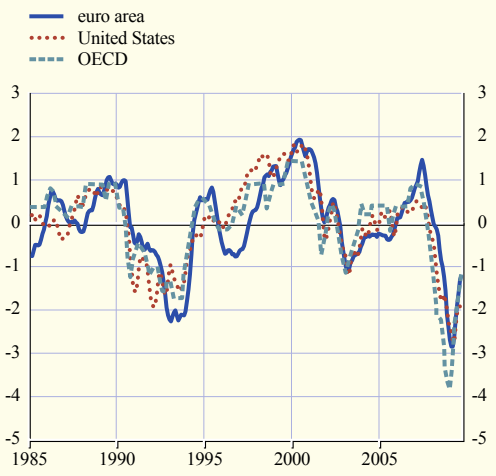
2 See M. Hoffmann and T. Nitschka, "Securitization of Mortgage Debt, Asset Prices and International Risk Sharing", Institute for Empirical Research in Economics Working Paper No 376, 2008.

Confidence linkages

Finally, as shown in Chart D for the United States and the euro area, confidence linkages across economies may also have become stronger over time: the correlation between euro area and US consumer confidence increased from 0.68 for the period 1985-99 to 0.90 in the period from January 2000 to April 2009.[3] The high and increasing degree of synchronisation could to some extent reflect the fact that news spreads faster across the globe than in the past, with negative news abroad more strongly affecting domestic confidence. Together with increased trade and financial integration, confidence linkages may have led to higher business cycle synchronisation across economies and greater sensitivity to common shocks (see Box 1).

Chart D Consumer confidence surveys

(standardised indices)



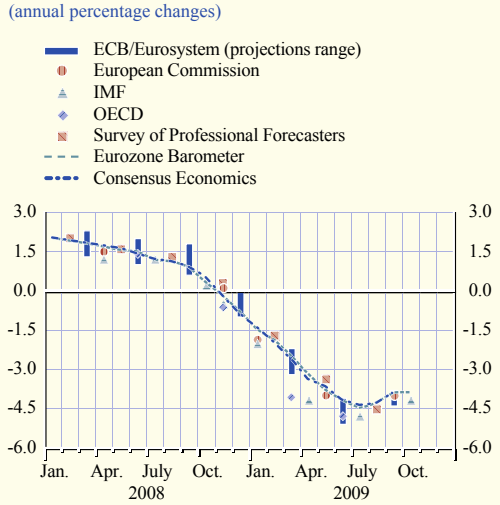
Sources: OECD, EU Commission and the Conference Board.

3 For further analysis of this increasing correlation between euro area and US business and consumer confidence, see R. Anderton and F. di Mauro, "The external dimension of the euro area: stylised facts and initial findings", in F. di Mauro and R. Anderton (eds), *The External Dimension of the Euro Area: Assessing the Linkages*, Cambridge University Press, 2007 and also R. Anderton, F. di Mauro and F. Moneta, "Understanding the impact of the external dimension on the euro area: trade, capital, flows and other international economic linkages", ECB Occasional Paper No 12, 2004.

The swift and dramatic deceleration in the pace of economic activity meant that most forecasters made unusually large projection errors, with the 2009 forecast having steadily deteriorated from an outlook of growth in the vicinity of 2% at the beginning of 2008 to an outlook of a large contraction of between 4% and 5% by the middle of 2009 (see Chart 2).[3] Two factors, in particular, contributed strongly to the magnitude of the forecast errors over this period. First, uncertainty rose to previously unseen levels as most of the indicators monitored entered uncharted territory. Corporations and households adjusted their behaviour accordingly in an unprecedentedly abrupt manner that was not captured by standard tools based on past relationships or linear approximations of economic behaviour.

Chart 2 Evolution of euro area real GDP growth forecasts for 2009

(annual percentage changes)



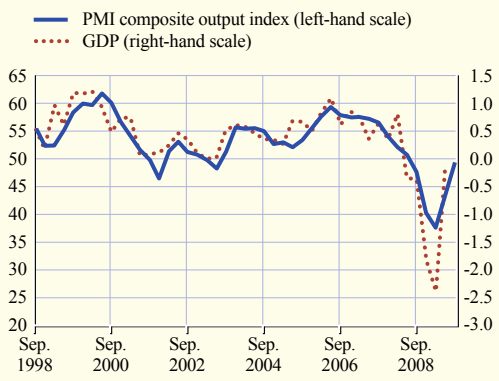
Sources: ECB, European Commission, IMF, OECD, Eurozone Barometer and Consensus Economics.
Note: The x-axis shows the release dates of the various estimates.

Second, the fairly close historical relationship between high-frequency survey indicators and national accounts data appears to have broken

3 This continued unusually heightened uncertainty for the near-term euro area outlook is detailed in the box entitled "Uncertainty and the economic prospects for the euro area" in the August 2009 issue of the Monthly Bulletin.

Chart 3 Euro area PMI composite output index and quarterly real GDP growth

(quarterly percentage changes and index)



Sources: Eurostat and Markit.

down over the crisis period, as illustrated in Chart 3 by the large gap between the Purchasing Managers' Index (PMI) composite output series and the real GDP data between the last quarter of 2008 and the first quarter of 2009. Survey indicators such as the PMI that are constructed as balance indicators generally indicate how widespread changes in activity are, but are not necessarily a good indicator of their depth. Since some sectors were hit particularly strongly by the crisis, notably the capital goods sector, the linear mapping between surveys and activity underlying most forecast tools no longer provided a good approximation.

The strength and severity of the financial tensions and the changes in the balance of risks to price stability have elicited strong macroeconomic policy responses. When liquidity in money markets became severely hampered in August 2007, the Eurosystem reacted swiftly to ensure that liquidity risk did not lead to a major systemic financial crisis. It reacted mainly by amending the timing and maturity of its liquidity-providing operations to accommodate the funding needs of banks.

Later on, in response to the heightened financial market uncertainties that emerged in autumn 2008, the Governing Council of the ECB adopted a number of non-standard measures to support the transmission of its interest rate decisions and enhance the flow of credit to households and corporations. Through its enhanced credit support, the Governing Council, in particular, extended the opportunities for the banks to borrow from the Eurosystem.

In parallel to taking these non-standard measures, the Governing Council also lowered the official interest rates swiftly. Given the changes in the assessment of risks to price stability emerging from economic and monetary developments, between October 2008 and May 2009 the Governing Council of the ECB cut the key interest rates by 325 basis points to levels not seen since at least the Second World War in the countries forming the euro area. At the same time, there was also a large fiscal expansion in the euro area. This reflected discretionary fiscal stimulus measures in the context of the European Economic Recovery Plan and – more importantly – the operation of automatic fiscal stabilisers and the underlying momentum of spending growth. Finally, governments implemented a series of measures to stabilise the financial system, which are mainly reflected in higher government gross debt ratios and large contingent fiscal liabilities.[4]

3 COMPARING THE LATEST DOWNTURN WITH PREVIOUS RECESSIONS

Notwithstanding the features unique to the latest euro area economic downturn, a historical comparison of past periods of recession and recovery can shed some light on the average historical trajectory of economic activity around cyclical turning-points. To this end, this section examines the evolution of aggregate real economic activity, as well as the expenditure breakdown of the main components of private demand, comparing it with the behaviour recorded in other

4 For further details of euro area fiscal policy responses to the financial crisis, see the article entitled "The impact of government support to the banking sector on euro area public finances" in the July 2009 issue of the Monthly Bulletin.

recessions since 1970, in both the euro area and, more generally, across OECD economies.

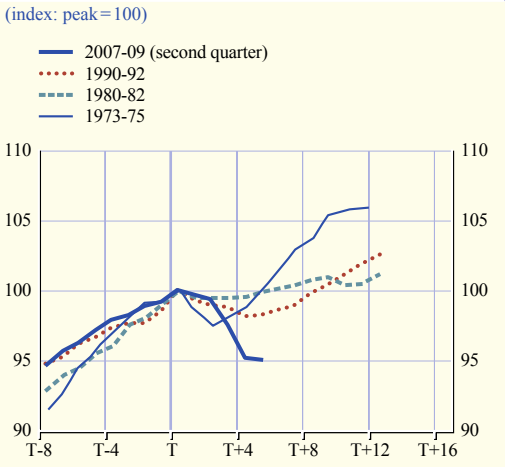
Given the financial nature of the latest euro area downturn, the section also singles out past periods of heightened financial distress in OECD economies to highlight adjustment profiles in such exceptional circumstances. Specifically, "standard" recessions are differentiated from "systemic" and "non-systemic" financial crises in the OECD.[5] While these historical comparisons shed some light on the typical dynamics of past recessions and recoveries, several limitations must be kept in mind, notably the unique nature of each episode despite a number of common features.[6] In particular, the financial turmoil since 2007 can be thought of as largely unique in the period since the Second World War on account of its global scale. At the same time, there have been important differences in macroeconomic policy-making compared with earlier episodes.

3.1 OVERALL ACTIVITY

The contraction witnessed in the latest euro area recession is without precedent since the 1970s. Specifically, the decline in real activity has exceeded that in previous recessions for a synthetic euro area aggregate since 1970 (see Chart 4). This recession is also among the most severe of all OECD recessions over the same period (see Chart 5).

Examining the average recovery profile, it would appear that, historically, the depth and duration of downturns in standard recessions have differed from those in financial crises. In standard cycles and non-systemic crises, a sharp decline in activity has tended to be followed by a swift recovery, thereby displaying a "V" shape. In systemic crisis cycles, the recession period is more protracted so that the cycle displays a "U" shape.[7] The latest contraction in euro area real activity is not only associated with a region-specific financial crisis, but also with a global crisis that is the most severe in OECD economies since 1970. In this context, past relationships would suggest that the latest contraction in euro area real activity is likely to be associated with a gradual recovery.[8] Factors leading to relatively more sluggish economic recoveries following financial crises are likely to include a broad-based balance

Chart 4 Real GDP growth pattern in euro area recessions



Sources: ECB and CEPR.
Note: T represents the peak of activity prior to the respective recessions. The dates of the euro area peaks are the third quarter of 1974, the first quarter of 1980, the first quarter of 1992 and the first quarter of 2008.

5 Five periods of financial crisis are singled out as having been particularly severe, and are referred to as "systemic": Spain (1978-79), Finland (1989-93), Sweden (1990-93), Norway (1988), and Japan (1993); all other financial crises in this article are referred to as "non-systemic". For a complete listing of episodes characterised as systemic and non-systemic crises, see Chapter 3 of the April 2009 IMF World Economic Outlook.

6 Indeed, the latest financial crisis differs in many respects from the selected group of previous crises examined – see, for instance, S. Cecchetti, M. Kohler and C. Upper "Financial Crises and Economic Activity", Paper for the Federal Reserve Bank of Kansas City's symposium at Jackson Hole, Wyoming, August 2009.

7 This is consistent with the finding that recessions associated with credit crunches and house price busts in OECD countries have tended to be deeper and longer than other recessions over the last 50 years (see S. Claessens, M. Kose and M. Terrones, "What Happens During Recessions, Crunches and Busts?", IMF Working Paper No 274, 2008).

8 International evidence suggests that past financial crises have been characterised by substantially and persistently depressed output during subsequent recoveries – see Chapter 4 of the October 2009 IMF World Economic Outlook. Indeed, the effects of the latest financial crisis may have lowered euro area potential output, as discussed in the box entitled "Potential output estimates for the euro area" in the July 2009 issue of the Monthly Bulletin.

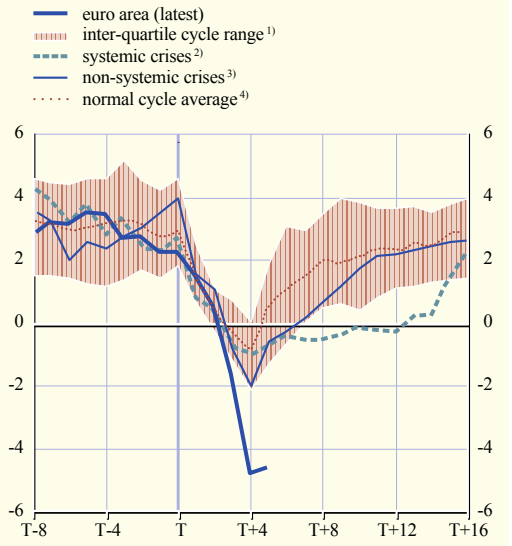
sheet overhang across institutional sectors, leading to weak private demand in a context of restricted credit flows. In terms of composition, the recovery from a financial crisis typically involves a more prolonged adjustment in investment. In addition, households increase their savings in an attempt to repair balance sheets affected by losses in housing and financial wealth, with the result that private consumption is even weaker than the level entailed by the strong rise in unemployment. In such circumstances, the impetus to growth from external demand is a considerably more important driver of the recovery. When the financial crisis is specific to a small open economy, it is typically accompanied by a significant depreciation of the exchange rate and the likelihood of an export-led recovery is much higher. In contrast to most past financial crises, a characteristic of the latest crisis is that it has affected the global financial system and the developed economies simultaneously. Finally, as financial crises are typically accompanied by a strong fiscal expansion, the subsequent period is characterised by a need for resolute fiscal consolidation.

3.2 EXPORTS AND THE EURO AREA EXTERNAL ENVIRONMENT

The decline in euro area real economic activity outlined above has had a clear counterpart in the adjustment of the various expenditure components of demand, but its effect has been most visible, by far, in the adjustment of international trade – particularly euro area exports. The contraction in export volumes in the latest downturn has been far in excess

Chart 5 Real GDP growth in the euro area compared with past recessions and crises in OECD economies

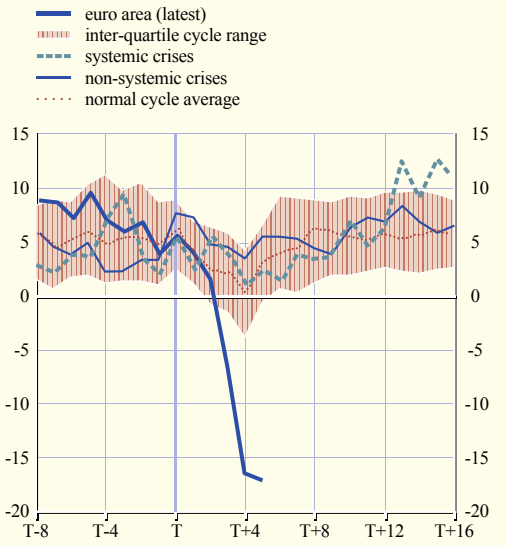
(annual percentage changes; quarterly data)



Sources: ECB calculations based on Eurostat data/ECB's area-wide model database (see Fagan et al., 2005) and OECD Main Economic Indicators.
Notes: T represents the peak GDP level prior to recession.
1) The cycle range for OECD recessions is derived as the upper quartile less the lower quartile of all OECD recessions since 1970.
2) Average real GDP growth during the "five severe" financial crises since 1970, labelled as "systemic", which occurred in Spain, Finland, Sweden, Norway and Japan.
3) Average real GDP growth during all other financial crises in selected OECD countries since 1970.
4) Average real GDP growth during all recessions in OECD countries not categorised as crises.

Chart 6 Exports of goods and services

(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

of those in previous downturns and financial crises (see Chart 6). The decline in imports, while considerable, was smaller than that of exports, so that net trade was a sizeable drag on euro area growth, from mid-2008 to early 2009. While the precipitous global decline in trade remains difficult to explain on the basis of past empirical regularities, the globally synchronised nature of the downturn may have been exacerbated by the worldwide integration of global production over the last decade, as well as other factors leading to increasingly synchronised trade developments (see Box 2). Neither past standard recessions in the OECD economies nor past crises have involved such pronounced movements in export volumes.

3.3 PRIVATE INVESTMENT SPENDING

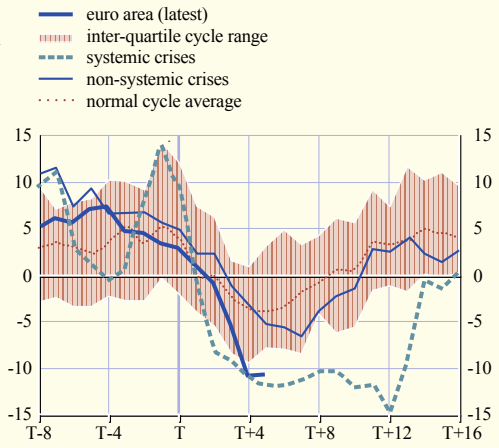
While real private investment spending in the latest recession has fared worse than on average in previous recessions in OECD economies, the contrast compared with previous episodes has not been nearly as stark as in international trade (see Chart 7). It is likely that a large part of the ongoing dampening of investment spending is accounted for by the reduction in overall demand, although financing may also have played a role in restraining investment.[9] The contraction in total private investment to date has not been dissimilar to that in the worst OECD recessions and in systemic crises in the past. Historical evidence suggests that private investment exhibits protracted weakness following systemic crises. On average, financial crises in the OECD have involved an unusually prolonged adjustment in private investment spending compared with other recessions, and particularly in housing investment (see Chart 8). Recoveries in housing investment following systemic crises have tended to be very weak compared with standard recessions in OECD economies, as well as non-systemic crises, possibly reflecting balance sheet adjustments in the non-financial and financial sectors, associated with a dampening in both credit demand and credit supply.

In past crises, part of the evolution of private investment spending, as well as of consumer spending, can be attributed to the impact of

9 See the box entitled "Euro area investment in the current downturn" in the July 2009 issue of the Monthly Bulletin.

Chart 7 Real gross fixed capital formation

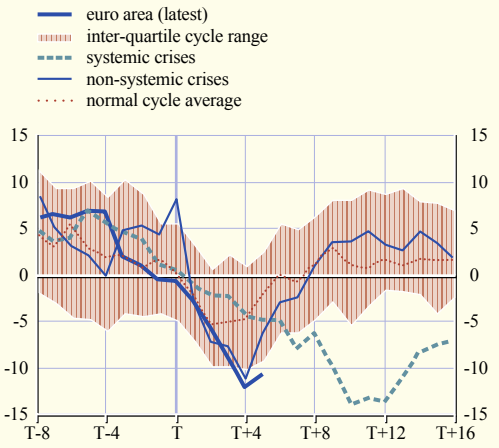
(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

Chart 8 Real housing investment

(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

these crises on the banking sector. As indicated in Box 3, experience of past crises shows that associated weaknesses in the banking sector tend to be long lasting, so that pertinent developments and their macroeconomic impact need to be closely monitored.

Box 3

THE BANKING SECTOR DURING SYSTEMIC CRISES: LESSONS FROM THE PAST

The banking sector has been at the epicentre of the continuing global financial and economic crisis. In particular, huge losses on banks' exposures to the impaired structured credit markets, as well as write-downs on their loan books in the context of the deepening recession, have been threatening the viability of the banking sector and its crucial role in the provision of financial services to the economy. Governments and central banks have reacted to these severe challenges with resolute action on a huge scale to restore stability and health to the banking sector and thus to the economy as a whole. In order to assess the extent of the latest financial crisis and the success of the various support measures taken by public authorities, this box compares the developments in the euro area and US banking sectors during the latest crisis with developments during past financial crises and recessions in OECD countries.

A comparison is made of the average evolution of indicators relating to (i) the capitalisation of the banking system, (ii) bank lending activity, (iii) international banking activity and (iv) the size of the banking system, within a time frame around financial crises and recessions (see Charts A to D). With regard to financial crises, episodes that have taken place in OECD countries since 1979 are considered.[1]

Each chart reports the average evolution of a specific indicator for all banking crises for which data are available (line denoted "banking crises") and for the most severe crises (line denoted "big 4 crises"). The quarter when the crisis starts is denoted "T" and is assumed to be the first quarter of the year in which the crisis unfolds.[2] The charts also display the evolution of the indicators during normal business cycle recessions in OECD countries that were not accompanied by systemic distress in the financial system (line denoted "Normal cycle"). In this case, quarter "T" refers to the quarter in which GDP reached a peak. Finally, the charts report the evolution of the indicators in the latest financial crisis for the United States (line denoted "United States (latest)") and the euro area (line denoted "euro area (latest)"), quarter "T" being the first quarter of 2008.

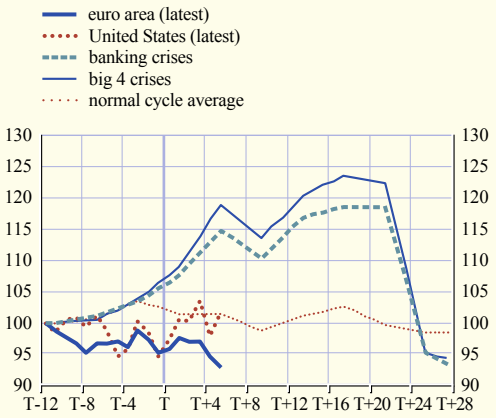
The leverage ratio (i.e. the ratio of total assets to capital and reserves), reported in Chart A, typically increases during financial crises, as the decrease in total assets does not fully offset the decrease in capital that mainly stems from reported losses. By contrast, in normal business cycle recessions,

1 The crises considered here are different from those considered in the main text, owing to issues of data availability. Specifically, the following cases are included: Norway 1987, United States 1988, Finland 1991, Sweden 1991, Japan 1992, Iceland 1993, Korea 1997, Slovakia 1998, Norway 1987, Finland 1991, Sweden 1991 and Japan 1992. The latter four crises are referred to as "big 4 crises". Indeed, some observers argue that these crises are very similar to the current episode in terms of the imbalances observed in the build-up to and in the severity of the initial phase.

2 According to the relevant literature, this is typically the year in which a large number of banking institutions went bankrupt or the government was forced to undertake large-scale interventions in order to avoid bankruptcies and the collapse of the banking sector. Unlike the main text, the box defines time "T" as the moment when the crisis starts. The banking indicators analysed in the box react quickly to the crisis, so that defining "T" as the moment when the crisis unfolds helps to clearly distinguish between the evolution of the indicators during the build-up to the crisis and during its unfolding.

Chart A Leverage in the banking sector

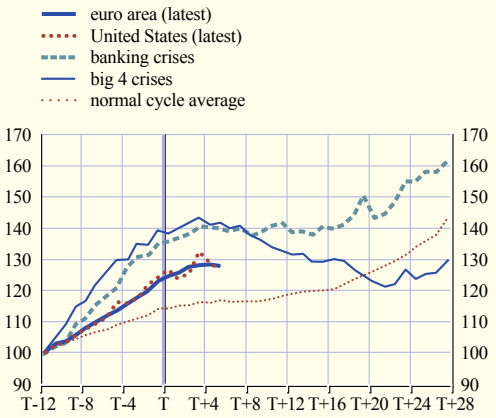
(index; quarter T-12 = 100)



Sources: OECD, ECB and Federal Reserve System.
Notes: Leverage is defined as the ratio of total assets to capital and reserves. Data for past crises are annual data from OECD banking statistics. These have been converted to quarterly frequency by linear interpolation. For "banking crises" and "big 4 crises" quarter "T" is the start of the crisis; for "normal cycle average" it is the quarter when GDP reached its peak; for "United States (latest)" and "euro area (latest)" it is the first quarter of 2008.

Chart B Real loans to the private sector

(index; quarter T-12 = 100)



Sources: IMF, ECB and Federal Reserve System.
Notes: Loans are deflated by the CPI.
See also notes to Chart A.

leverage either stays broadly constant or decreases. Interestingly, despite the severity of the latest global financial crisis, the evolution of leverage in the US and euro area banking sectors has been broadly in line with "normal" recessions. This finding suggests that recapitalisation policies and government guarantees may have mitigated the impact of the latest financial crisis.[3]

The size of banks' loan portfolios, in real terms (see Chart B), typically stagnates for a very protracted period after systemic financial crises. In the four most severe crises, it declined on average for four years. In the latest crisis, the initial phase has been more similar to normal business cycle recessions in both the United States and the euro area.

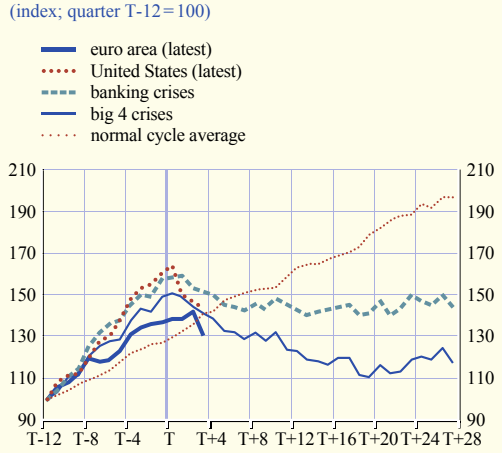
International banking activity (measured here as the sum of international bank assets and liabilities, (see Chart C) declines after financial crises and then stagnates for several years. The recovery comes on average after eight years. By contrast, normal business cycle recessions typically have no observable consequences for international banking activity. During the latest financial crisis this indicator has evolved in the United States and in the euro area broadly in line with past financial crises.

Total banking assets, in real terms (see Chart D), display a slight and short-lived decline after systemic financial crises. In the four most severe crises, total assets declined for a period ranging from three to four years. Normal business cycle recessions typically have no observable consequences for total assets. In the build-up to the latest financial crisis, real total assets in the United States and in the euro area grew faster than in past financial crises.

3 The deterioration of bank profitability in banking crises is much more severe than in normal cycles (not reported in the charts) as financial crises lead to systemic losses. In the most severe crises, losses last for four years on average. The strong deterioration of bank profitability is an important determinant of the low level of bank capitalisation in the years following the crisis.

Chart C Banks' real foreign assets and liabilities in local currency

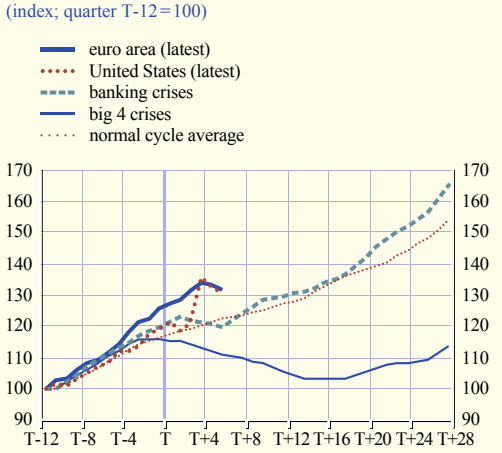
(index; quarter T-12 = 100)



Sources: BIS and IMF.
Notes: Foreign assets and liabilities are translated into local currency and deflated using the CPI. "Euro area (latest)" is the sum of international assets and liabilities for the 12 euro area countries for which data are available at the BIS since the first quarter of 2005 (Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal and Finland).
See also notes to Chart A.

Chart D Banks' real total assets

(index; quarter T-12 = 100)



Sources: OECD, IMF, ECB and Federal Reserve System.
Notes: Assets are deflated by the CPI. Data for past crises are annual data from OECD banking statistics. They have been converted into quarterly data.
See also notes to Chart A.

Keeping in mind the caveat that the typical past financial crisis is obtained by averaging across a range of heterogeneous episodes and countries with different economic and financial structures, the evidence presented in the box suggests that policy interventions may have mitigated the impact of the financial crisis to some extent. This notwithstanding, the financial health of the banking sector still needs to be closely monitored as experience of past crises suggests that weaknesses in the banking system tend to be persistent.

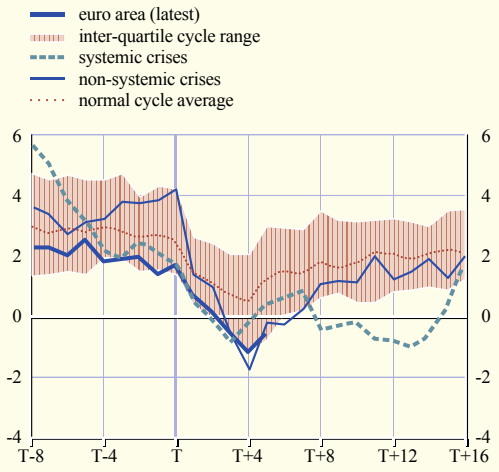
3.4 PRIVATE CONSUMPTION SPENDING AND THE LABOUR MARKET

Euro area private consumption spending has weakened considerably in the latest euro area recession. This appears to be consistent with the experience in past crises, when household consumption has also tended to be weaker than in standard recessions (see Chart 9). Two factors are behind the weakness in private consumption spending. First, the moderation in consumption in part reflects a rise in the household saving ratio, as households increase precautionary savings to finance unexpected losses in income or increase life-cycle savings to repair balance sheet losses.[10] Indeed, an unusually high degree of uncertainty, along with generally depressed asset prices, contributed to an abrupt rise in the euro area household saving ratio from the third quarter of 2008. Second, private consumption spending has also been adversely affected by the decline in household income associated with the recession. In particular, employment growth has dropped sharply, as in past financial crises (see Chart 10). In past systemic crises, employment has remained very subdued well after the trough in economic activity implying an unemployment rate which subsequently remained considerably above pre-crisis levels. In the latest downturn,

10 While the rise in value of asset holdings may have been important as a substitute for traditional household savings with a life-cycle motive in recent years, this factor appears to have been more pronounced in the United States than in large euro area economies – see, for instance, P. Hiebert, "Household Saving and Asset Valuations in Selected Industrialised Countries", Reserve Bank of Australia Research Discussion Paper No 7, 2006.

Chart 9 Real private consumption

(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

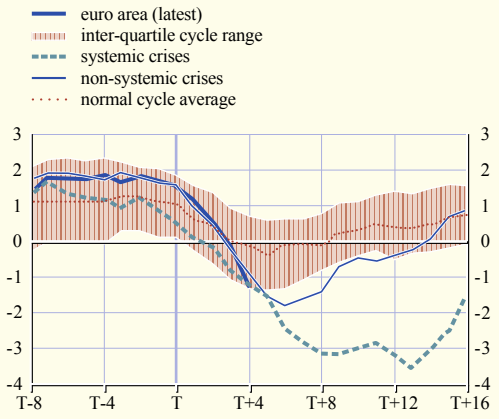
the employment adjustment has been dampened by a reduction in working hours per employee, with firms hoarding labour. While this may contain the employment adjustment in the short term, experience of past crises suggests that large employment corrections tend to follow a financial crisis, especially if this is accompanied by a build-up of excess capacity in certain sectors (such as the construction and financial sectors in the current episode).

The deceleration in real compensation of employees has so far been more moderate in the latest recession compared with past episodes (see Chart 11). This is partly a result of the less pronounced adjustment in employment, along with the decline in inflation, which has helped support real wages. It also reflects the fact that many wage settlements were agreed in 2008, at a time when the economic outlook was more positive and inflation was higher. In the past, the decline in real compensation growth has been much larger in recessions following a financial crisis, with real compensation showing pronounced falls for several years.

Examining the general trends in private consumption spending in past recoveries, it would appear that a recovery in household spending has helped underpin a return to economic growth in standard recessions, as well as in non-systemic crises. In contrast, systemic crises have been associated with far more protracted household spending weakness, which has displayed similar dynamics to those of private investment spending. These dynamics

Chart 10 Employment

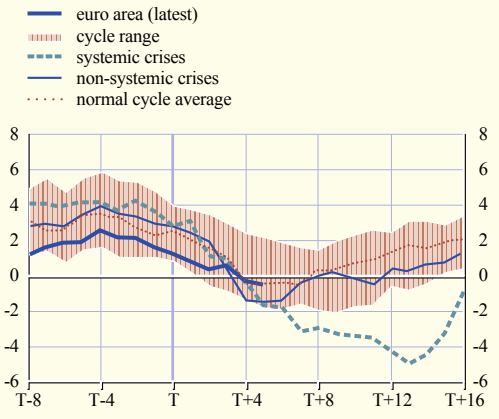
(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

Chart 11 Real compensation of employees

(annual percentage changes; quarterly data)



Sources: ECB and OECD.
Note: See notes to Chart 5.

probably stem from common underlying factors, such as balance sheet adjustment and restricted credit flows.

4 CONCLUSIONS

This article has sought to put the latest euro area recession into a historical context, examining the experience of the euro area – or of a synthetic euro area aggregate prior to 1999 – and other OECD economies since 1970, following both recessions and crises. While the profiles of recession and recovery associated with these episodes have many unique features, some empirical regularities can nonetheless be identified. In particular, the behaviour of macroeconomic aggregates during the latest euro area downturn resembles in many ways the behaviour witnessed during past financial crises in OECD economies. One factor aggravating the severity of the latest downturn, however, has been the sharp contraction in global trade, in addition to the more traditional significant declines in private consumption and investment spending associated with past crisis episodes in OECD economies. The precipitous fall in trade volumes has far exceeded the past declines witnessed in OECD economies, reflecting not only the global nature of the latest recession, but also the increase in cross-regional linkages in recent years, as well as some impairment in trade finance associated with the crisis.

At the same time, the scale and scope of the financial crisis has elicited a very strong macroeconomic policy response. The Eurosystem has reacted swiftly to mitigate the effects of the financial crisis, and has provided considerable support for households and corporations. Government measures have also provided key support to economic activity and financial stability.

Looking ahead, the profile of recoveries following past periods of financial distress suggests that the recovery of the euro area economy will probably be gradual. However, uncertainty is likely to remain high along the path to economic recovery. Indeed, the latest financial crisis has given rise to a need for fundamental adjustments in the balance sheets of both the financial and non-financial sectors, a process which dampens demand and which typically takes some time to complete. Finally, as financial crises are typically accompanied by strong fiscal expansion, there is generally a need in the subsequent period for fiscal consolidation.