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Economic Research Department

The financial shock has finally driven the Euro Area towards recession, which will continue during 2009

The response from the ECB has been "too little, too late", but it is welcomed ...

... and now it needs prompt assistance from a well-designed fiscal expansion, which should be temporary

Contents

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1. Editorial

Six months ago we predicted that the apparent decoupling of the European economy from the crisis that was affecting the United States was not going to last, and that financial turmoil would eventually affect Europe too. Unfortunately, it seems that this has been the case. The other two shocks that threatened to Europe by mid-year (price increases of oil and commodities and a rise of the euro exchange rate) have dissipated quickly, and have even been reversed. However, the impact of the financial crisis is being very significant. Agents' confidence as well as their propensity to consume and to invest has been seriously damaged. The combination of a severe liquidity squeeze in wholesale banking financing markets and a badly needed de-leveraging process is giving rise to an increasing lack of availability of credit in the financial system. This is adding a noteworthy burden on the EMU economy. In addition, there is a clear risk of lower demand from emerging countries, which previously seemed likely to keep buying European exports, but now face a more moderate outlook, in some cases rather gloomy.

The Euro zone is technically in recession, and we expect it to remain in this situation well through most of 2009. Aside from the negative impact of financial crisis on the prospects for consumption and investment, the sharp contraction of the real estate sector in some euro area countries (including Spain) will further weaken domestic demand. On the external side, the situation has worsened for several of the largest commercial partners (United States, United Kingdom) and has extended to new areas (countries of central and eastern Europe), while economic growth will moderate in other parts of the world that have been the main source of export growth in recent years. In this way, and although at present circumstances forecasts are particularly difficult to do, we anticipate that growth in the euro area will be negative in 2009 (around -0.9%) and only slightly positive in 2010, as the recovery from a situation of de-leveraging will be relatively slow.

Faced with these problems, the response of the ECB's monetary policy has been rather slow. Indeed, until recent times the ECB was minimizing the obvious consequences on the real economy arising from the financial turmoil, while emphasising inflation risks that finally did not materialize. Reductions in interest rates have recently begun, and will continue in the coming months to reach a level of 1.5% in the second quarter of 2009. In any case, the power of monetary policy at the moment seems limited, both because of the persistence of spreads in the interbank market and because of the restrictions in quantities that some banks may impose as a result of the process of de-leveraging, that also affects many firms and their demand of credit.

Therefore, in the likely coming scenario of a severe recession it is important that fiscal policy plays an active role. In the past two decades, the idea that fiscal policy should not play any role beyond the cyclical use of automatic stabilizers was predominant amongst many European governments and institutions. Certainly, it is a logical idea, given that the use of fiscal policy in the 80s in many European countries was far beyond prudence and caused increases in interest rates with long-lasting effects. The situation of public accounts in some countries, despite relatively strong economic growth in recent years, recommends caution.

However, the severity of the current situation calls for special action. A discretionary fiscal policy at this juncture is meaningful, if implemented in the appropriate manner and provided that it maintains a long-term fiscal balance. Our calculations show that there is still

room for such policies in Europe, including within the framework of the Stability and Growth Pact, and that an ex-ante persistent increase of the public deficit equivalent to 1% of GDP could improve growth in the euro area by 1.2%, which is not negligible. Nevertheless, a fundamental condition must be met: fiscal actions must be temporary in order to avoid unwanted effects on interest rates in the long run. Additionally, these temporary fiscal packages must be well targeted and implemented in a timely manner. These often-cited conditions, together with the need to avoid measures that distort investment across sectors, imply that fiscal actions have to be designed carefully, avoiding carrying out actions of little use. If these conditions are not met, then the efficacy of the expansionary fiscal policy will be seriously hampered.

2. The Economic Outlook and Policies in the Euro Area

The financial turmoil has accelerated since the summer due to higher risk aversion in response to the fall of Lehman Brothers. In our previous publication, and even since the summer of 2007, we predicted that the financial crisis would weigh heavily on the growth of advanced economies and also in Europe. In Europe, the effects have not been linear and have precipitated in recent months.

The reactions of governments have been quick and relatively coordinated, at least in terms of time and objective, despite the important disparities between the rescue plans of the financial sector. However, notwithstanding the reaction, the prolongation of the recession through 2009 will be difficult to avoid.

In the first section of the publication we will present a throughout review of the current situation in the Euro area as well as globally; special attention will be paid to the recent evolution of financial markets and their impact on the real economy, together with monetary and fiscal policy. Given the relevance that fiscal policy has been obtaining in recent times, we will provide a special emphasis on this issue in the last chapter.

2.1 Prospects for the Euro Area: towards a deepening of the recession

• The financial crisis has clearly worsened and financial packages have only had a mitigating impact

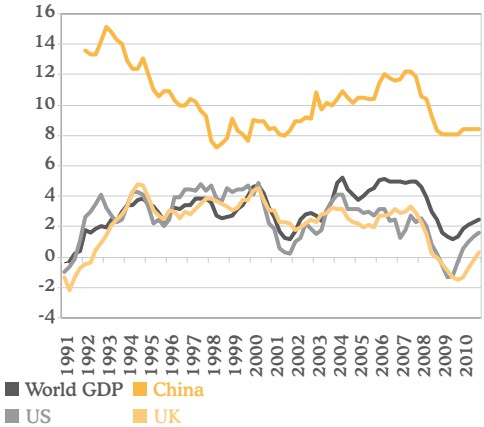
The collapse of Lehman Brothers has intensified the dysfunction of credit markets around the world. The degree of risk aversion has climbed to unprecedented levels and the resolution of the financial crisis is going to be the key element shaping World growth in the coming quarters. The actions carried out by different central banks have not been sufficiently effective. Emergency meetings amongst leading governments were necessary. A detailed description on this regard can be found in Box 2.1 at the end of this chapter.

• Global macroeconomic outlook outside the Euro area: a sharp slowdown of global growth, with increasing differentiation among emerging markets.

De-leveraging will continue to be the main driver of global economic developments in 2009. The ensuing restriction in credit availability should act as a drag on growth for every economy. In the United States, the effects of this process are already clear, with a sharp deterioration of economic indicators in the second half of 2008. Our forecast is for growth to remain negative for the first half of 2009 and, after that, to start a gradual recovery. Nevertheless, we anticipate growth to be around 1.1% for 2010, which is substantially below even the most pessimistic estimates of the US growth potential. All along this process, falling or practically stagnating consumption will be the main restraint to US growth, although all other components of demand will show substantial weakness too.

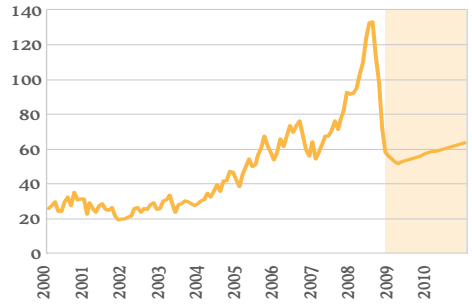
Regarding the emerging world, the difficult financing environment will result in a sharper discrimination among economies. It is by now widely accepted that decoupling will be impossible to achieve and the key issue is whether the emerging countries can avoid episodes of financial crisis. Here, countries that have strong dependence on external financing will find it harder to finance their growth and could in some instances be prey to extreme movements in financial markets. This is in fact what lies behind the reversal in market sentiment regarding developing countries, reflected in the increase

Chart 2.1.
World GDP growth - Weighted by structure of EMU exports



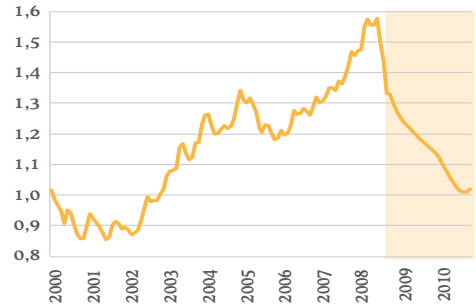
Source: BBVA

Chart 2.2.
Oil Brent price
($ per barrel)



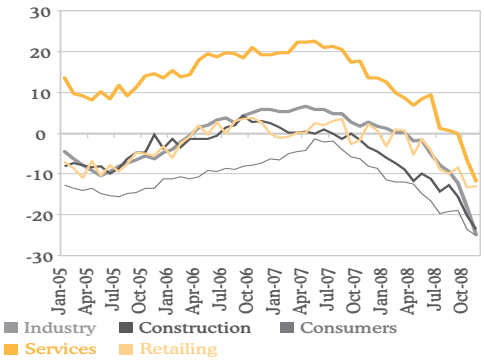
Source: BBVA

Chart 2.3.
Euro vs. US dollar exchange rate



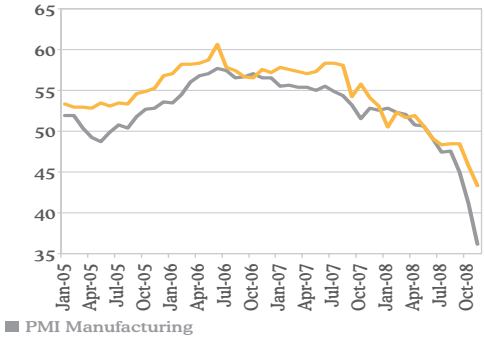
Source: BBVA

Chart 2.4.
EC Survey: confidence by sector



Source: European Commission

Chart 2.5.
Euro area: PMI Index



Source: NTC Economics Ltd

of sovereign spreads and the fall in stock markets, which has punished disproportionately those regions with large external financing needs. Nevertheless, countries with strong internal demand and the resources to finance growth will be in a strong position to withstand the difficulties ahead. Here, China stands out as the most prominent example, thanks to the willingness to use fiscal policy to maintain growth above 8% over the next two years.

• The drivers of the recession in the Euro area: Finally the financial crisis takes a toll; the slowdown of external demand is also contributing to lower growth

For six months now we have expected that the financial crisis would have significant consequences for the real side of the economy. Despite the relatively good performance in the first quarter of 2008, the increase in financial market spreads has ended up affecting credit and output. In addition, the bank loses associated with the crisis, which are more or less hidden, would trigger a de-leveraging effect that would affect the availability of credit. Although the development has not been linear, the process appears to be already underway with the fall of Lehman Brothers as the principal catalyst. In fact, the first impact of the financial crisis on output manifested through a negative effect on the confidence of relevant agents rather than on direct effects on the price or availability of credit.

On the other hand, the impact of the crisis, that appeared to only affect the most advanced economies, has created doubts in regards emerging countries, which at first seemed shielded from the financial turbulence. That has not been the case as emerging countries have confronted widespread risk aversion resulting in more moderate growth forecast for many of these countries. For example, it is expected that China will reduce its growth rate from 9.5% in 2008 to 8.1% in 2009 and that the rest of Asia will also decelerate. Likewise, Latin America should grow 4.4% in 2008 in front of 1.8% in 2009. Additionally, eastern European countries, experiencing a heavier impact from exports to the Euro zone, appear ill-fated to a very important crisis.

All together, with the downwards revisions to growth perspectives in the United States and the United Kingdom, the two most important partners in commercial trade of the area as weighted by the structure of European exports, will lead to a substantial reduction in foreign demand in 2009 (Chart 2.1)

• Oil prices have dropped, and so has the euro vis-à-vis the dollar, reversing the trend of the first half of the year

Two of the shocks that threatened growth in the Euro zone until the summer and that accelerated during the first half of 2008 were the rise of oil prices (and other commodities) and the exchange rate of the Euro with respect to the dollar. Obviously, the appreciation of the euro had a strong endogenous component due to differential growth Europe with respect to the United Sates and to the easing of monetary policy by the Federal Reserve while the ECB maintained interest rates high. Regarding oil, the high prices were strongly influences by refuge effects from other assets and to some extent by large increments in demand from emerging countries with strong growth.

Charts 2.2 and 2.3 show how these tendencies have changed rapidly, eliminating the negative effect from high commodity prices on incomes, consumption and higher inflation, and also the risk of very high exchange rate hurting exports. Our forecasts, as shown in the graph, are that both prices converge throughout 2009 towards their long run equilibrium values. Prices could be around 70 dollars per barrel of Brent (with the possibility increases in the long term) and 1.15 $/€, although in this case an undershooting in the short term below the equilibrium level is very likely.

• The most rapid channel through which the financial crisis has hit the real economy has been confidence...

Confidence in the Euro zone was deteriorating since the end of 2007, and among the large countries of the Euro zone erosion of confidence was larger in Italy and particularly in Spain. However, in the first half of the year the aggregate of the Euro zone still signalled high values consistent with solid growth. It has been in the last three months when the economic sentiment indicator of the European Commission and the PMI indicators have fallen abruptly coinciding with accelerating financial deterioration prompted by the fall of Lehman Brothers. The current levels are consistent with those observed in the 1993 recession, when the GDP of the Euro zone fell by 8 tenths of GDP (Charts 2.4 and 2.5).

• ...but hard indicators have also been hit

Real indicators have also fallen, though their availability is delayed with respect to confidence indicators and their deterioration has been somwhat more modest. Industrial production was falling in September at a rate of 2.2% annually, while retail sales fell at a rate of 1.5% and industrial new orders of the entire Euro zone at 5.2% (Charts 2.6 and 2.7).

All these indicators, coupled with others, are represented in our activity indicator (IA-UE) which summarizes with principal components technique the joint evolution of a large amount of variables in the Euro zone. Chart 2.8 shows that, currently, the indicator stands below the minima reached in the 2002-2003 slowdown and continues to decline.

• National accounts data for the second and third quarters show that the euro area is in recession, while the fourth quarter is expected to be even worse.

The release of national accounts data for the second and third quarters has shown that growth has been negative in both of them by two decimal points each. The decomposition of demand for the third quarter is not available yet for the whole area, but it is for France, Germany and Spain, and suggests that the recession has been spread across components (except public consumption), reflecting both weakening internal demand and exports. Imports have adjusted to lower final demand, such that the net contribution of the external sector has not changed.

For the fourth quarter we foresee GDP to deteriorate markedly, and based on confidence indicators for October and November and on several other hard indicators for October, point to growth around -0.5% (Chart 2.9).

• In the medium term, our standard models do not probably capture the whole extent of the crisis.

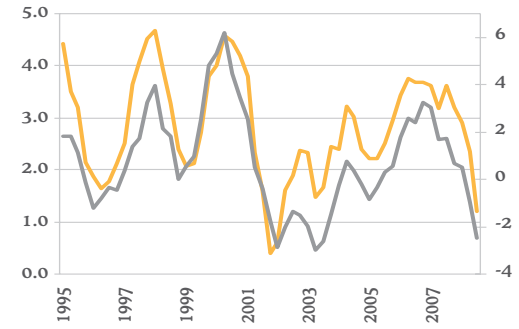
On a longer time perspective, it is difficult to gauge the extent of the recession, given the unusually large uncertainty that surrounds the current financial outlook, which is the key driving factor for lower growth.

Our standard tools for projecting GDP in the medium term –a DSGE model for the euro area economy and a battery of BVAR models for a reduced number of variables- are unable to fully track the current deterioration of growth, since they are not designed to capture directly financial distress, although both of them capture a significant deterioration of growth. In the case of the DSGE model, the projections for 2009 are not far from the final ones we think reasonable (see below) (Chat 2.10).

A different approach to determine the magnitude of the crisis derives from a time series model (also a VAR) that tries to measure the impact from a shock to the spread in interbank markets on credit and growth. Such a model (whose results were presented in the last issue of EuropaWatch), properly undated, provides a result for the full impact of the financial crisis of approximately -4 points of GDP, which is close to what we think is the correct figure. However, such a model gives a response since mid-2007

Chart 2.6.

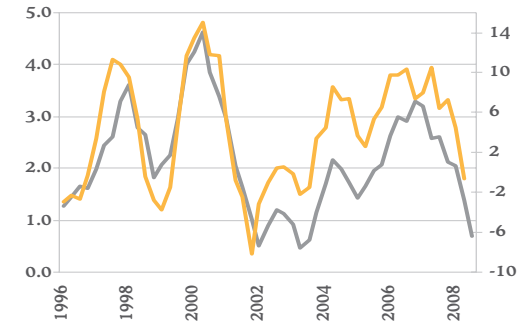
Euro area: GDP and Industry production



Source: Eurostat

Chart 2.7.

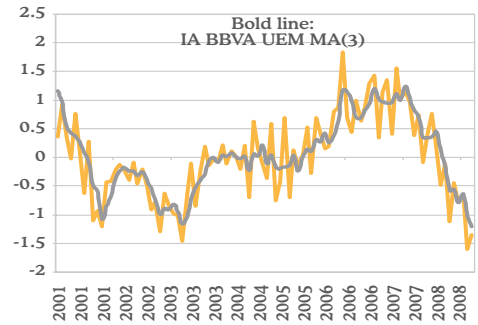
Euro area GDP and Industrial new orders



Source: Eurostat

Chart 2.8.

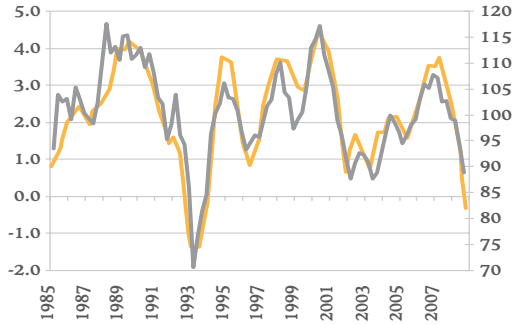
Euro area: activity indicator



Source: BBVA

Chart 2.9.

Euro area: economic growth and expectations

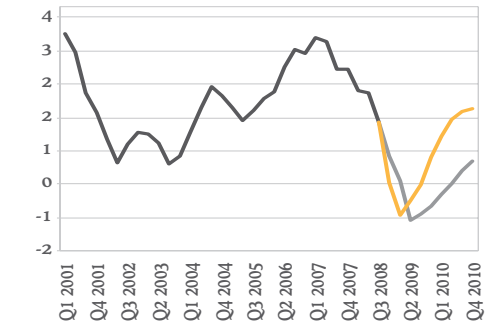


Source: Eurostat, European Commision & BBVA

Chart 2.10.

Euro area GDP growth

Forecast from a DGSE model

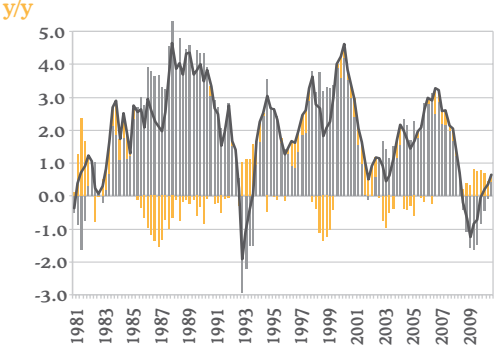


Source: BBVA

Chart 2.11.

Euro area: GDP Projections: Internal and external contribution

% y/y

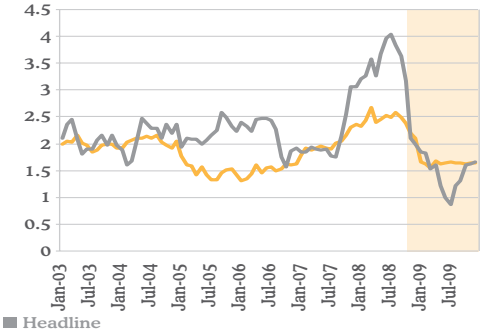


Source: BBVA

Chart 2.12.

Euro area: HICP

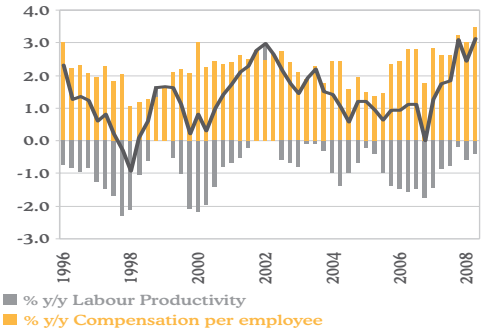
(% y/y)



Note: core excludes fresh food and energy; non-seasonally adjusted
Source: Eurostat and BBVA

Chart 2.13.

Euro area: unit labour cost



Source: ECB

which is linear in time, when we know that most of the effect from the financial crisis has been concentrated in the last few months.

• For 2009, we project growth to be around -0.9%, with a negative contribution of internal demand. Net exports will help to mitigate the fall, but only thanks to moderating imports.

Having these results and uncertainties in mind, and taking into account the policy responses in the financial, fiscal and monetary policy areas, our forecast for GDP in the euro area is one of a prolonged recession, with an average growth rate of -0.9% in 2009 and slightly positive (0.3%) in 2010. Both households and firms will feel the impact of the credit crunch, albeit mitigated by the relieve programmes summarized in Box 2.1. But perhaps it should be noted that the financial situation of households is relatively worse than that of firms, as these have indebted heavily in recent years and are likely to suffer heavy losses from the recent falls in stock markets (-25% the Euro Stoxx index between mid-September and end of November) and, in several countries, in housing prices. On average, we project private consumption to be -1% in 2009, below the negative growth rates of 1993, and investment to be –5.4%, with housing investment falling from -1.8% in 2008 to -8.7% in 2009.

Exports are likely to be about flat next year. With World growth moderating but not fully hitting emerging countries, and an exchange rate that is expected to depreciate further, our exports equation suggests that exports should only moderate. However, we also know that at times of recession the equation does not provide a good fit and exports turn out to be much weaker than projected. In any case, much of the fall in internal and external demand will result in falling imports, and the net balance of the external sector is expected to be procyclical, as in previous recession, contributing with 0.5 percentage points to GDP growth (Chart 2.11).

As for the labour market, net employment is expected to be negative in 2008, but with moderating growth of the labour force the unemployment rate is expected to grow by 8 decimal points between 2008 and 2009, averaging 8.2% in this latter year.

2.2.- Inflation forces have evaporated, while deflation is still a distant risk

• The evolution of inflation is mostly reflecting the dynamics of energy and commodity prices

In the same manner as with the acceleration of inflation since September 2007 and throughout the first half of 2008 was mostly driven by oil and other commodity prices, the dynamics of deceleration now observed in annual inflation rates is being determined by base effects (energy and food price increases that disappear from the annual growth rate one year after they materialize) and by the fall of those same prices. The oil price has now probably undershoot and has reinforced the rapid fall in annual inflation, which we have been projecting for several months already (Chart 2.12).

• Wage pressures are likely to moderate in the coming months as activity falls

Wages have been accelerating for several quarters, possibly driven to some extent by indexation to higher prices in some European countries, but also to catch up after a moderate evolution in recent years, mostly in Germany. Wage concerns have been however central to monetary policy until very recently, as unit labour costs have accelerated to 3% (Chart 2.13), due more to falling productivity growth than to higher employment compensation. Other wage indicators, as total labour costs from Eurostat (Chart 2.14), present also a pickup but are in levels below those prevalent at the beginning of the decade. In any case, we expect wages to slow down as the output gap widens.

• We project inflation to fall clearly below 2%, although there are several factors that play against the risk of deflation.

Our projections point to continuing deceleration of inflation, reaching a minimum below 1% by mid-next year as a result of base effects from past increases in energy prices. Core inflation should also moderate as the recession sets in, although on average prices should be relatively moderate and close to the ECB target of "below but close to 2%".

Deflation risks are not negligible, but we think we are still far from that situation. First, deflation is defined as a generalized and persistent fall in prices across many different goods and services, something which is very different from the eventual fall of prices due to the disproportionate effect of some (such as energy) items. To reach such a state, we should see a large impact from a large output gap on core inflation, something which has not been the case in Europe in a historical perspective, as the Phillips curve seems to be quite flat. Second, there are noticeable nominal rigidities in Europe (which may explain such flatness). Third, central banks have learnt from past experience of deflation episodes in some countries, and there is no doubt several un-orthodox ways of stimulating price increases, involving rapid monetary expansions. Fourth, narrow money aggregates have been growing fast since the beginning of the crisis (contrary to what happened in the Japanese crisis), and they are a good predictor of inflation in the medium term.

2.3.- Monetary policy has started to react only recently, but it will continue to do so.

• Interest rates were raised in the summer, and have started to be reduced after the deterioration of financial conditions in September

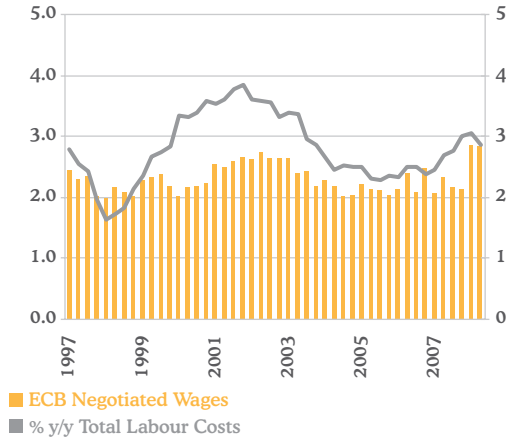
The tone of monetary policy in the euro area has changed significantly since our previous publication in June. At that time the message sent from the ECB emphasised the increasing upside risks to price stability and that inflation was expected to remain above the target for a more protracted period of time than previously thought. Moreover, additional risks came from very vigorous money and credit growth and the absence of significant constraints on bank loan supply. The wording even changed, introducing a new term: "heightened alertness". As a result, interest rates were increased by 25 basis points in the July meeting.

In August economic data started to provide signals of a weakening of GDP growth, which despite being expected, seems to have changed the mood of the Governing Council. Nevertheless, no immediate policy rate changes occurred at that time. HICP inflation remained high, with the July figure reaching 4.0%. The ECB was worried by some evidence that labour cost growth had been rising. The possibility on second-round effects was still regarded as a very strong concern. Additionally, and despite some moderation, money and credit aggregates were still very dynamic and posed upside risks to price stability.

In September, the ECB presented the staff macroeconomic projections, which were revised downwards. Central projections were 1.4% in 2008 and 1.2% in 2009. The Governing Council expected a recovery as early as 2008 Q4. However, the intensification of the financial market turmoil after the collapse of Lehman Brothers changed the picture.

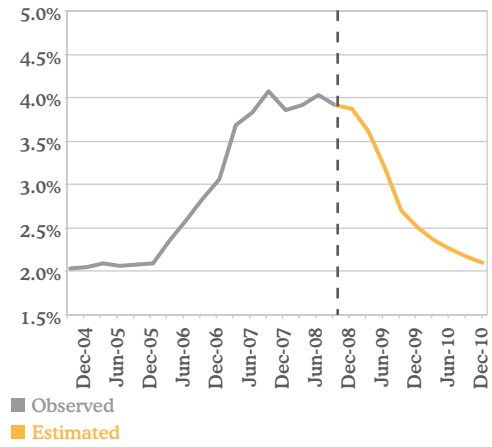
The deterioration of growth prospects in the Euro Area aggravated by tighter financing conditions led the ECB to start considering rate cuts. However, the risks to price stability remained and, thus, some members of the Governing Council were reluctant to cut rates. But the situation in financial markets aggravated considerably. On the 8th of October, a coordinated action was undertaken by the main central banks around the world. Rates were cut 50 basis points. In the November meeting another half point cut was decided.

Chart 2.14.
Euro area: total labour cost and negotiated wages



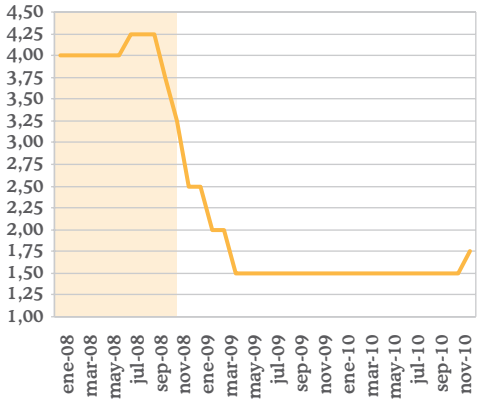
Source: Eurostat and ECB

Chart 2.15.
Taylor rule nominal short-term interest rates



Source: BBVA

Chart 2.16.
ECB official repo rates



Source: ECB and BBVA

• We project the key rate to fall to 1.5% by the second quarter of 2009. But rate cuts will have diminishing power to re-start demand.

The intensification and broadening of the financial market turmoil was likely to dampen global and euro area demand for a rather protracted period of time. The ECB Staff's macroeconomic projections to be released this week are likely to present a rather gloomy outlook for the next couple of years. Inflation has started to moderate and is expected to even undershoot its target zone.

Using our central scenario for growth and inflation, and following our estimated ECB policy rule, interest rates should reach 2.5% in the second quarter on next year (Chart 2.15). However, the estimates inherent in the rule reflect the historical behaviour of the ECB, which has tended to be rather smooth. In the current context, a prompt reaction is necessary. Thus, we expect substantial interest rate cuts in the coming months, reaching 1.5% in the second part of next year.

• Cutting rates might not be a sufficient condition for stimulating activity in the Euro Area as dysfunctional credit markets difficult the transmission mechanism of monetary policy.

Monetary policy has lost some power due to the abnormal functioning of the interbank market. Substantial spreads persist due to the lack of confidence in the economic and financial outlook. Moreover, as stressed in Box 2.1, some institutions might decide to rationing credit offered to firms and consumers, making rate cuts ineffective.

2.4.- Fiscal policy should have an important role in helping to mitigate the recession

The relative ineffectiveness of monetary policy in the current environment and the deepness of the recession, together with the limited success so far in kick-starting financial markets have stimulated a worldwide debate on the use of fiscal policy. Bold fiscal plans have been approved in countries such as the United States, China and the United Kingdom, and have been met by a more moderate approach in the rest of Europe, with different attitudes to discretionary actions from different governments, but also with differing margins for manoeuvre. The next chapter will deal with these issues in a more theoretical way, but here we look at the practical implications and requirements of such fiscal action.

• The cyclical deficit is likely to deteriorate, but it still leaves margin for discretionary action

Our calculations in chapter 3 point to the cyclical fiscal balance in the euro area to deteriorate from +1.1% in 2008 to -0.3% in 2009, and further to -0.9% in 2010 under the assumption that our growth projections are met. Assuming that the structural deficit of 2008 (-2.4%) is unchanged in 2009 and 2010, the net fiscal balance would reach -2.9% in 2009 and -3.1% in 2010. These results imply that there is margin for further fiscal action in 2009 without excessively breaching the 3% limit of the Stability and Growth Pact (SGP). The SGP, in its actual form, allows for temporary deficits above such a limit in exceptional circumstances, and the present circumstances are no doubt exceptional. Since such an excess over the 3% limit is not clearly defined, we would even support, if it is needed due to a further deterioration of the financial and economic environment, a temporary suspension of the pact.

The margin for individual countries differs clearly across countries. Among the largest ones in the euro area, Spain presents the largest cyclical deficit, but France and Italy would have the largest deficits, surpassing the 3% limit even without any increase in the structural deficit. Germany is the country with a higher room for manouvre, whereas the United Kingdom, outside the euro area and not subject to the SGP, will exceed the 3% margin by a large amount.

Table 2.1. Net lending: total and cyclical component before new discretionary measures

	2008		2009	
	Total	Cyclical	Total (1)	Cyclical
Germany	0.0	1.5	-1.7	-0.2
Italy	-2.5	0.4	-3.3	-0.4
France	-3.0	0.5	-3.8	-0.3
Spain	-2.0	1.0	-4.3	-0.3
UEM	-1.3	1.1	-2.7	-0.3
UK	-4.2	1.4	-6.2	-0.6

Note (1): In these calculations, the cyclically adjusted component is assumed to be the same in 2009 than in 2008, without considering further discretionary measures (some of them already announced).
Source: BBVA

• Our calculations suggest that an increase of the public deficit by 1% of GDP could spur activity by 1.2%

Not only there is some margin for fiscal action, but the results presented in chapter three suggest that fiscal measures can be helpful in reviving internal demand. A shock of public expenditure equivalent to 1% of GDP could have an impact of 1.2% on GDP growth for a given year.

• Although there are historical reasons to suspect of discretionary expansions, well designed temporary measures would be helpful

For many years European governments and institutions and international organizations have often used the mantra that discretionary fiscal policy should not be used to stabilize the economy, and that only automatic stabilizers built in the tax system and unemployment benefits should be allowed to play to counter the business cycle. There are good reasons for that, including the relatively high power of automatic stabilizers in Europe due to the size of the welfare state. Historical reasons also play in favour of prudence, since fiscal expansions in the 1980s lacked any kind of discipline in a dynamic sense, as deficits which should have been temporary rapidly entrenched into permanent imbalances. Even more recently, some European countries have not taken profit of the good times to balance their budgets.

However, past mistakes should not determine future policy, especially in an emergency situation as the current one. The initiative of the European Commission, which has proposed an expansion equivalent to 1.5% of the GDP of the Euro area is very welcomed. The definition and magnitude of such proposal is not clear yet, as it may include measures that have already been approved by different national governments or even measures that have already started to be implemented in the course of 2008. At closing date of this publication, it is not clear either if national governments will follow suit with fiscal plans of such a magnitude. **At closing date of this publication, new discretionary measures approved are those presented in table 2.2.**

However, it is key that any fiscal action is designed properly, such that its effects are maximized and it does not generate unwanted effects. First, fiscal measures should be temporary, in order to avoid permanent imbalances that deteriorate the long-term financial position of the State and induce crowding out effects on private investment. Temporary measures may sometimes be less effective that permanent ones (for instance, temporary tax cuts have a lower effect on permanent income and thus on consumption than permanent tax cuts), but a diminished impact is a price worth paying in order to ensure long-term sustainability. Second, fiscal measures should be well targeted, in the sense that they maximize the additional demand generated per unit of additional deficit. Third, measures need to be timely, and generate additional demand when it is most needed, not when the economy is already recovering. These well-known conditions are key for the implementation of proper countercyclical fiscal policies, and without them the effectiveness of fiscal action will be curtailed. An additional desirable condition would be that measures implemented play in favour of long-term economic growth by raising productivity, and in this sense horizontal measures that do not distort across sectors are preferable to sector-specific help.

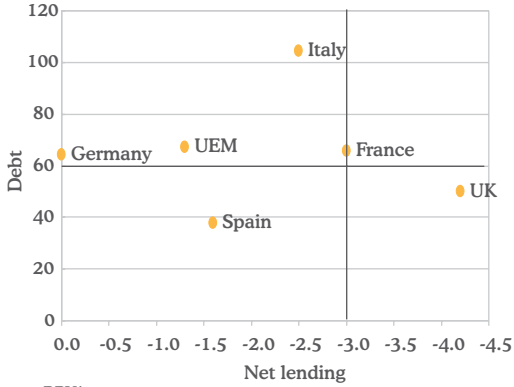
It is not easy to find what measures that fill all these criteria. Public expenditures in infrastructure are almost ideal if they are spent in worthwhile projects, but they take often long to implement and may not be timely, unless they are effectively accelerated. Measures aimed at temporarily increasing the incomes of very low income households or the unemployed are well targeted, as it is usually money which will in general not be saved, although they may be less useful in terms of long-term efficiency. Other measures, such as generalized tax cuts, could be less effective in terms of new demand generated, and could be more difficult to implement only as temporary measures.

Table 2.2. Discretionary fiscal measures as % GDP

Germany	1.3% (in 2 years)
Italy	0.3%
France	1% (likely)
Spain	1.3%
European Union	Recommendation: 1.5% Contribution EU institutions: 0.22%
United Kingdom	1%

Source: BBVA

Chart 2.17.
Public debt and net lending in 2008



Source: BBVA

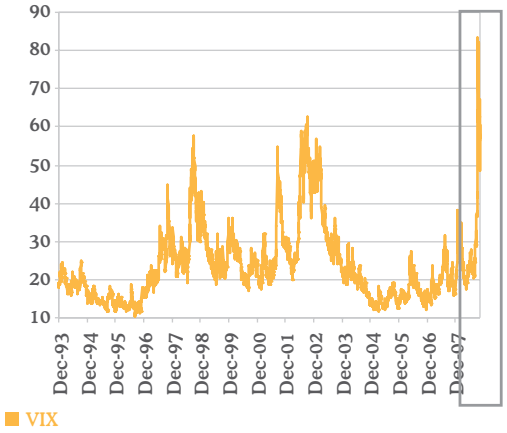
Box 2.1 Financial Crisis and the Policy Response

Tensions in financial markets reached unsustainable levels after the Lehman collapse, forcing central banks and governments to accelerate their efforts to stabilize financial conditions

During the last months, financial market instability has reached an unprecedented level, creating extreme risks for the world economy (Chart 1). The trigger for this additional worsening of financial conditions was the collapse of Lehman Brothers in September. Contrary to previous events of a similar nature –such as those related to Bear Stearns, American International Group, Freddie Mac and Fannie Mae– Lehman was not rescued with government help and had to fill for bankruptcy. As a result, holders of Lehman debt –which were dispersed throughout the world– faced important losses. Moreover, investors that had hedged their positions using Lehman as counterparty now found those trades invalidated, creating a surge in demand for credit protection and other hedging instruments.

Chart 1.

US stock market implied volatility: VIX (S&P 500)

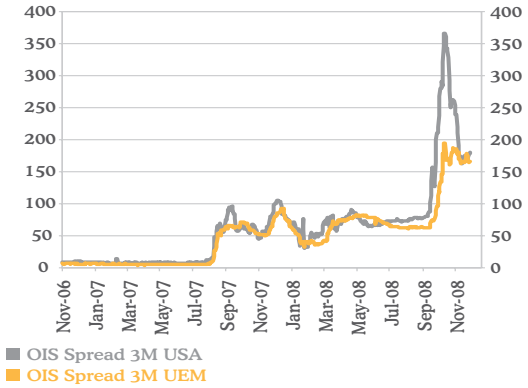


Source: BBVA and datastream

These events resulted in a complete breakdown of already weak debt markets. So much so, in fact, non-financial corporations also found important sources of financing such as commercial paper suddenly closed. As had already occurred in every previous phase in this crisis, inter-bank quickly reflected the closure of other funding alternatives and extraordinary frictions appeared, most evident in the increase of spreads to unsustainable levels and a dangerous fall in activity at maturities beyond overnight lending (Chart 2). In these conditions, risk aversion by market participants reached –and maintained– maximum levels. Several banks were faced with dire risks in this new context and, as a result, the pace of bank failures accelerated substantially. European banks, which so far had seemed relatively isolated from the crisis, felt victim to this worsening of conditions. As a result, several large institutions had to be bailed out by their respective governments.

Chart 2.

USA vs. EMU: Index of interbank liquidity tensions: spread between 3 months LIBOR and OIS

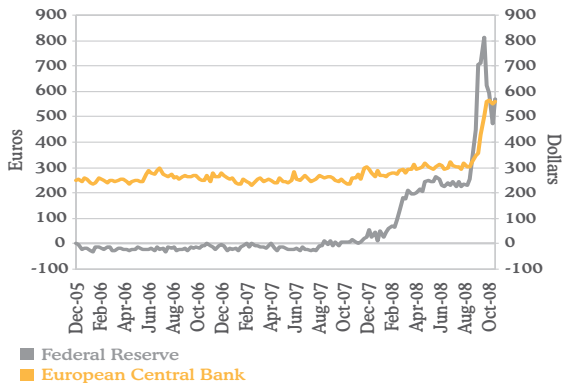


Source: BBVA and Bloomberg

Against this background and in view of a host of indicators confirming a strong deterioration in global activity, the prices of financial assets quickly moved to factor in a recessionary scenario, characterized by sharp credit contraction in the near future. Accordingly, stock indexes experienced a dramatic correction, comparable with those observed in 1929 and 1987 (Chart 3 & Table 1). Yield of government bonds moved sharply down, driven by the expectation of low official rates and quickly decelerating inflation. In fact, as commodity prices fell extremely fast and recession became engraved in market expectations, markets are now pricing a significant risk of deflation. The fear of a sharp contraction in 2009 to be followed by a very slow recovery is also a catalyst for risk aversion, thereby creating a vicious circle whereby the deterioration of financial conditions results in even worse cyclical expectations which in turn worsen the problems in financial markets and banks' balance sheets.

Chart 3.

European Central Bank vs. Federal Reserve: Net Lending to Depository Insti.*



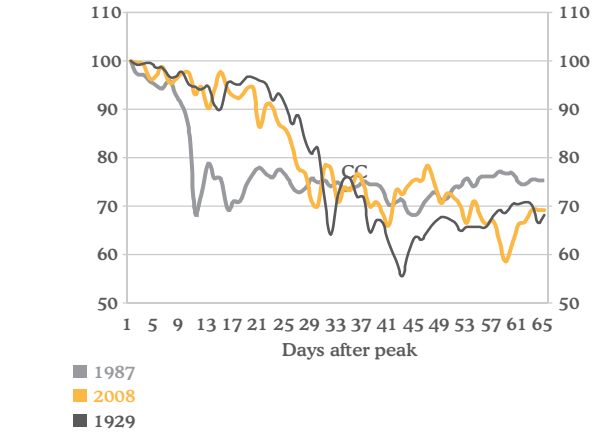
Source: BBVA Federal Reserve and ECB. * FED: Securities Repurchase Agreements + Loans to Depository Institutions + TAF + AIG line + Credit lines to other brokers minus Reserves. ECB: Lending to euro areea credit institutions related to monetary policy operations denominated in euros minus liabilities to euro area credit institutions related to monetary policy operations denominated in euros.

Table 1.
International Stock Markets

		YTD 2008
USA	S&P500	-40%
Spain	IBEX35	-42%
United Kingdom	FTSE100	-35%
France	CAC40	-43%
Germany	DAX30	-43%
EMU	STOXX	-45%
Japan	NIKKEI 225	-44%
China	Shanghai SE 180	-66%
Hong Kong	HANG SENG	-50%
Brasil	BOVESPA	-42%
Mexico	MXSE IPC Gral.	-31%
Argentina	MERVAL 25	-55%
Chile	SASE Gral Index	-18%
Russia	IRTS	-71%

Source: Datastream

Chart 4.
S&P Index: comparison of previous stock market cracks
(index= 100 at peak)



Source: BBVA

Fortunately, governments and central banks stepped up their efforts to avoid an extreme scenario. Central banks led the way by injecting massive amounts of liquidity, with the objective of alleviating the problems in debt and interbank funding markets. From the early 2008, the Federal Reserve has increased net lending to depositary institutions in almost six times, up to US$ 600 billion. Even further, the Fed has actively engaged its resources in lending to non-financial corporations, in an attempt to fill the vacuum in debt markets. In Europe, since August 2008, the ECB has increased its net lending by € 260 billion up to € 560 billion (Chart 4). A large fraction of this increase came after the decision to implement "full allotment" auctions, with the objective of alleviating extreme tensions in weekly auctions and further in interbank markets. Although this was an important step, its success in restoring interbank activity to more normal levels has been small, especially because the measure is temporary. In another important and positive step, central banks reaffirmed their willingness to coordinate their actions with two key decisions: first, the Federal Reserve increased by US$ 500 billion the currency swap lines with the ECB, Bank of England, Bank of Japan, Bank of Canada, and other important central banks from developed and emerging economies. Second, in an unprecedented action, the central banks of the United States, the Euro Area, Canada, Switzerland, and Sweden cut their reference interest rates simultaneously by 50bp and adopted a common communication strategy in order to maximize the impact of this cut on market confidence. Unfortunately, this step probed to be insufficient too.

Governments, which so far had adopted a cautious attitude, are by now completely aware of the need of being more ambitious in terms of policy actions. The United States designed the Troubled Asset Acquisition Program and opened the way for intervention by other countries. In Europe, during the initial phases of market tensions after the Lehman collapse, government undertook individual strategies, poorly coordinated and sometimes clearly conflicting with the interest of their neighbouring nations. Logically, this approach did not deliver the expected impact: lack of coordination was a reflection of a hurried approach marked by improvisation to solve the emergencies created by the failure of individual institutions. On a second phase, starting in early October, governments began to announce coordinated and concerted measures. Here, Europe led the way with a comprehensive agreement to use a common crisis resolution framework, based on two pillars: guarantees for new debt issued by financial institutions and equity capital injections.

These previous efforts led to G-20 summit meeting in Washington D.C., USA.This forum serve to strenghten further the message of unity and firm determination of the international community to jointly face the economic and financial crises, combining multilateral actions with domestic policies. Fortunately, policy mistakes of past financial crisis are being avoided: governments are aware that purely national policies, with a proteccionist bias, could in fact be damaging to the growth prospects of their economies. Also, it is important to mention that the announced list of measures is highly ambitious, part of a thorough analisis and diagnostic about the triggers of the crisis, the cross-country spillovers and global worsening of it. Even though the immediate effect has been limited – in the sense that debt markets remain closed and tensions have shown only limited correction– the coordinated action avoided a more than probable negative and systemic impact.

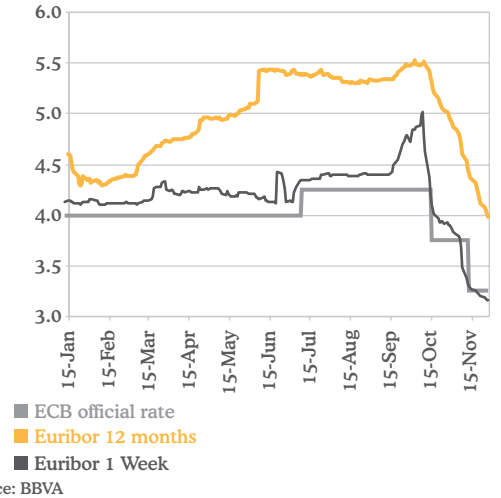
It is unlikely that government efforts will be enough to sufficiently mitigate the global restriction of credit in 2009

Despite the efforts by governments and central banks, the vicious circle between risk aversion, liquidity, banking problems and credit availability is still at work.

First, risk aversion remains at historical highs in all financial markets. Volatility in stock markets is at record levels, but the situation in bond and currency markets is also unprecendented. Faced with the prospect of the deepest global recession in the last decades, whose size and duration is practically impossible to ascertain with some confidence, participants in financial markets have adopted an extremely caution approach, shuning all types of risky assets. There is little the authorities can do to reverse this process directly, because risk aversion is the result of uncoordinated decisions in dispersed but closely connected financial markets. The objective, therefore, should be acting on other areas to finally restore market confidence.

Actions to solve liquidity tensions by injecting monetary policy have, as previously commented, had very limited success. There are several reasons for this, but the most important lies in the fact that tensions in interbank markets are a reflection of the closure of more stable financing sources. As a result, while these other sources remain closed, it will be very difficult to normalize conditions in the key segment of interbank lending (Chart 5). Particularly, the fact that measures by the ECB are planned to be temporary is a clear limitation to the willingness of banks to engage in interbank lending again.

Chart 5.
EMU interest rates: BCE vs. Euribor 12 months



Source: BBVA

Regarding debt guarantees and capital injections, these measures are positive, but several aspects are lacking in their design. First and foremost, while timing and communication of stabilization plans has been sufficiently uniform –as previously commented–, there are significant differences in design from one country to another. Some countries have chosen to adopt traditional debt guarantees, whereby banks have to issue debt in the market and pay a fee to the government. The first bond issued under the British and Irish scheme have paid large spreads relative to sovereign debt, a reflection of extreme market distortions, which magnify the value of liquid assets and those with simple terms, relative to complex and illiquid products. France, on the other hand, have adopted an alternative scheme, whereby a government sponsored agency issues debt and then distributes liquidity to the banks.

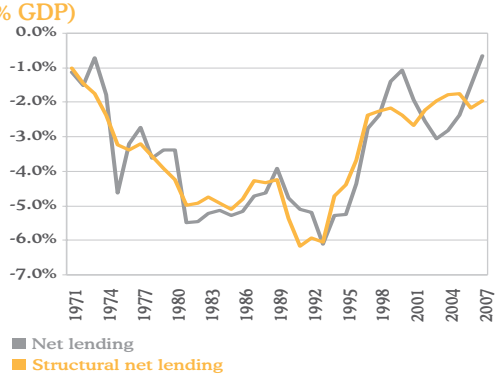
While apparently small, these features can generate important differences in the final cost for banks and, in any event, create additional confussion and distortions. These divergences are even more clear as regards capital injections by the official sector. The terms for such public participation have varied widely, with some countries opting for a much cheaper pricing. Moreover, the size of the injections has also been widely different with, for example, France opting for a generalized program to the largest banks, Germany adopting a case-by-case approach, etc. While the public sector has an important role to play, the risks to the competitive environment for financial institutions in the Euro area are not negligible. Meanwhile, in the United States, the emphasis has shifted from acquiring illiquid assets from troubled institutions to injecting capital on a broad based effort. All in all, given the unprecedented size of tensions already accumulated and the amount of time that will be necessary to develop the full potential of these programs, it is very unlikely that they will be enough to mitigate sufficiently the size of deleveraging to be expected in 2009.

Table 2 : Government measures to solve the financial crises

	Germany	France	Spain	Portugal	United Kingdom	Netherlands	Italy	Ireland	Greece
Liquidity programs									
Mechanism	Direct guarantee	Credit backed by collateral	Direct guarantee and credit backed by collateral	Direct guarantee	Direct guarantee	Direct guarantee	Direct guarantee	Direct guarantee	Direct guarantee and debt swat program
Amount (EUR billions)	400	320	Direct guarantee up to 200 billion, and credit up to 50 billion	20	250 mM GBP	200	40	Not limited	15 + 8
as % of GDP	17	17	20	13	18	34	3		
Operations	Debt issued after the approval of the law.	Debt issued after the approval of the law.	Debt issued after the approval of the law.	All	Debt issued after after the approval of the law.	Debt issued after after the approval of the law.	Not announced	All	Not announced
Maximum maturity	3 years	5 years	5 years	All	3 years	3 years		All	5 years
Description	«Re-financing instruments»	«Re-financing operations»	«Securities, bonds and obligations approved for negotiation in the Spanish offical secondary markets»	All	New Senior debt, with maturity (< 36 months)	Senior debt, commercial paper, certificates of deposits (< 36 months)	Not announced	All	Not announced
Recapitalization programs									
Mechanism	Open, but in principle preference shares	If recapitalization, then preference shares. If intervention, ordinary shares	Open	Not specified	Ordinary and preferred shares	Preferred shares	Not specified	Not specified	Preferred shares
Amount (EUR billions)	80	40 including the recapitalization fund for Dexia	Not specified	Not specified	37 mM GBP	20	Not specified	Not specified	5
Conditions	Dividend payment is forbidden. Caps on executive compensation	Generic, details not announced. 4% credit groth commitment	Not specified	Not specified	Government will have members in the board, and dividends on ordinary sahres will not be paid	Government with veto power, and will have two members in the board.	Not specified	Not specified	One member in the board with veto power in dividend and benefit policies regarding Directors. Executive compensation cannot exceed those of the President of the Bank of Greece

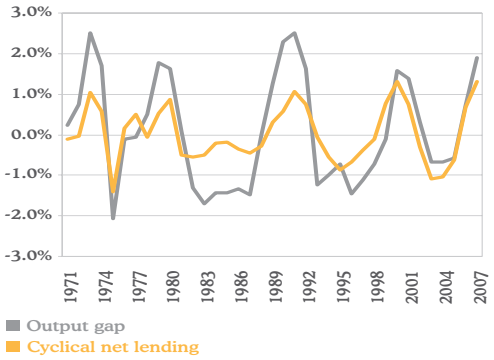
Source: BBVA

Chart 3.1.
Net lending
(% GDP)



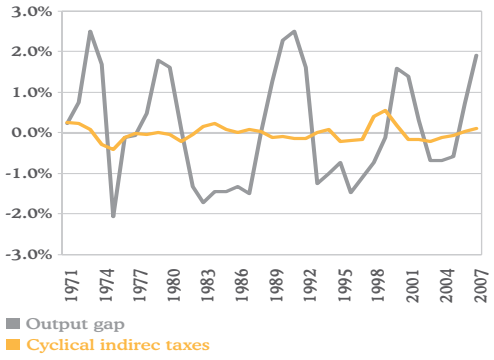
Source: BBVA

Chart 3.2.
Output gap and net lending



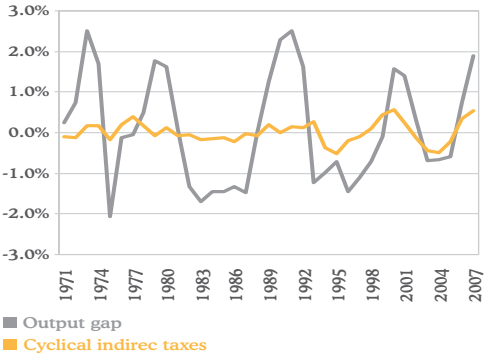
Source: BBVA

Chart 3.3.
Output gap and cyclical indirect taxes



Source: BBVA

Chart 3.4.
Output gap and cyclical direct taxes



Source: BBVA

3.- Analysing fiscal policy in the Euro Area

Given the magnitude of the economic downturn, governments are realising that they need a broad range of policies to contain the ongoing financial crisis. Fiscal policy is clearly one option in this regard. A key feature of the current situation is the emergence of widespread credit constraints. When credit markets are dysfunctional, the monetary policy transmission mechanism becomes weaker and more uncertain. It is then that fiscal policy is called for.

At this juncture, the sharp economic slowdown should affect the cyclical component of net government lending. This is mostly driven by a worsening of automatic stabilizers (as output falls, tax revenues also fall and unemployment rises), helping to stabilize the business cycle. Automatic stabilizers are, nevertheless, of limited scope in circumstances such as the ones currently envisaged. This is the reason why an active fiscal policy action is being asked for in recent months. Member states in the European Union are constrained by the Stability and Growth Pact (SGP), although the Pact could not be met under exceptional circumstances as the prevalent ones in the current economic situation.

The dynamics of public finances are shaped by two main elements, namely, the cyclical phase of the economy and the eventual implementation of discretionary measures of economic policy. This section provides an in depth analysis of these two elements looking, first, at the projected deterioration of the fiscal deficit, and second, to the likely impact that additional discretionary policy would have on output.

3.1.- The cyclical nature of fiscal policy

We proceed to characterise the cyclical properties of fiscal policy in the Euro Area. Intuitively, the cyclical component is mostly related to automatic stabilisers, whereas the trend or structural component is linked to discretionary actions by policymakers. Once the cyclical characterisation has been carried out, we can use the estimated elasticities together with our projections for GDP to forecast the cyclical and the discretionary components of net lending in the Euro Area. Our main conclusion is that the cyclical deterioration of net lending in public finances in 2009 is not likely to be very large and thus, there is ample room for discretionary fiscal policy without substantially breaching the SGP.

The empirical approach

We start the analysis by decomposing government net lending (relative to GDP) into a structural and a cyclical component. (details of the calculations are given bellow). Chart 3.1 shows observed net lending with respect to its structural or trend component. Chart 3.2 shows the corresponding cyclical component of net lending and compares it with the cyclical component of GDP. The latter, namely, the output gap, is computed using a standard procedure. In this case, a Hodrick-Prescott filter is used. Interestingly, both variables are highly correlated.

In order to gain more intuition on the results, we proceed next to analyse the cyclical behaviour of each of the components of net lending. To that end, note that net lending, in terms of GDP, can be decomposed in terms of public revenue and expenditure according to the following expression:

$$\frac{NL}{GDP} = \frac{T - G}{GDP},$$

where T denotes total government receipts, which is composed of indirect taxes, direct taxes, social contributions and other taxes. Government expenditure, denoted above as G, is made of social benefits, public investment and other public expenditures.

The components of net lending can be classified in two groups. The first group is composed by the so called automatic stabilizers, namely government receipts and social benefits. The second group is given by discretionary components, which in this case, corresponds to public investment and other public expenditures.

Cyclical characteristics of taxes and expenditures

We first analyse the cyclical behaviour of taxes (in terms of GDP) by running simple regressions of the cyclical component of relative taxes with respect to the output gap. The cyclical component of taxes is given by the difference between the observed data and its corresponding trend. The latter has been computed using a standard method.

Regarding indirect taxes, the estimates show that indirect taxes over GDP are acyclical. The estimated coefficient of the regression turned out to be -0.004 with a t-ratio (tr.) of 0.17. Hence, it can be concluded that indirect taxes are proportional to GDP. Chart 3.3 illustrates this issue.

Concerning direct taxes, the cyclical component of the ratio of direct taxes over GDP has been procyclical (progressive direct taxes). The estimated coefficient with respect to the output gap was 0.065 (tr. 2.51). Interestingly, the degree of progressivity has increased after the year 1996. The estimated coefficient from that date onwards was 0.254 (tr.3.89). Chart 3.4 illustrates this point.

In relation to social security contribution, its cyclical component has been slightly countercyclical (albeit significant). The estimated coefficient was -0.17 (tr. 6.8). This is illustrated in Chart 3.5. Next, other taxes has been countercyclical from 1971 to 1995 and acyclical from 1996 onwards. Chart 3.6 provides an illustration. A similar behaviour has been displayed by the cyclical component of total taxes over GDP. In this case, the estimated coefficients have been -0.18 (tr. 3.11) in the first part of the sample and 0.122 (tr. 0.92) from 1996.

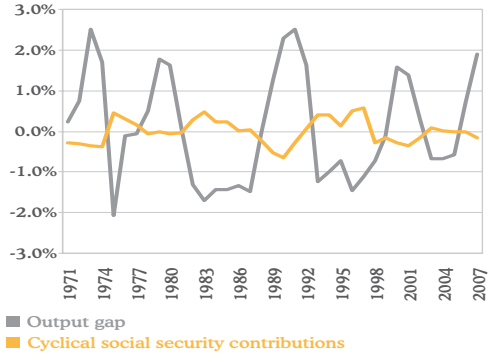
Expenditures in social benefits (over trend GDP) have been slightly (and significantly) countercyclical. Notice that these expenditures include unemployment benefits, the main component of expenditures that behaves as an automatic stabilizer. Charts 3.7 to 3.9 illustrate these results.

Once the cyclical behaviour of each automatic stabilizer of net government lending has been computed, it is possible to obtain that corresponding to net lending as a whole. The estimated cyclical component of the ratio of net lending over GDP has been procyclical from 1971 to 1995. The estimated coefficient turned out to be 0.373 (tr. 8.60). Indeed, after the year 1996 the estimates are larger, specifically 0.674 (tr. 5.58). One might conclude that the cyclical component of fiscal policy has helped to dampen the dynamics of the Euro Area economy. This is confirmed with the results of a regression of the structural component of net lending over the output gap. In this case, the estimated coefficient is not statistically different from zero, suggesting no countercyclical discretionary policy. These results are shown in Chart 3.10.

What cyclical and structural deficits do we expect for 2009?

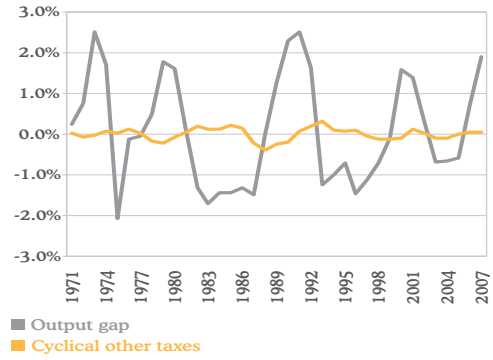
So far, we have characterised the cyclical behabiour of fiscal policy over history. Given the estimates obtained above, we proceed to analyse the cyclical behaviour of fiscal policy in the forecast period. First note that we expect annual average GDP in the Euro Area to drop from 2.7% to 1% in 2008 and to -0.9% in 2009. Under this scenario, the cyclical component of government net lending (in terms of GDP) will decline from 1.3% to 1.1% in 2008, falling further to -0.3% in 2009. This deterioration of 1.4 points of the cyclical component in one year is relatively rapid as compared with previous recessions (with the exception of the one in 1975).

Chart 3.5.
Output gap and social security contributions



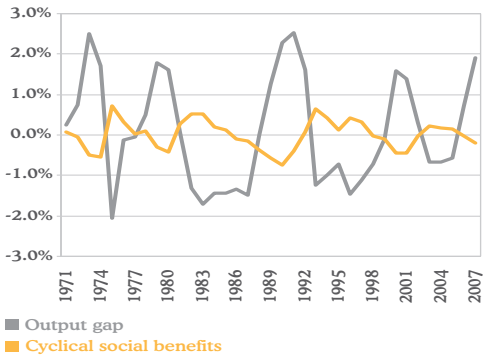
Source: BBVA

Chart 3.6.
Output gap and other taxes



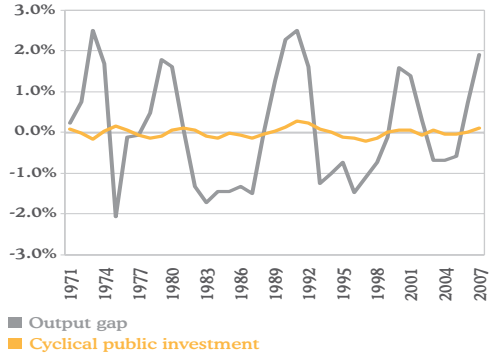
Source: BBVA

Chart 3.7.
Output gap and social benefits



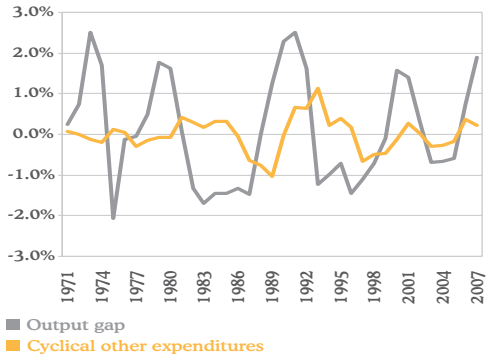
Source: BBVA

Chart 3.8.
Output gap and public investment



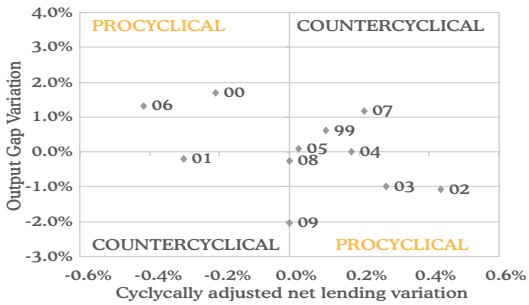
Source: BBVA

Chart 3.9.
Output gap and other expenditures



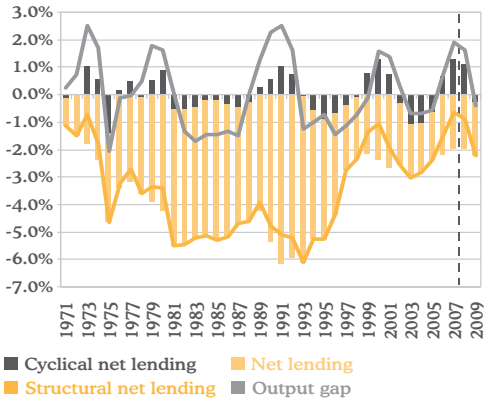
Source: BBVA

Chart 3.10.
Cyclically adjusted net lending



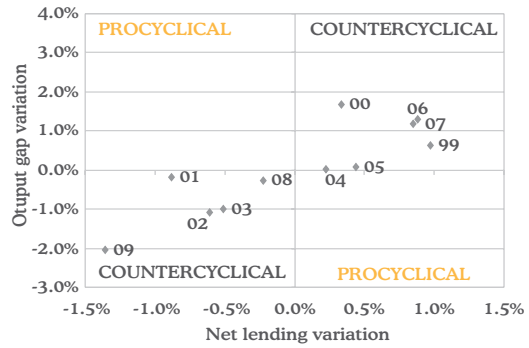
Source: BBVA

Chart 3.11.
Net lending, components and og. euro area



Source: BBVA

Chart 3.12.
Net lending



Source: BBVA

Interestingly enough, from the years 2002 to 2007 the structural budget surplus has been rather stable, varying from -2.2% to -1.7%. Therefore, if the cyclically adjusted component of net lending is assumed to remain in 2009 at the same level as in 2008, the total net lending would stand at -1.3% and -2.9% in 2008 and 2009, respectively. Consequently, there is still room for discretionary fiscal policy in coming years. This is illustrated in Chart 3.11.

Despite of the broadly controversial debate over the stabilising role of fiscal policy, there is a certain consensus about the need of fiscal stimulus when nominal interest rates approach to zero or the channels of monetary policy are in some way impeded. Chart 3.12 shows that fiscal policy helps to dampen the cyclical phase of the economy. Hence, a coordinated expansionary fiscal package in the Euro Area is being discussed to avoid a larger slowdown. Although that package is not defined yet, it is likely to discretionary fiscal measures could reach around 1% of GDP in the next two years. With this in mind, the budget balance deficit will be larger, standing at -2.9% in 2009 and -3.1% in 2010. This is illustrated in Chart 3.13.

3.2.- Measuring the Effects of fiscal policy

Once the cyclical nature of fiscal policy has been analysed, we proceed to estimate a benchmark empirical model to illustrate the macroeconomic effects of a discretionary fiscal shock, as the one proposed in many advanced economies to estimulate economic activity in 2009. To that end, a structural vector autorregresive (SVAR) model is estimated on euro area data. There are three main difficulties in the identification of fiscal policy shocks in a vector autoregression. Firstly, it is imperative to define what one means by a fiscal policy shock, as several competing definitions come to mind for this type policy. Secondly, it is necessary to distinguish the movements in fiscal variables which are caused by fiscal policy shocks from those which are simply the automatic movements of fiscal variables in response to other shocks such as business cycle or monetary policy shocks. Finally one needs to take account of the fact that there is often a lag between the announcement and the implementation of fiscal policy and that the announcement may cause movements in other endogenous macroeconomic variables before the change in fiscal variables.

Regarding the first issue, a macroeconomic fiscal policy shock can be defined as the combination of two basic impulses, a government revenue shock and a government spending shock. Different fiscal policies such as balanced budget expansions could then be described as different linear combinations of these two basic shocks. In the present analysis, however, the focus is only on the effects of a government spending shock. Since most public expenditures are discretional, government spending shocks are easily identified, solving the second difficulty mentioned above. Regarding the implementation lags, it is assumed that the initial response of GDP is relatively delayed with respect to the impact of the fiscal shock.

Setting up the empirical model

The estimated model contains quarterly data on six variables: government spending, private consumption, private investment, the gross domestic product, the consumer price index and the short-term nominal interest rate. All variables are specified in real terms, levels and logged, except the interest rate. The sample covers the period 1980:Q1 to 2008:Q2. No constant or time trends are included in the model, albeit the results are robuts to their inclussion.[1] The number of lags is chosen on the basis of an information criterion.

[1] The results are robust to the inclusion of a constant and to alternative sample lengths.

The identification of fiscal shocks

Once the model is estimated, it is necessary to identify the fiscal shock, that is, to distinguish the movements in fiscal variables which are caused by fiscal policy shocks from those which are simply the automatic movements of fiscal variables in response to other shocks such as business cycle or monetary policy shocks. In this respect, there are several approaches followed in the literature. Some authors identify exogenous shocks to government spending by assuming that the latter variable is predetermined relative to the other variables included in the SVAR. In this case, this involves assuming that government purchases are not affected contemporaneously (i.e., within the quarter) by the innovations in the other variables contained in the model. This is known as the Cholesky identification scheme.

Alternatively, some authors have proposed a more agnostic procedure where only relatively mild restrictions on the sign of the responses are assumed.[2] The basic shocks are identified, by searching for impulse-responses that best match the characteristics of the shock as defined by a criterion function. For example a government spending shock is simply defined as a shock where government spending rises for a defined period after the shock. In this case, it is chosen to restrict responses for a year following the shock. This relatively tight restriction is designed to rule out very transitory shocks to fiscal variables where for example, government spending rises on impact but falls after one or two quarters. Nonetheless, the results presented here are robust to weaker identifying restrictions where responses are only restricted on impact.

Additionally, a business cycle shock and a monetary policy shock are also identified and it is required that a fiscal shock be orthogonal to both of them. This filters out the automatic responses of public expenditure to business cycle and monetary policy shocks. A business cycle shock is defined as a shock which jointly moves output, consumption, investment in the same direction for four quarters following the shock. Such a comovement is consistent with both demand and supply side shocks and hence the approach remains 'agnostic' on the issue of the determinants of business cycle fluctuations. A monetary policy shock moves interest rates up and prices down for four quarters after the shock.[3] We also require the monetary policy shock to be orthogonal to the business cycle shock. The main purpose of characterizing the business cycle and monetary shocks is to filter out the effects of these shocks on the fiscal variables.

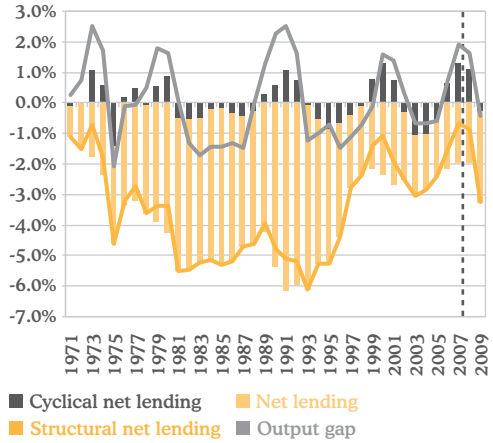
The macroeconomic effects of a fiscal shock

Table 3.1 summarises the findings in terms of traditional fiscal multipliers. These are defined as the response of each variable with respect to a shock to government spending of size equal to one percent of GDP. The impulse responses for the fiscal shock are displayed in Charts 3.14 to 3.18. As shown in Charts 3.14, the response of goverment spending is very persistent: two years after the initial impact, government spending is still well above the pre-shock level. Recall that one of the identifying assumptions was that the response of government spending should be positive during the first four quarters after the initial impact of the fiscal shock.

Charts 3.15 shows the response of private consumption. Interestingly, consumption rises significantly on impact (0.43%) and

[2] This is the approach of Mountford and Uhlig (2005) : "What are the Effects of Fiscal Policy Shocks?». SFB 649 Discussion Paper 2005-039.and the one followed here.
[3] These identifying restrictions are close to those used in Uhlig (2005): "What are the Effects of Monetary Policy? Results from an Agnostic Identification Procedure». Journal of Monetary Economics.

Chart 3.13.
Net lending, components and og. euro area



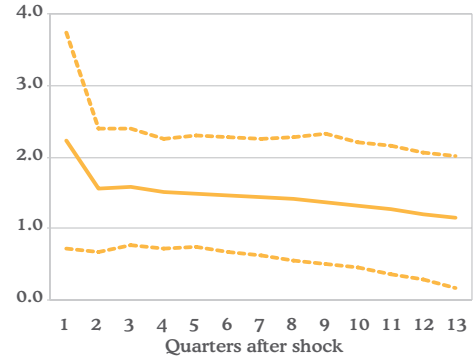
Source: BBVA

Table 3.1. Fiscal multipliers

Quarters:	GDP	CONS	INFLA	INTEREST
1	0.75	0.43	0.21	31.52
4	1.37	0.73	0.65	50.21
8	0.73	0.29	0.86	61.85
12	0.05	-0.03	1.08	42.37

Note: The multipliers are based on an initial increase on government spending equal to 1% of GDP. The multipliers are then computed as the ratio of $\Delta GDP_t / \Delta G_t$ and similarly for the other variables.

Chart 3.14.
Response of Government Spending to Fiscal Shock
% deviation from baseline level

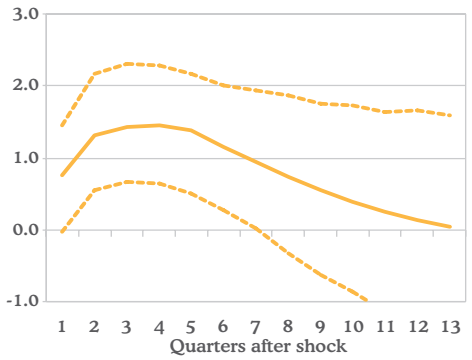


Source: BBVA

Chart 3.15.
Response Of Private Consumption to Fiscal Shock
% deviation from baseline level

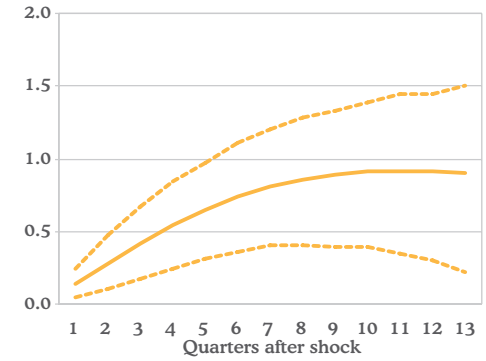
Source: BBVA

Chart 3.16.
Response of Real GDP to Fiscal Shock
% deviation from baseline level



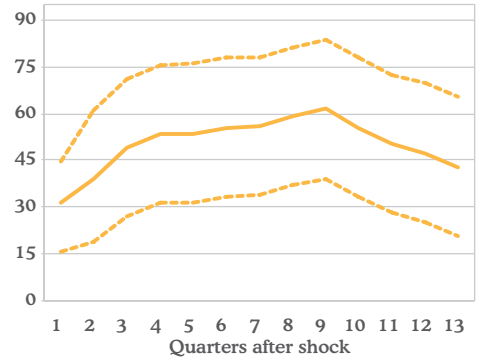
Source: BBVA

Chart 3.17.
Response of CPI to Fiscal Shock
% deviation from baseline level



Source: BBVA

Chart 3.18.
Response of the Nominal Interest Rate to Fiscal Shock
Deviation from baseline level - Basis points



Source: BBVA

remains well above the pre-shock level. After three quarters the response reaches its maximum (0.78%). Thereafter, the positive response starts to decline. Two years after the shock, consumption reaches a level below the original pre-shock. Hence, one might conclude the existence of a short-run crowding-in effect on consumption, but in the long-run, the fiscal shock has a crowding out effect. (See Box 3.1 for a discussion on this topic).

Regarding the response of output, Chart 3.16 shows that on impact, the response to the 1% of GDP increase of government spending turned out to be 0.75%. In the quarters after the initial shock, GDP continues to rise significantly, at least during the first year. The maximum is 1.45% which is reached three quarters after the initial impact of the shock. Hence, the estimated accelerator effect on GDP is rather noticeable. On average the the response in the first year is 1.23%. Overall, these results are slightly larger than those presented in some related studies. For instance, in a recent study by Forni et al. (2008) the response found was 0.9% in the first year after the shock. Roeger and Veld (2004) show multipliers for the largest four European countries ranging between 0.85% and 0.95%, whereas Ratto et al. (2008), have estimated a multiplier of 0.73% for the QUEST III model of the euro area.[1]

The expansionary effects of the fiscal shock come to a cost in terms of inflation. Chart 3.17 shows the response of the consumer price index. The response of prices is not immediate. Actually, it barely changes on impact. However, it starts to rise very clearly: the year after the shock, it reaches 0.65% (annualised), whereas three years later it reaches 1% (annualised). Thus, one might conclude that a persistent fiscal stimulus of the economy has inflationary effects in the long-run.

As expected, the central bank reacts to the expansionary effects of the government spending shock by increasing the nominal interest rate. Chart 3.18 shows such a response. The cumulated increase during the first year is of above 50 basis points (annualised). Interest rates remain persistently above the pre-shock level as the central bank tries to offset the inflationary consequences of the fiscal shock on the economy.

[4] The details of the references are: Forni, L., Monteforte, L. and L. Sessa (2008): "The general equilibrium effects of fiscal policy: estimates for the euro area", forthcoming Journal of Public Economics; Ratto, M., Roeger, W. and J. Veld (2008): "QUEST III: An estimated open-economy DSGE model of the euro area with fiscal and monetary policy", forthcoming in Economic Modelling.; Roeger,W. And J. Veld (2004): "Some selected simulation experiments with the European Commission's QUEST model". Economic Modelling 21 (5), 785–832.

Box 3.1: The Effects of Government Spending on Private Consumption

As shown in Section 3.2, the empirical evidence based on vector autoregressions finds that an increase in public spending leads to a significant and persistent increase in private consumption. This crowding-in effect is at odds with neoclassical macroeconomic theory, according to which government spending decreases consumption. The standard real business cycle model predicts that an increase in government spending gives rise to a negative wealth effect by lowering the households' permanent income, since the government should increase taxes in order to satisfy its intertemporal budget restriction. To avoid a large drop in consumption, households increase their labour supply. However, such a substitution effect is usually not strong enough to offset the wealth effect. Accordingly, consumption decreases in equilibrium and, thus, the neoclassical model is regarded as an inadequate framework to analyse the macroeconomic consequences of fiscal policy shocks.

In order to generate the positive effect of government spending on consumption, some authors have relied on the New Keynesian approach. The key features of these models are the existence of price stickiness and, more particularly, the presence of non-Ricardian (or rule-of-thumb) households, who consume their current disposable income.[1] If the weight of those households in the population is large enough, aggregate consumption will increase in response to a fiscal stimulus.

The empirical relevance of this explanation has been questioned, however. Coenen and Straub (2005), Forni et al. (2008) and Ratto et al. (2008), using using data from the Euro area, have found that the estimated fraction of non-Ricardian households is relatively small and that, as a consequence, it is unlikely that the mechanism described above yields a positive comovement of public and private spending.

A common feature of these models is that government spending is usless, that is, the goods bought by the government do not provide any utility to the private sector since they are simply thrown away. Instead, if one assumes some sort of complementarity between public and private spending, then it is possible to recover the empirical results. Intuitively, when the two variables are complements, government spending increases the marginal utility of consumption, providing an additional motive for households to work more, which in turn mitigates the negative wealth effect.

In order to illustrate this point, we consider a standard New-Keynesian model in which households utility depends on *effective* consumption. This is defined as the sum of goods bough by the household, denoted by C_t and goods bought by the government, denoted by G_t. Specifically:

$$\widehat{C}_t = \left[\phi C_t^{(\nu-1)/\nu} + (1-\phi) G_t^{(\nu-1)/\nu}\right]^{\nu/(\nu-1)},$$

where the parameter ϕ is the weight of private consumption in the *effective* consumption index, and the parameter ν is the elasticity of substitution between private consumption and government spending.

From the log-linearized version of the model, it is possible to show that, for a given level of private consumption, the effect of a change in government spending on the marginal utility of consumption is given by

$$(1-\phi)\left(GC^{ss}\right)^{(\nu-1)/\nu}(1/\nu - \varepsilon),$$

where GC^{ss} is the average share of government spending on effective consumption and the parameter ε measures the inverse of the elasticity of intertemporal substitution of consumption.

The expression above has the same sign as the term $(1/\nu)-\varepsilon$. When the elasticity of substitution, ν, is lower than $1/\varepsilon$, government spending raises the marginal utility of consumption, ceteris paribus. Hence, an increase in government purchases has not only a negative wealth effect on consumption, but also a positive effect that stems from the complementarity between private and public spending. The latter effect is stronger the smaller the value of ν relative to intertemporal elasticity of substitution, $1/\varepsilon$. For sufficiently low values of ν, the complementarity effect may actually offset the wealth effect, causing consumption to increase in equilibrium. Intuitively, when the two variables are complements, government spending increases the marginal utility of consumption, providing an additional motive for households to work more, which in turn mitigates the negative wealth effect.

Chart 1 illustrates the response of aggregate private consumption for different values of the share of rule-of-thumb consumers and the weight of government spending on households utility. The most relevant result is that for empirically plausible values of credit-constrained consumers, the positive response of private consumption after a government spending shock is possible provided the weight of public consumption is above a certain threshold. Hence, the model with complementarity between private and public spending helps to explain the puzzling increase in consumption in response to a government spending shock.

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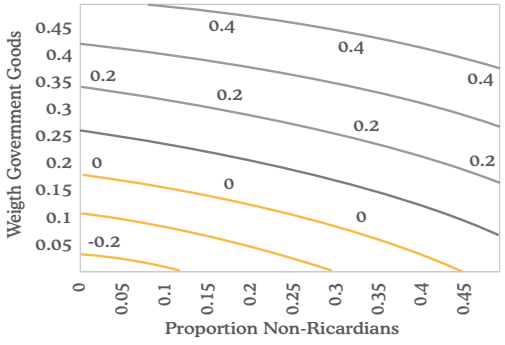
Coenen G. and R. Straub (2005), "Does Government Spending Crowd in Private Consumption? Theory and Empirical Evidence for the Euro Area", International Finance, Vol. 8.

Galí J., J.D. López-Salido and J. Vallés (2007), "Understanding the Effects of Government Spending on Consumption", Journal of the European Economic Association, Vol. 5, No. 1, pp. 227-270.

Linnemann, L. and A. Schabert (2004): "Can fiscal spending stimulate private consumption?". Economics Letters, 82, 173-179.

Chart 1.

Impact response consumption to fiscal shock



Source: BBVA

[1] Additionally, a non-competitive labour market is considered in which wages are set by an economy-wide union, and households are willing to meet the firms' demand for labour given the wage set by the union. More details can be found in Galí et al. (2007). A similar formulation can be found in Bouakez and Rebei (2007) and Linnemann and Schabert (2004).

4. Summary of Forecasts

Germany: GDP growth and inflation forecasts

YoY rate	2005	2006	2007	2008	2009	2010
Private consumption	0.2	1.2	-0.3	-0.5	-0.9	0.1
Public consumption	0.4	0.6	2.2	2.5	2.1	2.0
Gross Fixed Capital Formation	1.3	8.5	4.7	3.5	-5.8	-2.4
Inventories (*)	-0.3	-0.2	0.0	0.2	0.0	-0.1
Domestic Demand (*)	**0.2**	**2.2**	**1.1**	**1.1**	**-1.3**	**-0.1**
Export	7.9	13.0	7.8	4.1	-0.2	2.0
Import	6.7	12.2	5.3	4.4	-0.7	1.3
Net export (*)	**0.8**	**1.0**	**1.5**	**0.2**	**0.2**	**0.5**
GDP	**0.9**	**3.2**	**2.6**	**1.3**	**-1.0**	**0.3**
Inflation	**1.9**	**1.8**	**2.3**	**2.8**	**1.3**	**1.4**

(*) Contribution to growth
Source: BBVA

France: GDP growth and inflation forecasts

YoY rate	2005	2006	2007	2008	2009	2010
Private consumption	2.5	2.5	2.4	0.8	-0.8	0.2
Public consumption	1.3	1.4	1.3	1.6	1.4	1.6
Gross Fixed Capital Formation	4.5	5.0	4.9	0.3	-4.1	-2.4
Inventories (*)	0.1	-0.1	0.3	0.0	0.0	0.0
Domestic Demand (*)	**2.7**	**2.7**	**3.0**	**0.9**	**-0.9**	**0.0**
Export	3.5	5.7	3.2	2.4	-0.7	1.7
Import	6.0	6.5	5.9	2.0	-1.5	0.5
Net export (*)	**-0.8**	**-0.3**	**-0.9**	**0.1**	**0.3**	**0.3**
GDP	**1.9**	**2.4**	**2.1**	**0.9**	**-0.7**	**0.3**
Inflation	**1.7**	**1.9**	**1.9**	**3.2**	**1.2**	**1.4**

(*) Contribution to growth
Source: BBVA

Italy: GDP growth and inflation forecasts

YoY rate	2005	2006	2007	2008	2009	2010
Private consumption	0.9	1.1	1.5	-0.6	-0.8	-0.2
Public consumption	1.9	0.9	1.3	1.1	0.9	1.1
Gross Fixed Capital Formation	1.2	2.7	0.8	-0.4	-6.1	-2.9
Inventories (*)	-0.2	0.5	0.0	-0.3	0.1	0.0
Domestic Demand (*)	**0.9**	**1.9**	**1.2**	**-0.6**	**-1.5**	**-0.5**
Export	1.8	6.5	4.5	0.5	-0.5	2.5
Import	2.7	6.1	4.0	-0.2	-1.0	1.5
Net export (*)	**-0.3**	**0.1**	**0.1**	**0.2**	**0.1**	**0.3**
GDP	**0.7**	**1.9**	**1.4**	**-0.4**	**-1.3**	**-0.2**
Inflation	**2.2**	**2.2**	**2.0**	**3.5**	**1.5**	**1.7**

(*) Contribution to growth
Source: BBVA

Spain: GDP growth and inflation forecasts

YoY rate	2005	2006	2007	2008	2009	2010
Private consumption	4.2	3.9	3.4	0.5	-1.1	0.6
Public consumption	5.5	4.6	4.9	5.1	4.9	3.5
Gross Fixed Capital Formation	7.0	7.1	5.3	-1.3	-8.6	-2.4
Equipment	9.2	10.2	10.0	0.9	-12.3	-4.2
Construction	6.1	5.9	3.8	-4.0	-9.6	-2.7
Other products	7.1	7.1	3.9	4.1	0.6	1.0
Inventories (*)	-0.1	0.2	-0.1	0.0	0.0	0.0
Domestic Demand (*)	**5.3**	**5.3**	**4.4**	**0.8**	**-2.2**	**0.4**
Export	2.5	6.7	4.9	2.6	-2.0	0.3
Import	7.7	10.3	6.2	0.8	-4.5	1.0
Net export (*)	**-1.7**	**-1.5**	**-0.8**	**0.5**	**1.2**	**-0.3**
GDP	**3.6**	**3.9**	**3.7**	**1.3**	**-1.0**	**0.1**
Inflation	**3.4**	**3.6**	**2.8**	**4.1**	**1.9**	**2.4**

(*) Contribution to growth
Source: BBVA

Euro area (YoY)

	2003	2004	2005	2006	2007	2008	2009	2010
GDP at constant prices	**0.8**	**1.9**	**1.8**	**3.0**	**2.7**	**1.0**	**-0.9**	**0.3**
Private consumption	1.2	1.5	1.8	2.0	1.6	0.4	-1.0	0.1
Public consumption	1.7	1.6	1.5	1.9	2.3	1.6	1.7	1.9
Gross Fixed Capital Formation	1.2	1.8	3.3	5.7	4.1	0.8	-5.4	-3.1
Inventories (*)	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0
Domestic Demand (*)	**1.3**	**1.7**	**1.9**	**2.8**	**2.4**	**0.8**	**-1.4**	**-0.2**
Exports (goods and services)	1.4	6.7	5.1	8.4	6.1	3.2	0.2	1.6
Imports (goods and services)	3.2	6.5	5.8	8.2	5.6	2.7	-1.2	0.3
External Demand (*)	**-0.6**	**0.2**	**-0.1**	**0.2**	**0.3**	**0.2**	**0.6**	**0.5**
Prices and Costs								
CPI	2.1	2.1	2.2	2.2	2.1	3.3	1.4	1.6
CPI Core	2.0	2.1	1.5	1.5	2.0	2.4	1.7	1.6
Labour Market								
Employment	0.7	0.7	0.9	1.5	1.7	1.0	-0.2	0.2
Unemployment rate (% of labour force)	8.5	8.7	8.7	8.1	7.3	7.4	8.2	8.7
Public Sector								
Surplus (+) / Deficit (-) (% GDP)	-3.0	-2.9	-2.5	-1.3	-0.6	-1.3	-2.9	-3.1
External Sector								
Current Account Balance (% GDP)	0.3	0.8	0.2	0.1	0.4	-0.4	-0.1	0.0

* Contribution to growth

International environment (YoY)

	Real GDP growth (%)				Inflation (%)			
	2007	2008	2009	2010	2007	2008	2009	2010
US	2.0	1.4	-0.8	1.1	2.9	4.3	0.8	1.5
UK	3.0	0.9	-0.9	0.1	2.3	3.7	2.6	1.4
Japan	2.0	0.7	-0.3	0.6	0.1	1.2	0.3	0.5
Latam*	5.6	4.4	1.8	2.5	5.0	7.1	9.5	7.2

* Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela. Inflation forecast: end of period

Financial variables (end of period)

	Official rate (%)				10 year interest rate (%)			
	11/25/08	Dec-08	Jun-09	Dec-09	11/25/08	Dec-08	Jun-09	Dec-09
Euro Area*	3.25	2.50	1.50	1.50	3.33	3.85	3.25	3.10
US	1.00	0.50	0.50	0.50	3.11	3.30	3.00	3.00

	Exchange rate (vs euro)					Brent		
	11/25/08	Dec-08	Jun-09	Dec-09		11/25/08	Jun-09	Dec-09
US	1.28	1.30	1.21	1.15	$/b	49.15	54.00	57.50

* 10 year interest rate refers to German bonds

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