

Monographic November 2007:

Macroeconomic Policy

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1.- U.S.A.

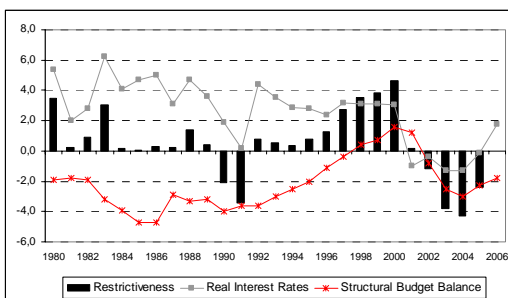
How sensible and timely the monetary and fiscal policy decisions in the United States have been in recent years has been discussed frequently and extensively since the OCEI began to publish monthly reports. In fact, this is a must in the first part of these reports, which is devoted precisely to the current economic environment.

Notwithstanding, this month's monographic article aims to provide a panoramic view of how these policies have developed over the past decade and a half, paying special attention to the last few years. We will also illustrate developments in the imbalances and variables related to economic growth and employment over the period in question. Of course, many factors influence these results, but the macroeconomic policy employed does have a lot to do with them.

a) Policies

For our first look at the overall trend in macroeconomic policy over recent years we will use an indicator (Figure 1) that sums real interest rates (to capture monetary policy) and the cycle-adjusted budget deficit, or structural deficit (to capture fiscal policy).

Figure 1: Indicator of Fiscal and Monetary Policy Restrictiveness (the more positive the score, the more restrictive the policy)



Source: own elaboration with data from the BLS, FRED II and the Congressional Budget Office

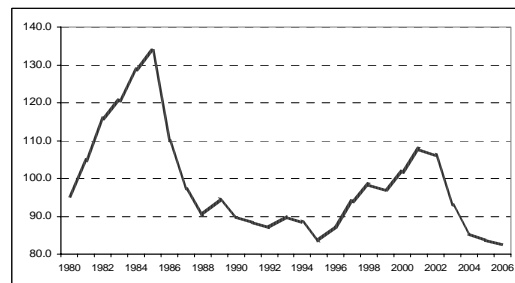
The graph shows how expansive fiscal policy (albeit less so than in the 1980s) has coincided with accommodating monetary policy, with negative real interest rates, a situation that did not even occur in the recession in the early 1990s.

We can see how the cushion resulting from the budget surpluses generated during the Clinton era, together with the price stability in the 1990s as a result of the effects of globalisation, new technologies and Central Bank credibility (among other factors) has been taken advantage of.

Therefore, the first point to be made is that macroeconomic policies have boosted the US economy extraordinarily (at least initially) so far this decade.

In addition to this, it is also worth keeping in mind that the exchange rate of the dollar (Figure 2) has also made a substantial contribution to this macroeconomic stimulus since 2002, as depreciation has taken the dollar to its lowest level over the entire period under consideration (since 1980).

Figure 2: Effective Exchange Rate of the Dollar against Main International Currencies (1973:3 = 100)



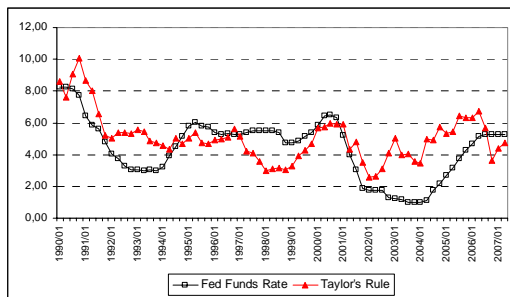
Source: own elaboration with data from FRED II

Monetary policy is responsible for a great deal of the boost the US economy has received. Interest rates remained below the level designated by a

conventional Taylor Rule formulation (Figure 3)¹ between 2001 and 2006).

Such accommodating monetary policy was undoubtedly the result of the rally in inflation suffered in the 1990s (with the subsequent room to manoeuvre that this provided), the fear of deflation at the beginning of this decade (which resulted in interest rates being too low for too long) and the timid initial stage of the current expansion.

Figure 3: Taylor's Rule and Effective Monetary Policy. Comparison of Interest Rate Trends (%)



Source: own elaboration with data from the BEA and FRED II

The cost of such accommodating policy emerged not in the form of goods inflation, but asset inflation.

At present, as analysed in detail in this and our previous economic environment report, the Fed appears to opt once again for avoiding a potentially excessive slowdown rather than confront the threat of inflation. Despite not appearing in Figure 2

¹ Taylor's Rule is of course only one of the most typical formulas for comparing the tone of effective monetary policy. For a review of this rule, see ECB (2001): "Issues related to monetary policy rules", in the October monthly bulletin, pp. 37-50. Interested readers who are not specialists in the field can find observations and some of the difficulties associated to Taylor's Rule in the **OCEI Special** (see section of the same name at www.ocei.es) from June 2006 entitled: "Monetary Policy Rules and their False Simplicity: an Approach to Taylor's Rule".

(because the final data necessary were only available up to the second quarter), the cuts will have once again lowered effective interest rates below the level indicated by Taylor's Rule, following a few quarters in which the relationship was inverse.

The costs of opting to face up to this risk rather than inflation may well emerge after some time has passed.

In relation to the Bush government's **fiscal policy**, there appears to be more widespread and increasing agreement: it has been highly unsuitable to the point of even being unsustainable². The biased tax cuts (in favour of the highest income earners) have been criticised by the Democrats, while the unjustified budget deficit that has been generated has been criticised by conservatives.

Note that the main lines of this fiscal policy have been the following:

- * Increase in discretionary expenditure bound for defence, military operations and national security.
- * A relatively successful attempt to control the rest of discretionary spending, which has been highly damaging for a more than a few social schemes. This is difficult to digest in a country that between 2001 and 2005, saw the number of people without health insurance rise from 1.2% of the population to 15.9%, some 47 million citizens!

² It is worth recalling that even Alan Greenspan, who made the mistake (in our opinion his largest) of endorsing Bush's fiscal policy recognised this in his memoirs, albeit alleging that he had not understood his approach. Perhaps being so cryptical did not pay off on this occasion...

* The increase in entitlements, mainly as a result of the reform of prescribing and supply medicine in Medicare³.

* Exceptionally large tax cut programmes (particularly in 2001 and 2003), which were supposed to be offset by an increase in tax revenue due to the boost to the economy that the cuts were meant generate (that is, the return of the Laffer Curve).

These tax cuts were so biased that⁴, while those who earned more than one million dollars a year would save \$118,000 (7.5% of their income) in 2006, the 20% of citizens in the middle of the population distribution would save \$740 (2.3% of their income) and the 20% that earn the least would save an average of \$20!

* The *Balance Budget and Emergency Deficit Control Act*, passed in 1985 and amended in 1990 by Republican governments and aimed at reducing public deficits by banning any tax cuts not covered by savings in other areas was abandoned.

Logically, this series of measures not only used up the budget surpluses generated by the Clinton government, but has also maintained the Federal government budget in the red, despite the current expansion lasting for more than six years.

How has this cost? According to the bi-party Congressional Budget Office, the fiscal legislation carried out under the current government cost between 2001 and 2006 *2.3 trillion dollars*, half of which was due to the tax cuts and a

third to expenditure on defence and national security.

Over this period, in order to defend themselves from the sleeping criticism received from all sides, George W. Bush himself and part of his team of economists have aired the spectre of the Laffer Curve and how much revenue would be recovered should fiscal policy stimulate economic growth. When in 2006 tax revenue as a percentage of GDP surpassed the average for the period dating from 1980 to today, these spokespeople thought they had been vindicated.

If it were not for the worrying situation that Bush's successor will encounter in November 2008, such euphoria would be hilarious.

In the first place, here are some statements on the issue made by *the Bush government itself*. The current Chairman of the Council of Economic Advisors, Edward Lazear said: "we do not believe tax cuts pay for themselves". His predecessor in the post, Gregory Mankiw said there was no believable evidence of tax revenue increasing with lower tax rates. A study carried out by the Department of Treasury calculated the increase in income attributed to the boost in economic activity stemming from the tax cuts made during the Bush era: 10% of the decrease in tax collection as a result of the tax cuts! The most amazing thing is that the government insists on eliminating the sunset clauses that usually accompany tax cuts and which would see them expire between 2008 and 2010⁵. How much would

³ Health Programme for over 65s and some people under this age with some degree of disability.

⁴ Data from the Tax Policy Centre.

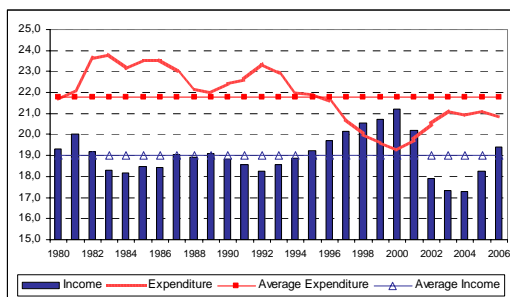
⁵ The reasoning behind sunset clauses is that if tax cuts seek to stimulate the economy in a low in the cycle, they should not be maintained indefinitely or the budget deficit will swell.

prolonging these tax cuts cost? *Between 2 and 3.5 trillion dollars*, according to what has been established with regard to the Alternative Minimum Tax (AMT)⁶.

In exchange for what? Another study carried out by the US Treasury itself stated that the US economy, under the full impact of the tax cuts, would grow by 57% up to 2025. If the sunset clauses were maintained, economic growth would amount to 56%! No comment.

Secondly, the current economic expansion has been weaker than the average for the last fifty years in terms of economic growth, employment, consumption, investment, net wealth and wages⁷.

Figure 4: Federal Government Income and Expenditure (% of GDP, natural year)



Source: own elaboration with data from the CBO

Finally, where tax collection is concerned, it is true that federal income as a percentage of GDP surpassed the average for the period dating from 1980 to 2006 (Figure 4).

However, the current government has continued to accumulate deficits, including the 2006 financial year (and will continue to do so in 2007 and

2008, however marked the slowdown is). Over the period dating from 2002 to 2005, the least amount of tax income was collected in the last three decades.

Above all, the average tax revenue between 1980 and 2006 cannot be used as a reference, because with that level of income, the federal budget would have displayed *a deficit in each and every year throughout the period* (see Figure 4). This is worrying in itself, but things will be even worse in the near future, due to the prospect of a spectacular increase in the cost of Medicare and Medicaid⁸, due to population ageing and higher health costs. These two schemes, plus social security, will account for more than 20% of GDP in 2050 unless there are changes in the legislation, while in 2007 they only represented 9%.

In short, the lack of fiscal discipline on behalf of the Bush government, apart from not significantly boosting economic growth in the short term and considerable increasing inequalities, has put the federal government on an unsustainable path for the next few decades. There is agreement across practically the entire sphere of political and economic currents of thought and most of the candidates for the forthcoming presidential elections. Of course, the differences lie in whether rebalancing should be tackled by reducing expenditure or by raising income. It will be difficult to avoid not resorting to both tactics simultaneously.

b) Imbalances

As in some previous reports, we will use a variety of *Misery Indexes*, inspired in the original by Arthur Okun that dates back to the beginning of the

⁶ See the May 2005 OCEI economic environment report (p. 10) for further detail on the AMT.

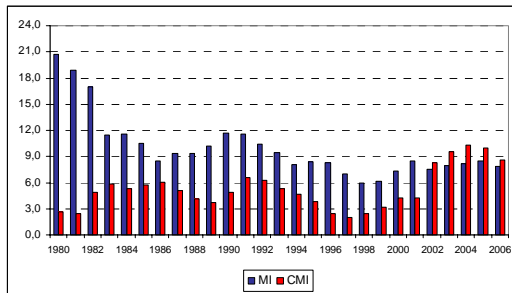
⁷ These first two lines of criticism are based to a great extent on various studies carried out by the Center on Budget and Policy Priorities.

⁸ The latter for low income earners.

1970s⁹. Los gráficos 21 y 22 muestran los resultados de los tres indicadores para el período 1980-2006.

Firstly, the Misery Index (MI) reflects unemployment and inflation trends.

Figure 5: Misery Index (MI) and Complementary Misery Index (CMI) (%)



Source: own elaboration with data from the BLS

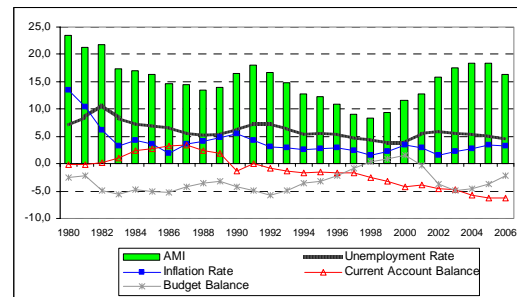
The indicator is seen to drop from the beginning of the 1980s to the end of the 1990s with a point of inflection between 1989 and 1992, firstly due to inflation getting out of control and later due to the increase in unemployment as a result of the recession in 1991. Over the last few years the situation has deteriorated in relation to the lows recorded between 1998 and 1999, albeit always with moderate margins. As a result, in 2005 the US was in line with the average for the OECD.

The Complementary Misery Index (CMI), which groups the current account and budget deficits, displays a much worse picture. The period dating from 2003 to 2005 has been the worst in a quarter of a century, with unstoppable growth in the foreign trade deficit coinciding with the deterioration

⁹ Interested readers can visit **OCEI Indicators (Misery Indexes)** to learn more about the indexes used herein. The report provides a detailed description of the indexes and how they are computed and both historical and comparative results for all OECD countries are presented, together with brief observations for each country.

of Federal Government finances (in other words, marked "twin deficits"). In 205, only five of the other 29 countries in the OECD recorded higher (worse) CMI scores than the United States. The improvement (albeit clearly insufficient) in the budget deficit, together with the stabilisation and slow decrease in the current account deficit in 2007 is reducing the CMI.

Figure 6: Aggregate Misery Index (AMI) and Components



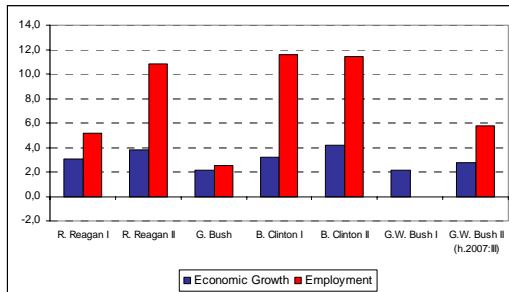
Source: own elaboration with data from the BEA and BLS

Finally, the Aggregate Misery Index (AMI) is a combination of the two previous indexes (and therefore the four variables considered). The constant deterioration in the first half of this decade (the situation only improved slightly in 2006) had led the US economy to record its worst scores in terms of imbalances since the early 1980s, when there was double-figure inflation, before being reduced drastically by the Fed led by former chairman Paul Volcker.

In the context of the OECD, the United States was ranked in a sad 23rd place.

c) Results

Finally, here is a quick glance at the results accomplished by the United States in terms of economic and employment growth (Figure 7).



Source: own elaboration with data from the BEA and BLS

While there is no need to indicate that these results do not only depend on macroeconomic policy, the Bush-Greenspan team does not appear to have been very successful. When the current government leaves office, the US economy will have grown at a considerably lower rate and created much less employment than during the presidencies of Bill Clinton and Ronald Reagan. While an improvement on the four years in office of George Bush Senior, tax and monetary policy was used a lot less in that case to stimulate the economy¹⁰.

Therefore, highly accommodating policy has left several worrying future scenarios: some are certain (the need for fiscal changes) and some potential (an increase in the outlook for inflation? Further financial or real estate bubbles?), as well as sizeable macroeconomic imbalances and highly discreet results in terms of growth and employment. It will not be easy to use the US as a model for macroeconomic policy this decade.

Vicente J. Pallardó
OCEI Director

Valencia, 30 November 2007

¹⁰ Some Republicans blamed Greenspan for years for Bush senior's election defeat for employing overly restrictive monetary policy.

2. Eurozone

Fiscal Policy

The Stability and Growth Pact (SGP) that Germany imposed on the rest of countries due to enter the Euro-zone stipulated that government deficits should not exceed 3% of GDP (National Accounts) and that total debt should be less than 60%.

The Pact aimed to promote fiscal policy towards the stability and sustainability of public sector finances, leaving the design of such policy in the hands of national governments.

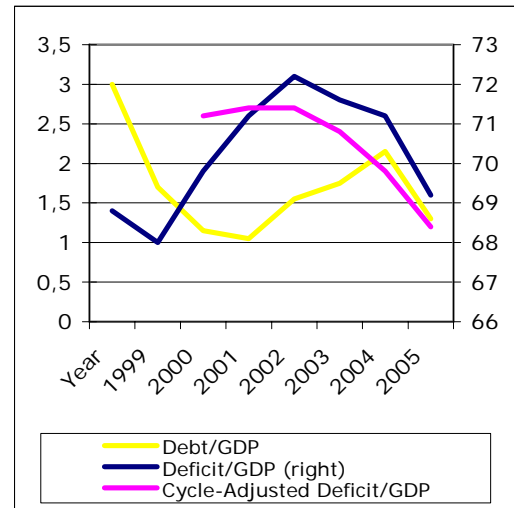
After several important countries failed to comply with the Pact, perhaps as a result of the slowdown in economic growth in certain years (although the structural deficit had also increased) and the verdict of the European Court of Justice regarding the application of sanctions, forced the European Commission to review the Pact itself.

The most important points of this review are as follows:

- The limits of 3% and 60% for public deficits and total debt respectively have been maintained.
- The preventive nature of the Pact has been reinforced by forcing countries to reduce their debt in times of bonanza.
- Countries' budget objectives in the medium term will depend on their initial situation in terms of deficit and debt.
- If the 3% threshold is violated, there would be two-fold flexibility: in the first place, the situation would have to be corrected in the second or third year after breaching the Pact. In the second

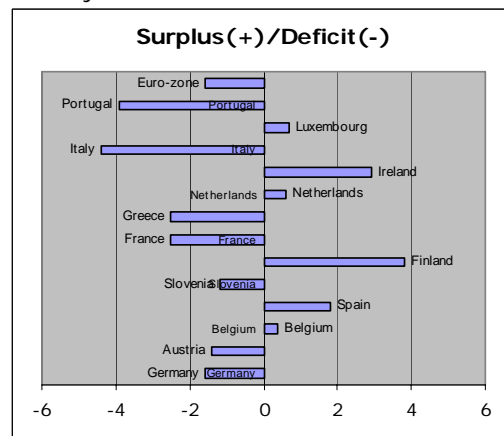
place, a series of mitigating factors were determined, such as the application of structural policies, R+D expenditure, GDP growth constantly below potential or negative, structural reform, solidarity policies, defence expenditure, reunification, etc. All these extenuating factors could allow for an extra 0.5% of deficit.

Figure 1: Deficit, Cycle-Adjusted Deficit and Public Debt (right)



Source: ECB and the European Commission

Figure 2: Public Deficit by Euro-zone Country



Source: ECB

During the period dating from 1999 to 2006, except for 2003 (-3.1%), the

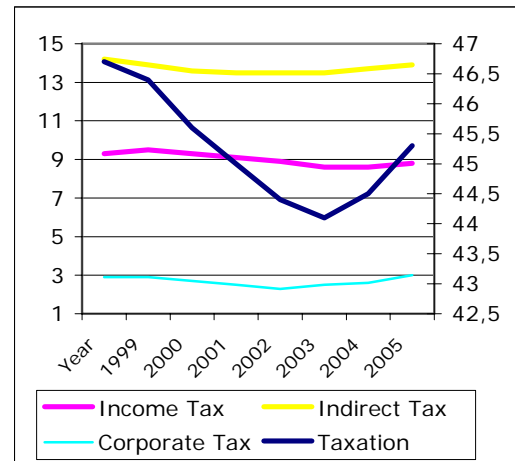
deficit of the Euro-zone as a whole has always remained below 3% in terms of SEC-95 national accounts, although clear differences are observed across countries. Countries with large deficits, such as Germany, France, Italy, Greece and Portugal, which surpassed the 3% limit several years, contrast with others such as Belgium, Finland, Luxembourg and Ireland with surpluses.

The debt/GDP ratio has remained systematically above 60% (70.5% in 2006), at an average of 70% over the last few years. In this case, there are also differences among member states: Italy and Greece on the one hand recorded total debts of 107.4% and 105% respectively, while Luxembourg and Ireland displayed debts of 7.9% and 27.7% respectively.

Only Portugal, and to a lesser extent Italy, face a budget scenario that is incompatible with intertemporal budget solvency.¹¹

Fiscal policy over this period has been expansive and procyclical as a whole. Throughout the entire period Euro-zone governments as a whole have always recorded deficits, even when figures are cycle-adjusted. Total government spending less financial expenditure has remained more or less constant in relation to GDP. Governments have therefore used the decrease in debt servicing to further increase their own spending. However, the structural deficit has decreased since 2003 when it stood at 2.7% to 1.2% in 2006.

Figure 3: Taxes/GDP, Direct and Indirect Taxation



Source: ECB

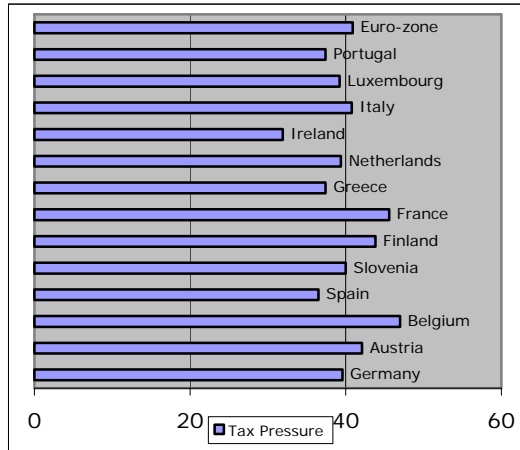
According to a report by the European Commission, the application of fiscal rules in countries which affect all levels of government – including internal stability pacts – have had a highly positive impact on public finances. Government spending has tended to decrease, which has helped to reduce deficits and increase surpluses as well as reduce the number of procyclical policies. However, markets barely penalise those Euro-zone countries in weak financial situations. The additional cost of public debt in these countries (Italy and Greece) with respect to Germany only amounts to 15bp.¹²

Global tax pressure has decreased over the period by 1.6%, from 42.5% in 2000 to 40.9%. However, tax pressure has increased in countries such as Spain and Portugal, while it has decreased in others such as Germany, Italy and Austria. The highest tax pressure is observed in Belgium (47%) and France (45.6%), while the lowest is recorded in Ireland (31.9%) and Greece (31.6%).

¹¹ Natixis Flash N°152, April 2007 by Patrick Artus

¹² Natixis Flash N°152, April 2007

Figure 4: Tax Pressure by Euro-zone Country



Source: European Commission

Global tax pressure has decreased over the period by 1.6%, from 42.5% in 2000 to 40.9%. However, tax pressure has increased in countries such as Spain and Portugal, while it has decreased in others such as Germany, Italy and Austria. The highest tax pressure is observed in Belgium (47%) and France (45.6%), while the lowest is recorded in Ireland (31.9%) and Greece (31.6%).

Taking into account taxation as a whole, indirect taxes (13.9%) are slightly higher than direct taxes (12.2%). Indirect taxation has remained unchanged over the period in terms of GDP, but has risen since 2002, while direct taxation has fallen, despite the upturn in 2006. As regards direct taxation, income tax has lost ground in relative terms over the period, whereas corporate tax has gained, possibly due to the favourable trend in corporate profits over the period.

Fiscal reform in Europe in recent years has tended to reduce corporate and income tax rates, simplify tax brackets and reduce marginal tax rates in order to better combat tax evasion. Reform has also been aimed at increasing the

tax base to face up to the challenge of an ageing population on the one hand, which will imply a decrease in the tax base in the future as well as an increase in overall government spending and of globalisation on the other, which increases competition through capital and skilled labour mobility, particularly bearing in mind governments' desire to maintain the Welfare State.¹³

Moreover, the tax levied on inheritance and donations has been abolished in some countries, while Spain plans to eliminate capital gains tax.

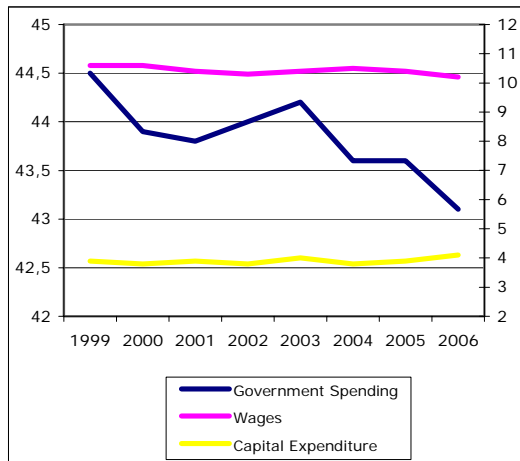
Some of the possible ways of offsetting these moves include environmental, real estate and consumption taxes.

As regards government spending, which represents 47.2% of GDP, the percentage of the budget devoted to each item has remained more or less unchanged, except for civil servant wages and subventions, as well as debt interest payments, which have decreased due to interest rate developments.

Government investment expenditure represents only 4.1% of GDP. However, the wide range of formulas used by most governments to avoid having to report investments would raise this figure significantly. Tenders, operating leases and even the creation of public-private partnerships to build and manage infrastructure are the most common formulas used.

¹³ European Economy. Economic Papers 280, May 2007. "Tax Revenues in the EU: Recent Trends and Challenges ahead by Giuseppe Carone and Jan H. Schmidt

Figure 5: Government Spending/GDP and Budget Expenditure Items

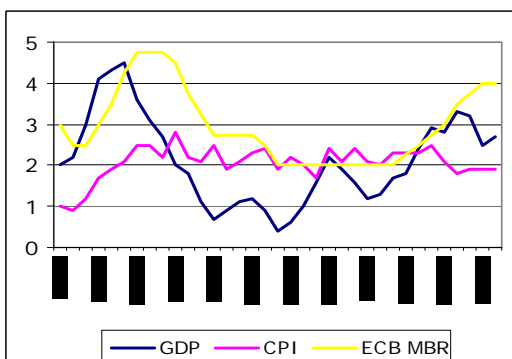


Source: ECB

Monetary Policy:

Over the period dating from 1999 to 2007, the ECB minimum bid rate has ranged from 2% to 4.75%. Initially, following a 50bp decrease in the reference interest rate from 3% to 2.5% in 1999, the ECB began to tighten monetary conditions by raising interest rates gradually to 4.75% in response to strong GDP growth of between 3% and 4.5% (well above potential) and to inflation, which had risen above 2%.

Figure 6: ECB Minimum Bid Rate, CPI and GDP



Source: ECB

When growth slumped well below potential (to 0.9% and 0.8% in 2002 and 2003 respectively), the ECB was forced to lower interest rates, which

reached 2% in the second quarter of 2003, where they remained until the last quarter of 2005. However, favourable confidence indicators, price tensions and a rally in GDP convinced the ECB to begin to raise interest rates, which currently stand at 4%.

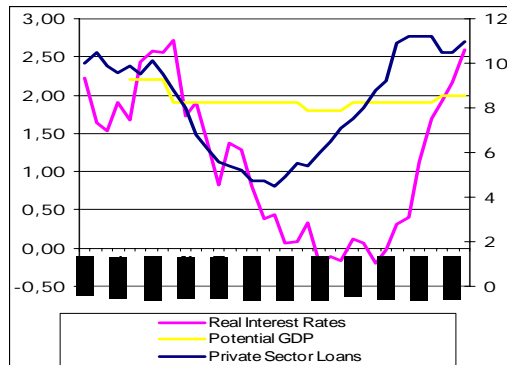
ECB interventions occur with a lag of between seven and eight months with regard to the leading cycle indicator, according to Natixis, which considers it too long. Therefore, ECB monetary policy is procyclical at the beginning of the cycle.

Monetary policy has generally been expansive over the period under consideration. Real interest rates have remained below potential GDP, including period when they were even negative or zero between 2002 and 2006, whereas during the rest of the years of the sample, policy has been more or less neutral, except in 2000 when it was tense.

There has been a high degree of liquidity in the system. Exceptions aside, growth in the M3 has always been higher than what is considered compatible with price stability, although some of these movements are simple the result of money being moved from financial instruments not considered by this aggregate to others that are and vice-versa.

Private sector credit demand, particularly over the last few years of the period, was also boosted by the favourable outlook, favourable monetary conditions in terms of interest rates and financial institution profit margins and more accommodating loan conditions. Corporate financing of investment projects and household purchasing of dwellings were the two cornerstones of this favourable trend.

Figure 7: Real Short Term Interest Rates, Private Sector Loans (right) and Potential GDP



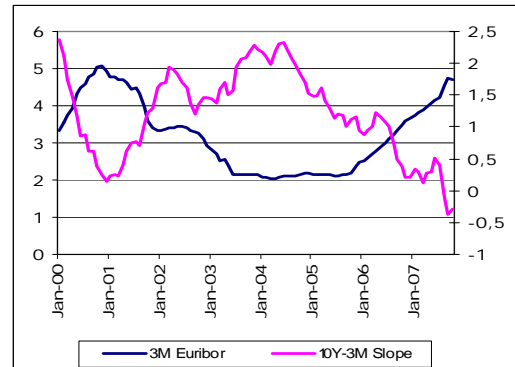
Source: ECB, European Commission and own elaboration

The expansive monetary policy employed also had a positive effect on asset prices. This is the case of stock market securities in general and real estate prices in some countries, where higher interest rates were required.

As regards the interest rate curve, which has been historically and normally positive, due to the risk premium paid for uncertainty regarding short term interest rates in the future and the inflation rate, has undergone significant structural changes.

If a broad sample of observations were taken of the normal terms on the curve in order to econometrically construct relationships between them, the current short term interest rates should result in 10-year rates being much higher than has normally been the case in the last few years.

Figure 8: Three-month Euribor and 10-year Bund



Source: ECB

The following factors explain why the curve has become flatter: ECB performance receives greater recognition, which results in a lower risk premium; the shortage of long term paper to satisfy the strong demand for these financial assets stemming from financial institution development; the influence of US Treasury Bonds (with a positive correlation of 90%); and the intense purchasing of long term paper on behalf of Asian central banks in order to prevent their respective currencies from appreciating against the euro and the dollar.

Following the emergence of subprime loans in the United States and the necessary cooperation of important European investors, liquidity has vanished quickly since August. As a result of financial institutions widely using asset securitisation to obtain liquid assets and the near closing of the market, forced them to seek alternatives somewhat desperately, toughen up the requisites for granting loans and reduce the funds available for borrowing.

The ECB, as did other central banks, decided to provide all the liquidity necessary to avoid a liquidity crisis in

the system. Nevertheless, and despite the steps taken by the bank, a trust crisis has broken out among the financial institutions that operate on the market and this makes it impossible for interbank interest rates to avoid distortion leading to banks exchanging transactions fluently. The Euribor rates published correspond to the ECB minimum bid rate at 4.5%, but not the current 4%. Some transactions have been made on the interbank market with one year maturities at rates of 19%, which appeared difficult to understand.

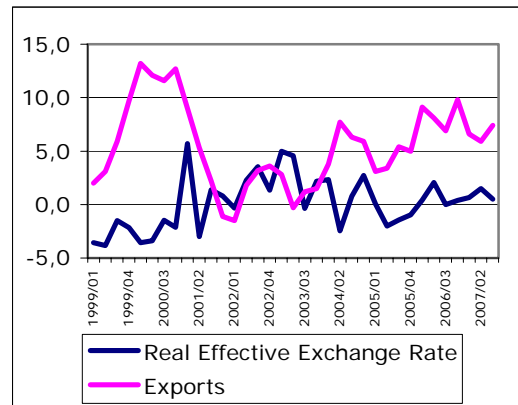
Exchange Rate Policy:

ECB exchange rate policy has been to let the euro float freely over the period, with the exception of the joint intervention on behalf of the ECB and the Federal Reserve, together with other central banks, in order to curb the marked depreciation of the euro in 2000 and 2001.

Notwithstanding, the ECB monitors the exchange rate of the euro in light of the impact it could have on the economy, through foreign trade, that is, whether or not it is overvalued and because real effective exchange rate appreciation or depreciation is really an increase or decrease in interest rates. In fact, a 10% appreciation of the real effective exchange rate of the euro is estimated to be equivalent to a 100bp rise in interest rates.

Although the appreciation of the euro affects export growth negatively, it is much more sensitive to an increase in international trade. In fact, Euro-zone exports are registering excellent results in 2007, despite the appreciation of the euro.

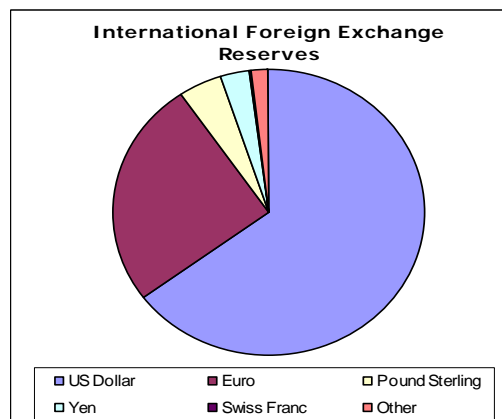
Figure 9: Real Effective Exchange Rate (quarterly change) and Exports



Source: ECB and own elaboration

The euro/dollar exchange rate has displayed two trends. The euro depreciated up to 2002, even dropping below parity, while from 2002 onwards the euro has appreciated, reaching 1.50 dollars to the euro. If we take the real effective exchange rate into account, the euro has appreciated by a total of 14.7% since 1999.

Figure 10: Central Banks' International Reserves in 2006



Source: IMF

The strength of the euro against the dollar is due to a series of factors: the expected decrease interest rates due to the weakness of the US economy, the trade deficit and the problems to finance it and, in addition, the role of

the euro as an international reserve currency.

The Euro-zone as the world's largest trading power with 22% share of world exports since 1993 had to establish its currency as an international reserve currency in a short space of time. While at the beginning of 1999 the euro as a reserve currency represented 18.1% of total reserves, in the second quarter this year, its share had risen to 25.6%, while the US dollar has lost ground in this aspect, despite remaining the top currency with a share of 64.8%.

The appreciation of the euro against the Yen and the Swiss Franc is due to these countries having low interest rates in response to low inflation rates.

Nevertheless, the strength of the euro is perhaps surprising bearing in mind the low rate of potential growth in comparison to the US, the lack of improvement in the profitability of European companies and the institutional problems at European level due to a lack of coordination, the community budget being too small, the policies put into practice and the limited internal mobility.

Structural Policy:

The European Union promoted the design of structural economic policy in member states by passing the so-called Lisbon Agenda in 2000, with the overall goal of having "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion."

In order to accomplish this goal, a series of objectives were established in the fields of innovation, research and development, in energy and in reducing

public administration costs which were to be achieved by 2010.

a) Innovation, Research and Development:

The aim for 2010 is that spending on innovation, research and development rises to 3% of GDP, two thirds of which must come from the private sector.

R+D+i spending in the Euro-zone has stagnated at 1.86% (2004) with large differences across countries. Finland has already reached the target rate with 3.51%, while countries such as Germany (2.49%) and Austria (2.26%) are close. However, several countries are far from achieving this goal, including Portugal (0.74%), Greece (0.57%) and Spain (1.07%).

Most countries have made an effort to increase government spending on R+D+i over the past few years, although the greatest challenge is getting the private sector to increase its share. Private involvement is minimal and falls well short of the objective established.

In this sense, countries have increased their specialised work force, particularly in science and technology, from 11 per 1000 to 13.6 per 1000. The number of science and technology qualifications has been increased, along with spending on continuing education. Some countries, such as the Netherlands, Luxembourg and Finland, have even employed policy to attract highly skilled labour from outside the Union.

In order to expand and boost private spending on R+D+i, countries have taken certain steps, including tax benefits, the creation of networks linking universities, public research centres and industries and improving

Small and Medium-sized Enterprise (SME) access to financing, awarding guarantees or backing risk capital.

Further moves have focused on enhancing the treatment and protection of intellectual property, in order to make it cheaper in terms of both money and time.

b) Labour Market:

As regards the labour market, apart from reducing benefits to encourage the unemployed to return to the labour market, as in the Netherlands where the duration of the unemployment benefit was reduced from 60 to 38 months and also income tax rates and company social security contributions, the following objectives were established:

- 70% employment rate
- 60% female employment rate
- 50% employment rate for people aged 55-64

The employment rate in the Euro-zone rose by almost 2% between 2000 and 2005, reaching 63.5%, which still falls well short of the 70% objective. The Netherlands is the only country to surpass the target rate (73.2%), while Finland (68.4%) and Austria (68.6%) are close to accomplishing the objective.

Italy is the country furthest from achieving the objective (57.6%).

As regards the female employment rate, a much more marked improvement is observed. The female employment rate rose by 3.5% over the first five years (2000-2005) and now stands at 55.2%. Finland (66.5%), the Netherlands (66.4%), Portugal (61.7%) and Austria (62%) have already achieved the objective, while Germany is close to doing so.

As far as raising the employment rate among those aged between 55 and 64 years old, Euro-zone member states have applied tax benefits in order to extend the effective age of retirement to 67 as in Germany, made the retirement age more flexible or even allowed people to continue working beyond the legal age of retirement in exchange for increases in net wages and pensions based on the number of years worked after reaching the age of retirement.

The employment rate rose by 6.2% over the five-year period and now stands above 40%. Only Ireland (51.6%), Portugal (50.5%) and Finland (52.7%) have achieved the objective stipulated in the Lisbon Agenda.

c) Energy Policy:

Energy sector volatility and high prices, supply security and climate change have made it necessary to foster greater cooperation in this field.

As a result, a target was established whereby at least 10% of electricity output capacity is channelled to interconnecting countries together with the application of measures to enhance competitiveness. Five Euro-zone countries have achieved this objective. They are Austria, Belgium, Germany, Italy and Luxembourg.

As regards fighting climate change, apart from the moves announced by France aimed at promoting rail transport to the detriment of cars and others on behalf of Germany, some countries have established energy saving objectives, promoting the use of efficient technologies in energy consumption. The European Commission states that up to 20% can be saved if investments are made towards using energy more efficiently.

Countries such as Belgium, Spain, France, Italy and the Netherlands have established energy saving objectives.

As far as promoting the use of renewable energies is concerned, there is a EU level objective that stipulates that at least 21% of electricity output must come from renewable energy sources. The means countries have used to achieve this objective include tax incentives, promoting investment, green certificates and more attractive prices for producers. Spain, Finland, Germany, Luxembourg and the Netherlands are on the way towards achieving the objectives established on a national level.

d) Enhanced Regulations and Less Burocracy:

This has led countries to cooperate in joint measures, making clear progress towards simplifying regulations and their application.

Nicolás Jannone
Valencia, 7 December 2007

3. Spain

Robust Economic Growth... Deterioration of Some Imbalances

The Spanish economy has been growing strongly now for a long time (see Figure 1). During this expansion, some traditional imbalances have been spectacularly corrected (unemployment and budget deficit), while others have worsened (foreign imbalance) or persisted (inflation gap with regard to Spain's main trading partners).

In the first place, the labour market has been remarkably dynamic, making significant rises in the labour force, due to the arrival of immigrants and women being incorporated into the labour market, compatible with a decrease in the unemployment rate to all-time lows.

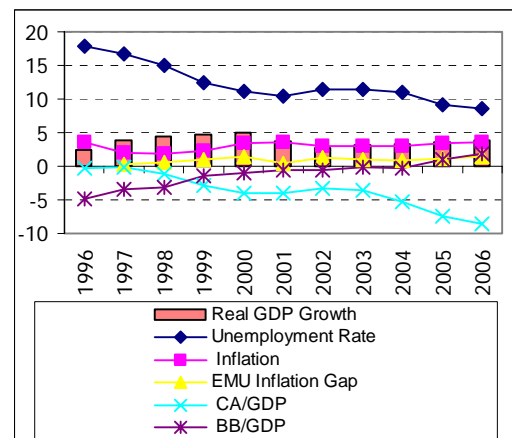
In the second place, the budget deficit and public debt have been reduced considerable since the mid 1990s, as a result of the effort made in order to comply with Maastricht criteria in order to become a member of the EMU and more tax policy rigor.

Correcting these imbalances has been a basic factor in the process of nominal convergence that made it possible for Spain to join the EMU and is also a key factor in real convergence.

In the third place, the gap with the rest of the Euro-Zone remains wide and loathes to decrease. Furthermore, at times when inflationary tensions become more intense (like over the last few months in 2007), the gap rises abruptly, raising persistence of certain structural weaknesses. The presence of rigidities in the goods, services and factors markets and the lack of competition in economic sectors that are not exposed to international competition (services, distribution

industry) contribute to this situation. Moreover, slightly expansive bias on behalf of tax policy also helps to explain the increase in inflation.

Figure 1: Macroeconomic Growth and Imbalances



Source: own elaboration with data from INE and Banco de España

CA/GDP: current account balance in relation to GDP

BB/GDP: budget balance/GDP

The persistent inflation gap that is continuously eroding Spanish companies' and the Spanish economy's international price-competitiveness.

In the fourth place, strong pressure from domestic demand, boosted by the marked increase in private consumption and residential investment (with producer investment also pushing forward in recent years) have continuously contributed to the deterioration of the current account deficit, which has also been fuelled by the decrease in price-competitiveness. While it is true that the Spanish economy has traditionally (since the 1960s) displayed a current account deficit, the situation has deteriorated drastically over the past few years, reaching an all-time high in 2006 (close to 9%).

The growing foreign deficit shows how Spain's borrowing requirements have increased substantially as a result of the country's inability to save in order to finance investment. The increase in government saving has not been enough to offset the increase in borrowing on behalf of households and non financial corporations.

The foreign deficit could be corrected by means of progress in productivity, which would spread to costs thus improving price-competitiveness, or through a depreciation of the real exchange rate.¹⁴ In the absence of exchange rate policy (devaluation/revaluation) due to the disappearance of national currencies in the Euro-zone¹⁵ and if productivity growth does not pick up substantially, it might take an abrupt and prolonged economic slowdown to correct the situation.

In order to correct the imbalances described above, structural reform is required together with suitable demand policy. The process of progressive European integration has restricted the number and scope of economic policies that governments have to influence aggregate demand and correct macroeconomic imbalances. In this sense, Spain does not have control over trade, agricultural, regional or monetary policy. Therefore, fiscal policy remains the government's most powerful tool, albeit with restrictions. This monographic article analyses the nature

¹⁴ Productivity can be boosted by means of tax policy and structural reform that increases market flexibility and competitiveness.

¹⁵ Moreover, the ECB has no objective in relation to the exchange rate, unless it endangers price stability.

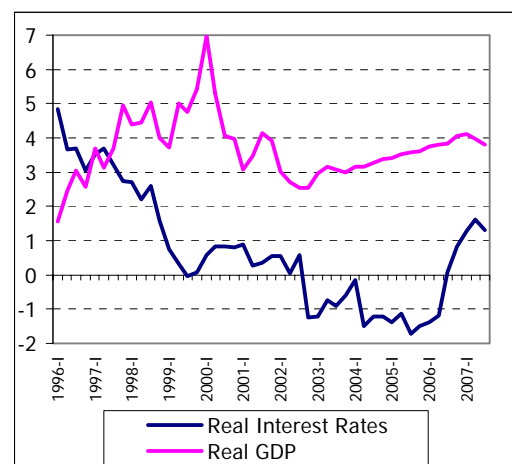
of monetary and fiscal policy in Spain in recent years.

Monetary Policy

After joining the EMU, monetary policy was delegated to the European Central Bank (ECB), which is a politically independent institution which uses money market interest rates to achieve its main objective: price stability in the medium and long term (HICP inflation of no more than 2%). This objective is based on the belief that greatest contribution that monetary policy can make to guarantee growth and employment is to maintain prices stable.

One problem with designing a single monetary policy for Euro-zone countries lies in the fact that there are structural and circumstantial differences (different stages of the economic cycle) among the different member states. As a result, single monetary policy affects countries differently, despite countries becoming increasingly integrated.

Figure 2: Real Interest Rates and GDP growth



Source: own elaboration with data from INE and OCEI

ECB monetary policy has been extremely accommodating over the last few years for the Spanish economy

(even during the period dating from mid 1999 to 2001 when conditions were tightened), thus helping to stimulate growth in domestic demand, particularly residential investment, which has driven economic growth (see Figure 2).

In the period dating from 2001 to the end of 2005, monetary policy was highly expansive for Spain, particularly bearing in mind that the average inflation rate (calculated as the mean of monthly year-on-year rates) in Spain between May 2001 and December 2005, when interest rates set an all-time low, stands at 3.2%, well and truly above the (medium term) objective of 2% (which is for the EMU as a whole).

Monetary conditions have been made progressively tougher since the end of 2005 in order to respond to inflationary tension in energy prices and those of other raw materials and to excess liquidity in a scenario of economic growth exceeded EMU potential. Real and nominal interest rates have risen, while the real effective exchange rate has appreciated on increasing the value of the euro against other currencies.

However, monetary conditions remain accommodating for Spain, as real interest rates rose above 1% in 2007, the first time since 1988. Furthermore, the smooth and generally predictable upturn in interest rates on behalf of the ECB since the end of 2005 has enabled the economy, to date, to steadily moderate domestic demand growth, which is helping to rebalance the contributions made by internal and external demand.

Fiscal Policy

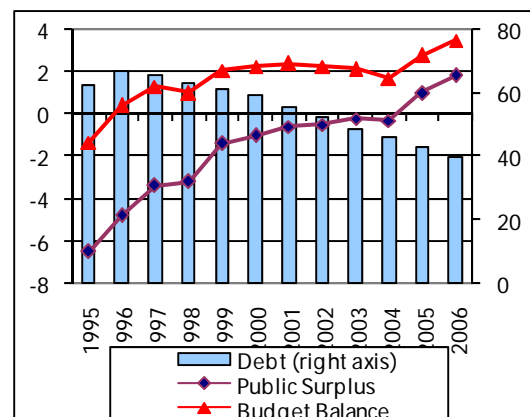
We will now move on to analyse fiscal policy in more detail, as EMU countries have more independence in this domain.

Each EMU country is subject to the limits established by the **Stability and Growth Pact (SGP)**, which (at least theoretically) reduces discretionary spending in national fiscal policy. The main objective of the SGP since its creation is the sustainability of public finances maintaining flexibility to respond to the economic cycle without the budget deficit exceeding 3% of GDP¹⁶. Governments should register surpluses in expansive phases of the cycle.

Fiscal Policy in Spain

Fiscal policy has been slightly more restrictive over the last few years and 2007 is the third year in a row that the government (public administration as a whole) will close with a budget surplus for the first time since the mid 1970s. As a result, debt in relation to GDP has dropped to below 40% (Figure 3).

Figure 3: Public Surplus, Primary Budget Balance (excluding debt servicing) and Public Debt (% of GDP)



Source: own elaboration with data from MEH and Banco de España

However, the persistently high level of inflation and strong domestic demand in recent years, including the public

¹⁶ The ratio of public debt/GDP also has to be maintained below 60%

sector (government spending and investment) suggest that fiscal policy is still somewhat expansive or that at least has been less restrictive than advisable bearing in mind the economic cycle as well as long term goals such as the impact of fiscal policy on the process of demographic ageing.

Consequently, as can be appreciated in Figure 1, fiscal policy appears to have been aimed more at balancing public accounts and guaranteeing bidet stability, without taking into account the cycle. Moreover, fiscal policy has not helped to curb inflation either. As a result, fiscal policy has not played an anti-cyclical role.

Fiscal policy includes all the decisions made by local, regional and the central government in two main areas: government income and expenditure. A more detailed analysis of the main items in government income and expenditure is provided below.

Table A.1 in the Appendix show the structure of government non financial transactions (as a percentage of GDP) in 1996, 2001 and 2006. Gross savings are obtained from the difference between gross available income and effective final consumption expenditure, while borrowing capacity/requirements (government surplus) are obtained from gross fixed capital formation and the sum of gross savings and the balance in capital transfers. Finally, the primary budget surplus represents borrowing capacity/requirements, excluding debt servicing.

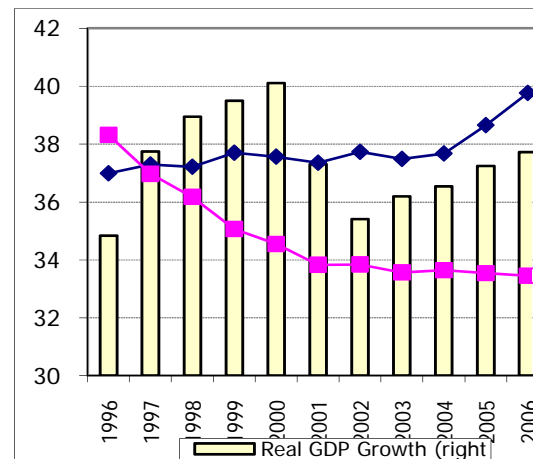
Since the mid 1990s, the government has made a significant effort to balance the books, a move in response to the process of EMU integration and that has benefited from the favourable situation in the Spanish economy in

recent years, which has substantially increased government income (Figure 3). The main characteristics of fiscal policy over the last few years are as follows:

1. Increase in Tax Pressure

Tax pressure has increased by more than three points over the last decade, from 36.6% to 39.8% of GDP (see Figure 4).

Figure 4: Current Income, Current Expenditure (% of GDP) and GDP Growth

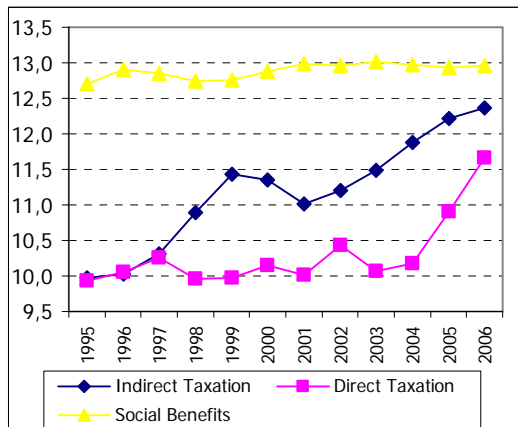


Source: own elaboration with data from MEH and Banco de España

Government income has increased as a result of the marked rise in nominal GDP due to strong real growth and relatively high inflation rates. Hence, both personal and corporate income have risen remarkably. Tax income elasticity in Spain is estimated to be very high as a result, among other things, of the decrease in tax evasion in recent years, the fact that tax brackets were indexed to real inflation late and not enough and the large amount of income obtained from the numerous real estate transactions over the last few years. Furthermore, strong domestic demand has resulted in marked increases in indirect tax income. Finally, social benefits have also

increased significantly (at a similar rate to nominal GDP, thus maintaining their weighting) on the back of a dynamic labour market (see Table A.1 in the Appendix).

Figure 5: Main Government Income Items (%GDP)



Source: Elaboración propia. Datos: MEH y Banco de España.

2. Indirect Taxation Becomes Proportionately More Important

Growth in indirect taxation is seen to outpace that in direct taxation, making the tax system slightly more regressive (Figure 5).

3. Controlled Government Spending, particularly in the 1990s. Since 1993, when government spending exceeded 42.5% of GDP, a significant effort has been made to curb spending. This has finally stabilised between 33% and 34% of GDP in the current decade (Figure 4).

4. Decrease in the Financial Burden and Wage Moderation

The remarkable cutback in government spending was triggered mainly by three factors. Firstly, by the substantial decrease in interest payments as a result of decreases in interest rates and in total government debt, which was particularly large in the second half of

the 1990s (see Table A.1 in the Appendix), as highlighted by the difference between the public surplus and budget surplus in Figure 3. In the second place, wage constraints have reduced the purchasing power of civil servants and thirdly, the control of social benefits.

5. Increase in Government Saving, Moderate Government Investment and a Decrease in the Deficit

Apart from reducing government spending and increasing government revenue (as a percentage of GDP), moderate government investment has also helped to balance public accounts (see Table A.1 in the Appendix). Following the first few years in the 1990s when public fixed investment approached 5% of GDP, this figure dropped somewhat before stabilising at slightly above 3%. Public investment has been seen to rise slightly since 2001 to 3.76% of GDP in 2006. One consequence of this trend is that public saving has been able to finance public investment since 2001.

6. Unequal Effort Made by the Various Public Administrations

The central government and social security have made the most effort to balance their accounts. In contrast, regional and local government expenditure has risen notoriously (particularly in the early 2000s) as a result of the marked rise in public sector employment – see Table 1.

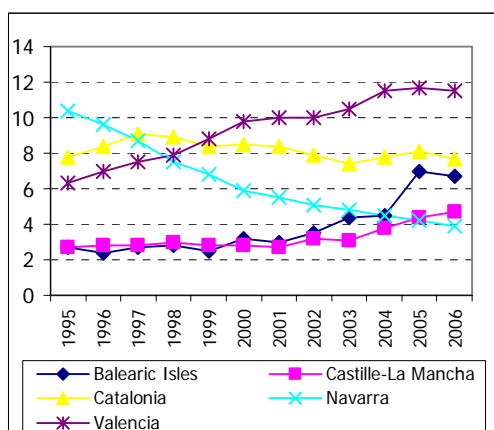
Table 1: Public Administration Total Debt and Budget Surplus (%GDP)

	1996	2001	2006
Budget Balance			
Central Govt.	-3.8	-0.8	0.6
Regional Govt.	-0.6	-0.6	0
Local Govt.	0	0	-0.1
Social Security	-0.4	0.8	1.3
Total	-4.8	-0.6	1.8
Debt			
Central Govt.	55.9	45.9	30.9
Regional Govt.	6.3	6.4	5.9
Local Govt.	4	3	2.8
Social Security	0.6	0.2	0.1
Total	66.8	55.5	39.7

Source: own elaboration with data from MEH and Banco de España

Furthermore, the situation varies a great deal from one regional government to another, although they appear to be converging to a certain extent, as can be appreciated in Figure 6 which includes the evolution of the most and least indebted regions in terms of GDP in 1996, as well as the Region of Valencia, which currently boasts the largest debt in relation to its GDP.

Figure 6: Debt (%GDP) by Region



Source: own elaboration with data from Banco de España

Conclusions

Spanish fiscal policy has been used more to balance public accounts and attempt to guarantee budget stability, regardless of the economic cycle, than to smooth out rough cyclical moments. Fiscal policy has not played an anti-cyclical role in the current upward trend in growth. Therefore, nor has it contributed towards mitigating the inflationary tension sparked by strong domestic demand. Quite the opposite: growth in government spending has generally exceeded real GDP growth, thus contributing to growth, based on domestic demand, and further boosting inflation.

While it is true that the best position from which to confront a shock is one of macroeconomic stability in order to be more flexible and competitive in goods, services and factor markets to help the economy respond. The key issue here is whether or not current fiscal policy should be slightly less expansive. If policy were more anti-cyclical, it would help to slow down domestic demand and rebalance the contributions made by domestic and foreign demand to overall growth. Furthermore, this would help to reduce inflationary tensions in the economy and could help to increase public saving to prepare for the financial impact of the demographic ageing process taking place in Spain.

Despite the Law of Budget Stability setting a limit for increasing government spending (equal to nominal GDP Growth, not potential GDP growth), pressure could mount on government spending for several reasons. In the first place, there is less room for debt servicing payments to decrease due to the recent and expected future rises in interest rates. In the second place, the

government's effort to enhance productivity could lead to an increase in government spending. In the third place, the effect of various social policies being brought in (the "Ley de Dependencia" and baby cheques) and new social measures that will probably come into force in forthcoming months due to how close the general elections are. In the fourth place, due to the behaviour of various local governments that are increasingly independent in areas such as health, education and that have absorbed a large number of immigrants. Furthermore, the budget surplus is expected to decrease as a result of the slowdown in private consumption and residential investment, which will hurt public accounts, and particularly those of regional and local governments.

Silviano Esteve

30 November 2007

	1996	2001	2006
TOTAL NON FINANCIAL INCOME	38.36	37.97	40.40
Current Income	36.99	37.35	39.76
Indirect Taxation	10.03	11.01	12.36
Direct Taxation	10.06	10.01	11.66
Social Contributions	12.91	12.98	12.95
Other	3.99	3.34	2.78
Capital Income			
Capital Transfers, to Be Received	1.37	0.62	0.64
TOTAL NON FINANCIAL EXPENDITURE			
Current Expenditure			
Wages	11.2	10.1	10.04
Intermediate Consumption	4.31	4.29	5.03
Taxes levied on output and imports	0.02	0.02	0.02
Subventions	0.95	1.02	1
Property Gains (interest, other income)	5.23	3.05	1.64
Social Benefits other than Social Transfers in Kind	13.46	11.73	11.49
Social Transfers in Kind	2.14	2.35	2.63
Other Current Transfers	1	1.26	1.6
Capital Expenditure			
Fixed Investment	3.12	3.31	3.76
(Fixed Capital Consumption)	1.57	1.55	1.66
Net Purchases of Non Produced Financial Assets	0.07	0.07	-0.02
Capital Transfers, to Be Paid	1.7	1.42	1.38
SAVING	-1.33	3.53	6.31
FINANCING CAPACITY/REQUIREMENTS	-4.86	-0.64	1.83
PRIMARY BALANCE	0.38	2.39	3.47

Table A.1: Public Administration Non Financial Transactions (%GDP)

4.- Germany & France

1. Fiscal Policy

It must be pointed out that following the creation of the Economic and Monetary Union (EMU), which saw monetary policy placed in the hands of the ECB, fiscal policy has become more important, as it is the only tool that member states have to try to influence the economy.

Furthermore, we cannot ignore the fact that both France and Germany are subject to the fiscal discipline imposed by the Stability and Growth Pact (SGP), which regulates fiscal policy in the EMU.

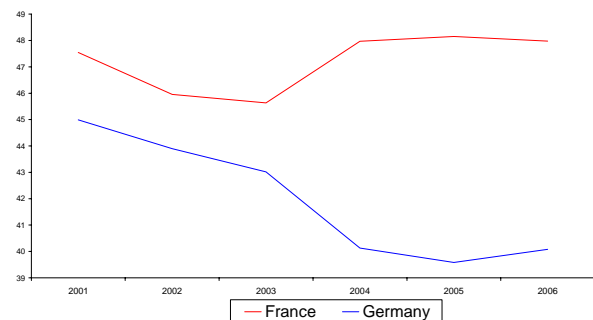
Government Spending and Public Sector Size

It is a well-known fact that government spending as a percentage of GDP is often used as a measurement of the size of the public sector. Well, in this domain, France and Germany record high percentages which are in both cases above 45% in the first year of the sample period. If we bear in mind that the average percentage for OECD countries stands around 40%, such high percentages indicate that both economies are developed and enjoy highly advanced social welfare states.

However, the two countries have registered opposite trends in this area. While the ratio dropped at the beginning of the period in both cases, the trend in France reverted from 2003 onwards and the ratio surpassed 48% in 2006. As regards Germany, the public sector has shrunk further, taking the ratio in terms of GDP to only slightly above 40%, near the average for the OECD. This trend in Germany is particularly impressive in that it has occurred in a scenario of economic crisis, considering the standard anti-

cyclical nature of this variable. In this sense, the diverging trends in the two countries stands out, bearing in mind that both are subject to the SGP, as mentioned previously.

Figure 1: Government Spending/GDP



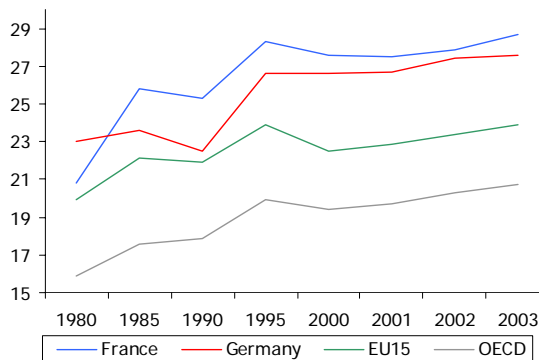
Source: OECD

In any case, public social expenditure is prevailing in terms of recent fiscal policy. In this sense, public social expenditure is taken as a better indicator of the *quality* of fiscal policy than total government spending. The long run trend displayed by this variable is presented in Figure 2 and we can see how public social spending has risen as a percentage of GDP in all the countries under consideration. France and Germany register scores above the average for the European Union and the OECD throughout the entire period, due to the advanced and mature nature of their economies. While the average score for the OECD and the EU in 1980 stood at 16 and 20 approximately and respectively, France scored 21 and Germany 23.

Moreover, this ratio has increased in all cases over the period under study, almost certainly due to this variable receiving greater attention. In the case of France and Germany, which are the two countries we are interested in, public social spending has increased even more rapidly, which explains why the gap with regard to other countries

has widened. In 2003, France and Germany registered ratios of around 27, the French score being the highest. Nevertheless, Germany can be praised for at least maintaining the ratio of public social expenditure over GDP during this period, considering that total spending over GDP has dropped. This means that non social expenditure items have become less important in German budgets over the last few years.

Figure 2: Social Spending/GDP

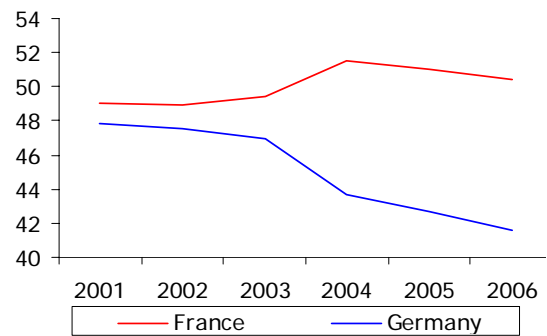


Source: OECD

Government Income and Taxation

Total government revenue in relation to GDP in both countries has recorded a very similar pattern to that observed above in government spending, as is to be expected. In this sense, the same divergence as before is visible: German government revenue as a percentage of GDP has decreased, while in France this variable decreased at the beginning of the period before returning to its initial level at the end of the period, 48%. The German ratio dropped from nearly 45% to nearly 40%. It can therefore be confirmed that the German public sector has *shrunk in size* over this decade.

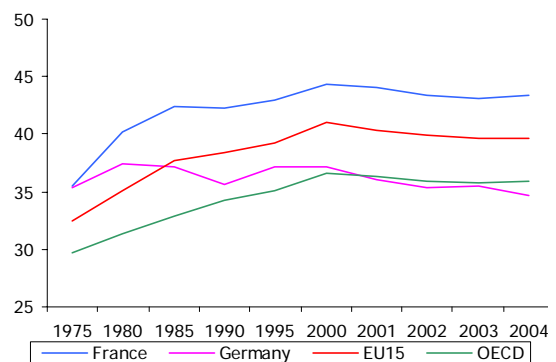
Figure 3: Government Income/GDP



Source: OECD

As regards tax pressure, it must be taken into account that in 1975 both countries displayed particularly high percentages (35%) in comparison to the other economies under consideration. Since then, tax pressure increased in all countries up to 2000, with the exception of Germany, where the figure remained close to the initial figure 35%. Since 2000, tax pressure has stabilised in all economies, displaying a slightly downward trend in all economies that is more pronounced in the case of Germany. At the top end of the EMU, tax pressure in France at the end of the period (over 43%) was particularly striking, when in Germany the percentage has dropped below the average for the EMU.

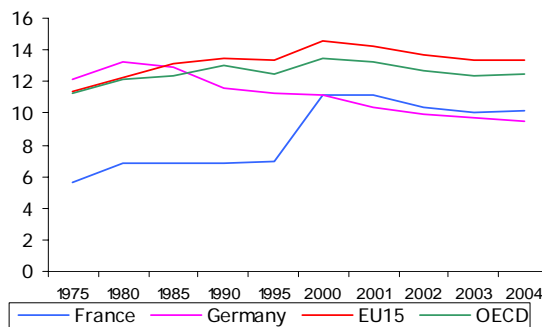
Figure 4: Tax Pressure



Source: OECD

In reference to tax pressure on income and profits, the low ratio in France at the beginning of the period stands out, while Germany was slightly above the averages for the EMU and the OECD at the same time. Since then, tax pressure has risen spectacularly in France, mainly during the second half of the 1990s, in line with the overall trend of the two groups of countries under consideration. However, in Germany this ratio has recorded a clearly downward trend since the beginning of the 1980s, which saw it drop below its French counterpart in 2004.

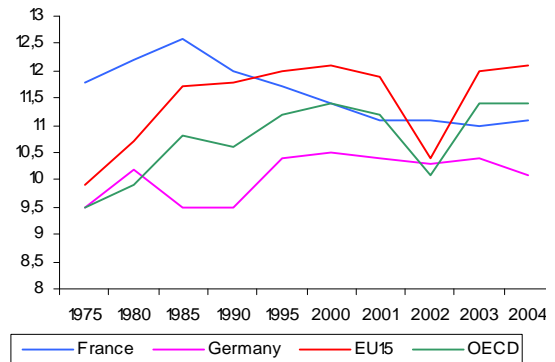
Figure 5: Tax Pressure on Income and Profits



Source: OECD

Tax pressure on goods and services has varied a great deal across the countries being studied. In the first place, France began the period with a particularly high ratio, while Germany was in line with the average for the OECD and slightly below the average for EMU countries. Since then, the averages for the two groups of countries have increased, apparently stabilising in 2000, although a strange fall was observed in 2002. In contrast, tax pressure on goods and services in France displays a clearly downward trend, stabilising in 2000 around the initial ratio recorded by Germany.

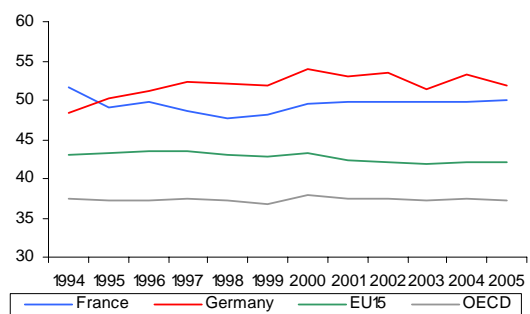
Figure 6: Tax Pressure on Goods and Services



Source: OECD

As regards the tax levied on work, as a percentage of labour costs, it is worth highlighting how stable this variable has remained across the board. France and Germany stand out with high percentages of around 50% or slightly higher, when the average for the EMU is below 45% and that of the OECD below 40%.

Figure 7: Taxes on Average Worker as a Percentage of Labour Costs



Source: OECD

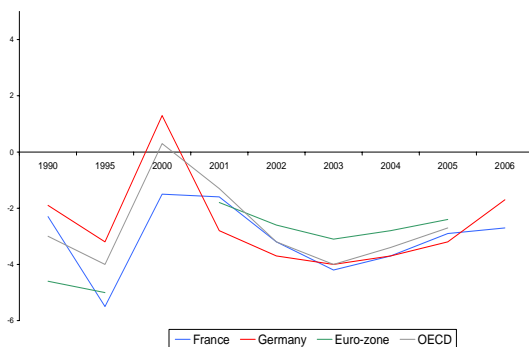
Public Deficit

In relation to the public deficit, the trend observed in all the countries in under consideration has been similar since 1990. Deficits have normally been recorded, except in 2000, when the economic recovery in the second half of the 1990s enabled countries to balance public accounts. In this sense, the signing of the Stability and Growth Pact

does not appear to have had any effect on public accounts in France and Germany, judging by the trend that can be observed¹⁷. The trend displayed by these two countries and the EMU as a whole, is similar to that of the average for the OECD, which means that the situation in Germany and France is more due to the economic cycle than to poor management.

In any case, it is worth highlighting the fact that both France and Germany had smaller deficits (around 2% of GDP in 1990) than the rest of countries in the sample. Following a slump in the early 1990s, the economic recovery during this decade led Germany to record a surplus in 2000 and France to improve its situation, ending the decade with a deficit of 2% once again. Later, the effect of the crisis resulted in the situation deteriorating in the first few years of this century, although both countries now appear to be recovering.

Figure 8: Public Surplus/Deficit as a Percentage of GDP



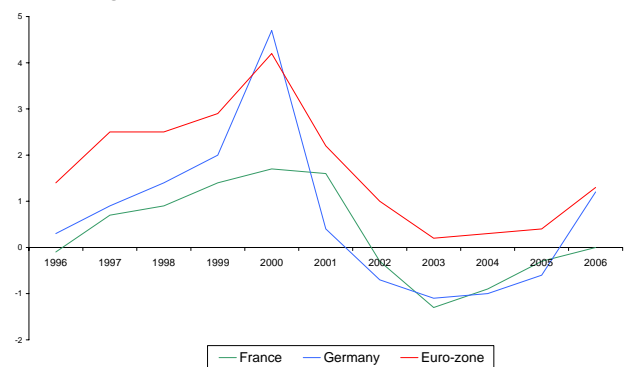
Source: OECD

Notwithstanding, examining the trend of the primary budget surplus/deficit seems a better way of analysing fiscal policy, as it does not take into account public debt interest payments. That is,

¹⁷ Although one wonders if the situation of the public accounts in both countries would have been worse had they not signed the SGP.

it is a better indicator of policymakers' intentions in this domain. The trend displayed by this variable confirms the conclusions reached above for both France and Germany. In the first place, both countries recorded growing surpluses at the end of the 1990s, as was the case for the Euro-zone as a whole. Germany increased its primary surplus to 4.7% of GDP in 2000, while France boasted a 1.7% surplus in the same year. From this point onwards, the impact of the economic crisis deteriorated public accounts until 2003, when both France and Germany registered deficits of more than 1%, recovering since then. This recovery saw France balance its budget in 2006 and Germany record a 1.2% surplus in the same year.

Figure 9: Budget Surplus/Deficit as a Percentage of GDP



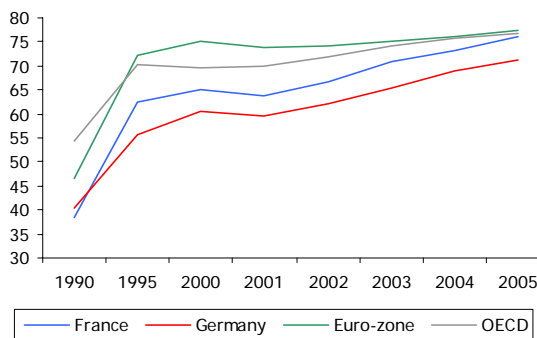
Source: OECD

Public Debt

All the trends commented on previously can be summarised by the evolution of public debt. The trend this variable has displayed is presented in Figure 10. France and Germany recorded similar trends to the averages for the Euro-zone and the OECD throughout the period under consideration. It is worth highlighting the fact that this trend has been upward throughout the period. France and Germany had very similar

public debt/GDP ratios of around 40% in 1990, well below the overall averages for the groups of countries being studied. From this point onwards, the crisis in the early 1990s saw debt increase dramatically up to 1995, from which time the increase moderated. Nevertheless, debt continued to increase up to 2005. It is worth underlining the fact that the economic crisis in the early 2000s did not result in debt shooting up in France or Germany, although the gap with respect to the two averages had narrowed in 2005 with respect to 1990. In 2005, France recorded a public debt/GDP ratio of 76.1%, while in Germany public debt represented 71.1% of GDP.

Figure 10: Public Debt/GDP



Source: OECD

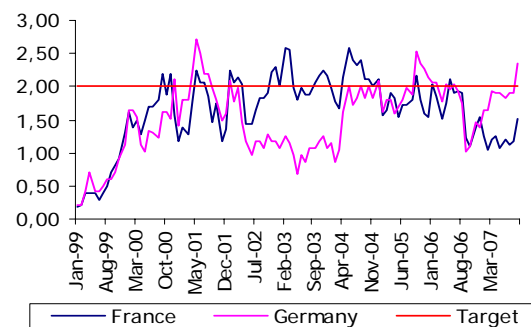
Monetary Policy

As far as monetary policy is concerned, the first thing that should be pointed out is that it is in the hands of the European Central Bank and should be interpreted accordingly, as policy is designed to attend the overall situation of the EMU as a whole and not the individual situation in France or Germany.

In any case, the ECB itself states that the objective of its monetary policy is to maintain inflation below 2%. Therefore, our first task is to see whether or not this objective has been accomplished in

the countries under consideration. As can be appreciated in Figure 11, generally speaking the conclusion is that price stability has been achieved in the case of the two economies being focused on. The inflation in France and Germany has only surpassed the target rate of 2% temporarily. In fact, if the period in the late 1990s is ignored, the most striking aspect of Figure 11 is the period between 2002 and 2004 during which time Germany recorded very low inflation rates that were a cause for great concern among policymakers and led many analysts to consider the possibility of deflation. The extremely low inflation rate in France since mid 2006 is also striking. Nevertheless, both these episodes can be attributed to the individual situation of each economy at the time.

Figure 11: Inflation

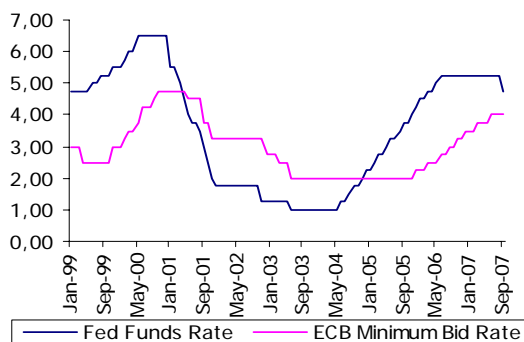


Source: ECB

In any case, when it comes to evaluating the monetary policy employed by the ECB, the picture that has become the most popular is the comparison between the interest rates set by the ECB and those established by the Federal Reserve. This is particularly the case because the ECB has been accused of imposing much more rigorous monetary policy than the FED. This picture is presented in Figure 12 and two conclusions appear to be confirmed. In the first place, the Fed Funds Rate displays a much more

pronounced trend than the ECB minimum bid rate, that is, interest rates have recorded more extreme levels. In this sense, unless the US cycle is more volatile than the European cycle, the FED seems to react more actively to the economic cycle than the ECB. In the second place, Fed interest rates move before ECB rates, to the point that the former could be a good predictor of the latter. Once again, unless the North American cycle anticipates the European cycle, which is still to be demonstrated, the FED seems to react to cyclical developments more quickly than the ECB. All the points mentioned above appear to indicate that the FED is much more flexible and less cautious when it comes to making monetary policy decisions than the ECB. In any case, these conclusions should be taken carefully until they are confirmed or rejected by research and formal empirical evidence.

Figure 12: Interest Rates in Europe and the United States

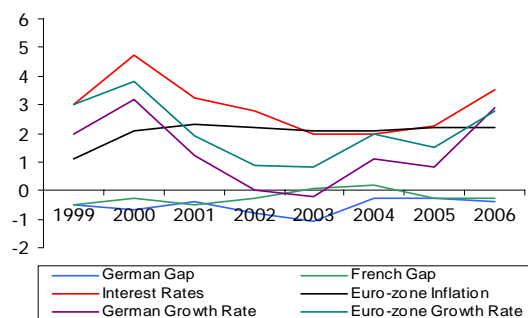


Source: ECB

Another accusation levelled at the ECB is that, in light of the differences regarding the behaviour of the different EMU member states, monetary policy, aimed at combating inflation in the most buoyant economies has damaged those countries where economic growth was not as strong, such as France and Germany. While this is very difficult to

test, we will try to do so by examining the inflation gaps of the two countries with respect to the Euro-zone, together with their growth rates and the pattern followed by the interest rates set by the ECB. This information may be found in Figure 13, where the average inflation rate for the Euro-zone is also displayed.

Figure 13: Inflation, Interest Rates and Growth in France and Germany



Source: ECB

Some conclusions can be drawn from the graph above. In the first place, the slower economic growth in France and Germany in relation to the average for the Euro-zone is reflected by the fact that their inflation rates have been lower than the average inflation rate for the Euro-zone throughout practically the entire sample period, giving rise to negative inflation gaps. Note that this means that real interest rates in both countries are generally positive and higher than the average rate in the EMU, providing effective and expected inflation correspond. However, this is not the result of ECB policy, which is guided by the community inflation trend, but rather the fact that French and German prices have behaved differently.

In the second place, the pattern followed by the minimum bid rate set by the ECB does not appear to be linked to inflation in the two countries. As a result, ECB monetary policy can be

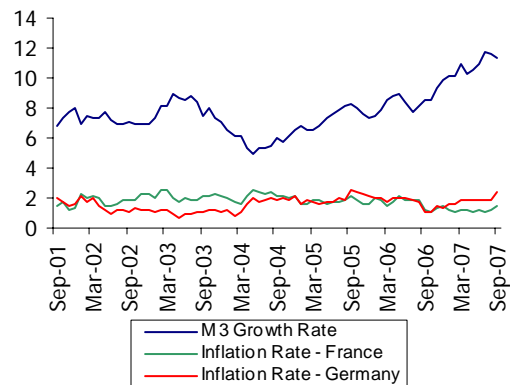
seen to have been counterproductive on some occasions in terms of the inflation in both economies. This is what happened between 2000 and 2003 when the ECB did not stop reducing interest rates while inflation in France rose in relation to the average for the Euro-zone. A similar situation was observed between 2003 and 2004, when the minimum bid rate remained unchanged when inflation in Germany gained ground on the average for the Euro-zone. In both cases it is worth noting that ECB monetary policy was particularly expansive for both countries, in light of the fact that their inflation rates were different to the rest.

In the third place, the pattern of the interest rates set by the ECB runs parallel to the trend of real growth in both economies, which seems logical as price tensions should accompany economic growth. Therefore, the monetary policy performed in Europe does not appear to have been especially detrimental to France or Germany. In fact, the only conclusion that can be drawn from the graph above is that ECB monetary policy appears to have been exclusively designed to achieve price stability in the Euro-zone and, as a matter of fact, the ECB has been enormously successful as can be observed by the average inflation rate in the Euro-zone over the period.

In addition, one further trait of European monetary policy can be highlighted. It is a well-known fact that the ECB expresses a great deal of concern over the trends of monetary aggregates. The reason can be appreciated in Figure 14, which shows the M3 growth rate and the inflation rates in France and Germany. As we

can see, since halfway through 2004, the M3 growth rate has not stopped rising, while the inflation rate in both France and Germany has remained relatively stable¹⁸. This gradual but continuous rise in the M3 has been a real cause for concern on behalf of the ECB, in light of the long term relationship that exists between money and prices. Nevertheless, the risk of a marked upturn in prices is not visible to date¹⁹. In any case, the ECB's concern over this issue is understandable. Should the situation continue in the future, further research will have to be carried out.

Figure 14: Money and Inflation



Source: ECB

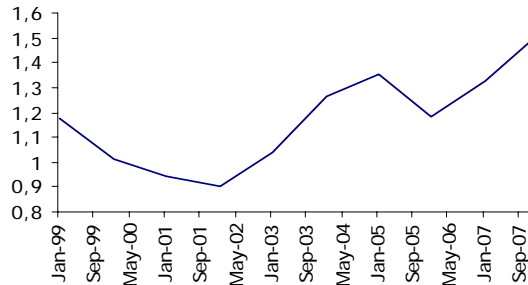
To conclude, Figure 15 displays the pattern of the euro-dollar exchange rate from the time the ECB was constituted, in light of the relationship between this variable and monetary policy. As can be appreciated, except for the beginning of the period and in 2005, the euro has appreciated continuously with respect to the dollar. The trend with regard to other

¹⁸ Together with the inflation rate in the Euro-zone, as can be appreciated in Figure 13.

¹⁹ While not included in the graph, other countries also fail to show a worrying upward trend in this sense, at least to date.

currencies such as the Chinese yuan has been similar. This trend, in light of how damaging it is for European exports, has seen the ECB receive a great deal of criticism, as many analysts have suggested that the ECB should be more concerned about the exchange rate trend. In any case, the performance of the German external sector backs the ECB's attitude, albeit true that the situation could change if the euro remains as strong in the future. Notwithstanding, it cannot be forgotten that some analysts have insinuated, in response to given moves made by the ECB, that monetary policy is more aimed at maintaining a high exchange rate than maintain price stability.

Figure 15: Euro-Dollar Exchange Rate



Source: ECB

Further Policies

While France is ranked 31st out of 178 countries by the World Bank in 2008 in terms of business and property right protection policy regulation, Germany is ranked 20th. Therefore, as was to be expected, both economies are at the top end of the list, although both could perhaps have been expected to be higher up this ranking.

Table 13: France and Germany in "Doing Business 2008" elaborated by the World Bank

	France	Germany
Ease of doing business	31	20
Starting a business	12	71
Dealing with licences	17	16
Employing workers	144	137
Registering property	159	47
Getting credit	36	3
Protecting investors	64	83
Paying taxes	82	67
Trading across borders	25	10
Enforcing contracts	14	15
Closing a business	32	29

Source: World Bank

In any case, as can be observed in the table above, France was ranked strikingly low by the report in terms of employing workers, registering property, protecting investors and paying taxes. The same occurs with Germany, although the ranking obtained for registering property is much higher than in the case of France. However, Germany is ranked well down in terms of starting a business, which is not the case in France.

Finally, the report points out that France is currently carrying out positive reforms in the field of registering property and granting loans, while Germany, despite carrying out positive reforms for starting a business, is also carrying out a negative reform in the domain of registering property.

Conclusions

In summary, fiscal policy in France and Germany is a clear example of two developed and mature economies with a broad social welfare state. In this domain, data indicate that Germany's management of fiscal policy has been better than France's across-the-board since the year 2000.

As regards ECB monetary policy, the most striking aspect is the price stability that has been accomplished without signs of being especially damaging to French or German interests.

To conclude, it would be a convenient for both countries to take their supply policy a step further.

Antonio Cutanda
Valencia, 28 November 2007

5.- China

Despite the fact that the Chinese government accomplished many of the objectives outlined in the recently released 11th Five-Year Plan, there are still problems pending solution:

1. Contradictions in the economic structure: sectors are growing out of proportion, social inequalities between urban and rural areas are increasing as well as between geographical regions, and excess investment to the detriment of consumption.
2. Widespread economic growth with high energy consumption and serious environmental pollution.
3. Social issues pending solution: medical services, guaranteeing education and housing, income distribution and land expropriation among others.

At the beginning of 2007, in the "Government Work Report", a series of economic measures were established aimed at solving the shortfalls in the past. More specifically, the following policy moves and economic measures were listed:

1. Maintain macroeconomic policy stability and continue applying cautious fiscal and monetary policy.
2. Strengthen and enhance macroeconomic control, particularly in the field of fixed investment, loans and fostering equilibrium between overall supply and demand in the economy.
3. Increase the quality and profitability of economic growth, concentrating on saving energy resources and protecting the environment among others.

4. Give more importance to social development and improve the standard of living of Chinese people.

The government is trying to enforce these somewhat broad measures through a series of economic policies. Those we consider to be the most important are detailed below:

- Moderate Fiscal Policy

In terms of fiscal policy, it is worth highlighting the following objectives the government has set:

- Reduce the fiscal deficit and long term State bond issues to be channelled to construction
- Increase the amount of State investment in: improving living and production conditions in rural areas, basic education, public health, other social services and provide further support for energy saving, environmental protection and independent innovation.
- Ration tax income surpluses by creating a fund to stabilise and regulate the central government budget.

At the end of November, the Chinese government passed a bill stipulating that 1.35% of GDP will be channelled towards protecting the environment over the next three years. The public sector calculates that a total of 640 billion yuan (85,330 million dollars) will be spent on treating polluted water, 600 billion yuan (80 billion dollars) on air pollution and 210 billion yuan (28 billion dollars) on treating solid waste.

Likewise, the government has also decided to significantly increase fines for polluting. This effort is mainly

aimed at protecting sources of drinking water, which are current under threat.

- Moderate Monetary Policy

Monetary policy focuses on a series of objectives, of which the following figure prominently:

- Encourage banks to increase loans in support of farming, SMEs and initiatives related to energy saving, environmental protection and innovation.
- Achieve market interest rate regulation.
- Perfect the renminbi's exchange rate fixing mechanism.
- Improve currency control, as well as using reserves more rationally.

Government monetary policy moves in China are not at all effective. One of the reasons is the lack of control of capital accounts, in that massive inflows of funds for speculating are making interest rate movements, among others, inefficient.

The report by the PBC on the money market in October indicated that the first nine months of 2007 had navigated calm waters. In our opinion, this description is too soft, as the country has an enormous excess of liquidity together with a boom in loans that is not responding to government attempts to control it.

The PBC said the main reasons behind the excess liquidity in China were the continuous surplus of international payments, the high proportion of savings and low consumption. As a result, the government is trying to solve these problems and in order to do so, raised the obligatory reserve ratio for trading banks for the ninth time in 2007 to 13.5%, the highest in ten years.

As regards monetary policy, it is also worth mentioning that state bond issues rose by 67.03% between January and October, compared to the same period in 2006. This means that the government borrowing a great deal of money at fixed interest rates by means of these assets.

Interest rates display an upward trend and further rises are expected before the end of the year in an attempt to curb investment and economic growth.

- Adjusting consumption and investment

The income distribution system will have to be reformed. In order to achieve this, the government plans to adjust the minimum wage, the mechanism used to raise wages regularly and reform the civil servant wage system. Plans have also been made to promote tourism, culture and recreation.

- Growth in fixed assets

The enormous amount of money invested in fixed assets in the Chinese economy has seen the government seek higher yields. In order to achieve this, the government will continue to control not only land use and loans but also new projects will be approved.

The new guidelines for FDI were published at the end of November. They detail the sectors in which FDI will be restricted, prohibited or promoted.

- The government will promote investment that helps to conserve the environment, reduce pollution and develop renewable fuels. Moreover, FDI is also promoted in high technology and advanced materials in order to boost innovation and promote the restructuring of industry in order to

mitigate regional imbalances. This FDI will receive preferential tax treatment.

- Those projects that imply the use of non renewable minerals are to be prohibited, together with foreign investment in small and medium-sized refineries.

- Promote the real estate sector

In order to promote the sector in the healthiest and most stable way possible, the government has decided to: improve and regulate the cheap functional housing system, maintain prices at a reasonable level and regulate the market for raw materials.

- Develop agriculture

This measure focuses on fostering a modern primary sector and promoting the construction of a new agro socialist. The government has decided to reinforce its policies in support of agriculture by raising subsidies and applying minimum price fixing policies. More specifically, this effort is concentrating on:

- Strengthening controls, monitoring and regulation of production, consumption, stocks and also grain imports and exports.

- Raise farm production capacity by building agricultural facilities, improving technical equipment and booster scientific farm research.

- Build hydraulic facilities, paths and electricity and telecommunications networks...

- Increase rural worker income

- Promote rural worker training

- Reform of State-run Companies

These measures are aimed at further reforming public companies by means of:

- Promoting the reconversion of these companies' shares

- Improve the monitoring and administration of State assets

- Close the State companies that are not profitable

- Concentrate State capital in key sectors in the economy

- Reform of Fiscal and Tax Systems

In order to promote changes in terms of fiscal policy, the following measures are planned:

- Unify taxes levied on foreign and national companies

- Perfect the fiscal transfer of payments system

- Establish a regulated system of non-tax government revenue

- Reform of the financial system

In this area, the government plans to bring forward the reform by:

- Further reforming State-run banks

- Developing financial institutions adapted to rural needs

- Continue reforming the insurance sector by extending services and improving their ability to prevent risk

- Promote the opening up of the financial sector to foreign competition

- Reduce the excessive surplus

The government seeks to optimise foreign trade. In order to do so, the public sector has decided to support the

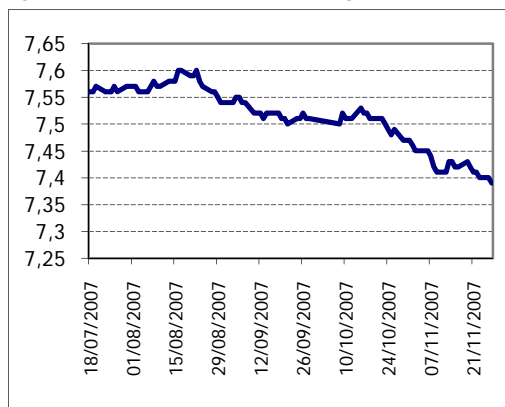
exportation of products with their own brand name or with a high level of value added, controlling those that imply a high level of energy consumption.

- Exchange Rate Policy

Similarly, the reform of the exchange rate regime carried out by the PBC over the last five years is also worthy of special attention. In the first place, steps have been taken to increase the role of the market in determining the exchange rate, by increasing the variety of exchange rate products and widening the renminbi's daily floatation range.

In the second place, people and companies may now hold and use foreign currencies and financial and domestic capital markets have also been deregulated. Finally, financial institutions have cooperated actively in promoting private consumption by improving access to credit and by providing a greater range of financial products.

Figure 1: Yuan/Dollar Exchange Rate



Source: Invertia

Chinese exchange rate policy plays a highly important role in the economy since July 2005 when the yuan was revalued. At the time, the currency

moved from 8.28 yuan to 8.11 yuan to the dollar. Currently, the yuan/dollar exchange rate stands at 7.39, that is the yuan has now appreciated by more than 9% since 2005. However, western superpowers still consider this revaluation to be insufficient.

The value of the yuan is based on a basket of currencies which are not entirely known and which allows a daily fluctuation of 0.5% (initially 0.3%).

Western superpowers have been exercising continuous pressure on China to make the yuan more flexible for a long time now. At a recent meeting of the G20, there was an explicit petition regarding an increase in the yuan's exchange rate fluctuation. The United States and Europe accuse China of maintaining their currency artificially low thus giving the Asian giant a significant advantage in terms of international trade. Some economists dare to say that the yuan is up to 40% below its real value.

In addition to this, the largest countries defend the idea that a stronger yuan would help China to grow in a more balanced and sustainable way, particularly considering the current situation in which the country is suffering an upturn in the current account surplus and inflation.

The Chinese government, in order to calm down the West, announced that the exchange rate of the yuan would be dictated by market forces, but did not say when this step would be taken.

The yuan has behaved differently with respect to the euro. While the exchange rate in 2005 stood at 10.41 yuan to the euro, it is currently even cheaper than then for Europeans (10.72 yuan to the euro).

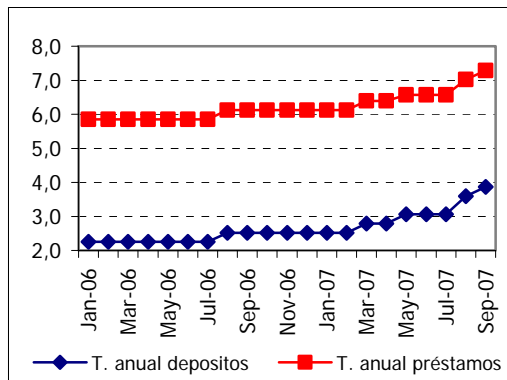
In short, all these steps are aimed at achieving the Government's main economic policy objective over the last few years: promote sustainable development, a task which is considered basic in order to improve the standard of living of Chinese people.

The PBC on the other hand, in support of this goal and as mentioned previously, is making an effort to slow down the expansion in investment and loans. The central bank has toughened up loan conditions, issuing PBC bills and increasing the cash rate, as well as reference loan and deposit rates.

in loans to remain below 13% with respect to those granted in 2006.

M^a Luisa Martí Selva
Rosa Puertas Medina
Valencia, November 28, 2007

Figure 2: Interest Rates



6.- Mexico

Monetary Policy

The Bank of Mexico was founded in 1925, initially in response to the need to issue bank notes. However, the Mexican Constitution charges the central bank with the task of maintaining the stability of the national currency's purchasing power.

For this reason, the bank's main function is to provide the Mexican economy with currency, as well as to ensure price stability.

One move that went a long way towards the accomplishment of the second objective was undoubtedly the independence the bank was granted in 1993.

Legal reserve requirements were first used in 1926 and mainly sought to protect deposits. The obligatory reserve was abolished in 1991.

One year after becoming an independent institution (in 1994), the Bank of Mexico stipulated that the inflation rate in Mexico should be similar to that in the United States, the country's main trading partner.

Since 1996, the central bank has included a target inflation rate in all its annual monetary programmes.

The Bank of Mexico does not have direct control over prices, which are determined by market forces. However, it does have an indirect influence through the mechanisms it uses to enact its monetary policy, which affect liquidity in the economy and, in turn, interest rates and aggregate demand, which do have a final repercussion on prices.

The Bank of Mexico adopted a strategy in 1999 known as "Inflation Objectives", which was first used in 1990 in New Zealand and which is linked to the monetary base. This is considered an intermediate objective. However, the bank announced that it would not come into force until 2001.

In order to reinforce its inflation objectives, the bank announced it would measure core inflation in 1999. This methodology was also applied to earlier years and information now dates back to 1983.

The Bank of Mexico also established a medium term target inflation rate in 1999, which was set at 3%. In 2001, the "inflation objectives" programme was made official and included the 3% target rate (+/-1%), which has been since made permanent.

More precisely, the Bank of Mexico set itself the goal of reducing inflation to 3% by December 2003, but was unsuccessful.

The "inflation objectives" programme remains in force today and includes the following main features:

- The main objective of monetary policy will be to maintain price stability
- Establish and announce short and medium term target inflation rates
- Consolidated independent monetary policy maker
- Open communication strategy with regard to objectives, mechanisms and policymaking decisions in the interest of monetary policy transparency
- Evaluate the future pattern of prices by continuously analysing

all the potential sources of inflationary pressure

- The use of alternative methods to measure inflation, such as core inflation, in order to identify the phenomena that momentarily affect inflation and to situate the medium term trend in terms of price movements

This programme is based on the independence of the central bank when it comes to both analysing and evaluating the causes of inflation, as well as setting short and medium term inflation objectives together with transparency and reporting.

When Monetary Policy Acts

Pressure on prices can stem from both supply and demand. According to the inflation objectives programme, Bank of Mexico mainly acts when the pressure comes from demand. In this case, monetary policy is tightened in order to control inflation.

On the contrary, when pressure comes from supply, reflected by changes in relative prices, Bank of Mexico considers the situation to be momentary or temporary and that prices will eventually return to their original level. As a result, the bank does not intervene. Only if the bank believes a situation could contaminate the outlook for inflation will monetary policy be made tougher.

Monetary Policy Instruments

Bank of Mexico has used two basic instruments since 2004 through which it signals the stance it will take in terms of monetary policy.

One of these instruments is known as the "corto" (the reserves that banks

must deposit in accounts at the central bank – hereafter referred to as the reserve ratio) and the other involves informing agents via press releases about monetary conditions and the changes in the bank's monetary instruments aimed at achieving the target inflation rate.

The "tasa de fondeo bancario" (Mexico's reference interest rate, hereafter referred to as the *cash rate*) is also used to send out signals and influence interest rates.

Monetary policy is enforced through these instruments and is always aimed at achieving inflation objectives, as it affects the monetary base and the liquidity in the system.

When the central bank wants to raise or lower interest rates, it manipulates the supply of money. That is, the bank carries out open market transactions in both the primary and secondary markets.

The Bank of Mexico, with the aim of both interest rates and the exchange rate being determined by the market, adopted a system called "encaje promedio cero" (zero-average reserve in English) and an objective for central bank reserve requirements.

Changes in reserve requirements and the cash rate alter interest rates, which at the same time affect aggregate demand and later prices.

The End of the Reserve Ratio

The reserve ratio has been a highly useful instrument for the Bank of Mexico in its task of guiding monetary policy. It has enabled market shocks to be distributed and absorbed by moving both short term interest rates and also the exchange rate.

As a result of the economic crisis at the end of 1994, which took full hold in 1995, it was in March that year when the system of accumulated reserves was brought in, which became overnight reserves from April 10 2003 onwards.

The crisis saw reserve requirements used for the first time as an instrument of monetary policy to send signals out to markets and influence, to a certain extent, the determination of interest rates.

Credit institutions have to be holders of a sole account at the Bank of Mexico. This account should have a zero balance at the end of the day's trading. A negative balance is "penalised" with a charge of twice the daily interbank interest rate.

If the balance is positive, no prize is given. In fact, the credit institution will lose the yield represented by the opportunity cost, which it could have earned had those extra funds been invested at a similar rate of interest to that prevailing in the market.

For this reason, in both cases the net cost is approximately once or part of the market interest rate.

When the Bank of Mexico decides to change its monetary policy, it modifies the reserve requirements, which becomes a signal to the market of the stance of the central bank.

Even when the reserve requirements are modified, the central bank satisfies the market's demand for liquidity at all times. However, a small fraction is satisfied by means of a variation in the balance of commercial bank accounts, either by means of an overdraft or by increasing the balance in the account.

The overdraft, created by the new reserve requirements, is penalised as described above, with the equivalent to double the market interest rate, which provokes an increase in short term interest rates.

By using the reserve requirements, what the central provokes is not providing banks with all the resources they demand at market interest rates.

This instrument is only modified when the Board of Governors of the Bank of Mexico detects monetary conditions that are not compatible with or may lead the economy away from the target inflation rate.

When the Bank of Mexico observes inflationary pressure, it increases reserve requirements, which tightens its monetary policy, making it less accommodating, as nominal short term interest rates rise, thus influencing price trends.

An increase in interest rates can also reduce credit and restrict its supply. It can also result in the exchange rate devaluating less or even appreciating. However, it is worth remembering that a floating exchange rate in particular is influenced by other elements apart from monetary policy.

When there is no inflationary pressure, and conditions are favourable for prices, reserve requirements are reduced, providing more liquidity at the interest rate prevailing in the market, which results in more accommodating monetary policy that leads to a decrease in short term interest rates.

For this reason, reserve requirements are used by the Bank of Mexico to induce movements in interest rates, thus making it possible to spread the

effects of inflationary across interest rates and the exchange rate.

Reserve requirements amount to 79 million pesos a day, and have remained unchanged since 23rd of March 2005.

It is also worth indicating that the Bank of Mexico intervenes every working day of the year in the money market, from 12pm onwards, by means of reports, loan or deposit auctions and in the purchase and sale of government bonds, by setting the quantity while the market determines interest rates.

Later, between 6:30pm and 7:30pm, and once the results of the chambers of compensation have been applied to credit institutions' accounts, the Bank of Mexico opens its system in order for banks to be able to exchange funds, intervening with loan or deposit auctions in order to offset the differences and, as a result, comply with the objective established in terms of "total overnight balances".

In order to become a short term creditor on the money market, the Bank of Mexico seeks to structure its liabilities with financial institutions in the long term.

These liabilities take the form of both voluntary and obligatory monetary regulation deposits, by means of issuing Federal Government Development Bonds (BONDES) and Monetary Regulation Bonds (BREMS).

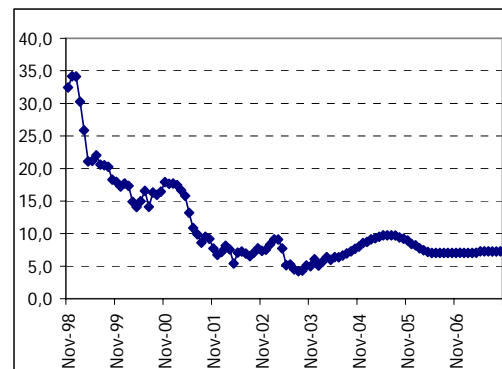
For example, if the central bank wishes to lower interest rates, it injects money into the market, that is, it injects liquidity into markets by buying short term government debt. In contrast, if the bank wants to raise interest rates, it can reduce liquidity by selling short term government debt.

The reserve requirements, which up to now had been the main monetary policy instrument used by the Bank of Mexico, will be replaced by the cash rate (overnight interbank interest rate) from 21st of January 2008. The bank has indicated that this change will have no effect on its monetary policy stance.

Cash Rate

The cash rate, or interbank interest rate, is obtained from the overnight loan market and determines the cost of money.

Figure 1: Cash Rate, Monthly Average 1998-2007



Source: elaborated with information from the Bank of Mexico

This rate moved very much in sync with the changes made by the FED. For example, the overnight rate rose by more than 500bp in 2004 and the first half of 2005, due to Mexico's monetary policy being linked to the changes made by the FED.

However, from August 2005 onwards, the rate has been seen to "depair". While the FED raised its reference interest rate, a decrease in the cash rate was observed in Mexico.

As mentioned previously, the cash rate will become the Bank of Mexico's main monetary policy instrument from January 2008 onwards.

Communication Policy, the other Cornerstone

Within the framework of inflation objectives, the central bank's public communication policy is a central aspect that helps economic agents' to converge with the target inflation rate.

Some have even gone as far as to say that a significant part of monetary policy relies more on how well the bank communicates its intentions to the market than on actually managing liquidity.

This communication must be accompanied by transparent decision making in order to create more certainty and trust. For this reason, the Bank of Mexico decided to provide the public with more information by publishing a quarterly inflation report, the first of which was released in 2000, as well as to announce multiple annual objectives, which makes it possible for target inflation rates to converge.

Bank of Mexico announcements regarding monetary policy began in January 2003, following a schedule that was published in the inflation report released in the third quarter of 2002. Between 2003 and 2005, changes in monetary policy instruments were announced twice a month, with the exception of December.

From 2006 onwards, the general public is notified of these changes on a monthly basis by the Bank of Mexico Board of Governors.

In addition to the quarter inflation report, the central bank also provides information on a fortnightly and monthly basis, when press releases detail the analysis of price trends.

While it is true that the hints given regarding monetary policy on behalf of

the central bank are not themselves instruments the bank may use to affect the liquidity in the economy, such signals, if effective, can result in economic agents taking action that in turn spark changes in interest rates equivalent to those that would occur in the case of modifying the liquidity of the financial system.

Tight Monetary Policy

As Mexico almost permanently suffers from inflation, Bank of Mexico monetary policy has been restrictive.

Central bank policy has been designed in such a way that when prices and wages are in line with an outlook for inflation that surpasses the target rate, the Bank of Mexico tightens its monetary policy, making it more restrictive.

The Bank of Mexico has gone from monetary policy particularly focused on the exchange rate to establishing short and long term target inflation rates, when at one time monetary aggregates were used as intermediate objectives.

However, despite the effort made, which has seen restrictive monetary policy raise interest rates causing a lack of investment and, in turn, an increase in unemployment in an attempt to reduce aggregate demand and lower prices, the longed for target rate of 3% is still to be achieved. But, once reached, the most important task will be to maintain inflation at that level.

It was in 2005 when Mexico came the closest to achieving the 3% target rate, recording an annual inflation rate of 3.3%.

We are not in favour of inflation, but we are against mechanisms to eliminate it, as one sometimes gets the impression that when designing

monetary policy, producer aspects and employment are not taken into account.

Price stability is a necessary condition, but enough to accomplish a higher level of well being, but the instrument used to achieve this should not damage vital aspects of economy.

We believe central bank monetary policy will remain restrictive until the target inflation rate of 3% is achieved and maintained.

Monetary Policy in 2007

The Bank of Mexico is legally obliged to inform the Federal Government Congress in January of the monetary policy it will carry out throughout the year.

According to this report, the Bank of Mexico will employ a monetary policy strategy under inflation objectives, which consists of:

- Announcement of explicit multiple annual target inflation rates
- Systematic analysis of the current economic environment and inflationary pressure
- Description of the instruments the central bank will use to achieve its objectives
- Communication policy aimed at promoting transparency, credibility and monetary policy effectiveness

A regime of inflation objectives contemplates tougher monetary policy when upward pressure on prices comes from demand.

The Bank of Mexico indicated that when supply is responsible for such pressure, it normally only affects the level of prices temporarily. In these cases, the

central bank should not intervene, unless this pressure contaminates the outlook for inflation.

For this reason it is necessary and highly useful to have an analysis of the current economic environment in order to obtain a correct diagnosis of the situation, as the way the central bank intervenes depends on it.

The target inflation rate remains at 3%, +/-1%. This rate will certainly not be achieved this year, as inflation is forecast to stand around 4%.

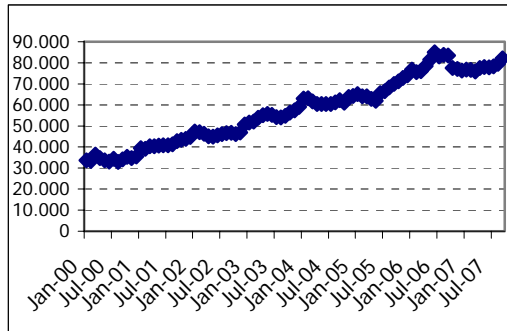
Exchange Rate and Reserves

As a result of the marked economic crisis the country suffered in the last month of 1994 and which continued into 1995, a floating exchange rate system was adopted. Therefore, the exchange rate was no longer a basic element that made it possible to monitor the outlook for inflation.

Having a flexible exchange rate has helped to soften the effect of exchange rate movements on domestic prices.

The Bank of Mexico's international reserves are made up of the gross international reserve, which includes assets in foreign currencies, from which liabilities due in less than six months are subtracted. These comprise currency deposits received by the central bank from the Federal Government, from *Petroleos Mexicanos* (Mexican State-run oil company) and multiple banking institutions and the development bank, as well as the currencies due to be received for the purchase and sale against the national currency and other liabilities in currencies and gold.

Figure 2: Gross International Reserves 2000-2007 (in millions of dollars)



Source: elaborated with information from the Bank of Mexico

Previously, the level of international reserves was only made public twice a year: when the bank informed the government and at the National Banking Convention.

At present, the Bank of Mexico publishes the balance of international reserves and the flows that explain it on a weekly basis, on the last working day of the previous week.

The Exchange Commission, made up of representatives from the Tax Office and the Bank of Mexico, is the organism in charge of the country's exchange rate policy.

In order to reduce exchange rate volatility without altering the principle of free floatation, the Exchange Rate Commission announced a plan for selling dollars in February 1997 due to the large accumulation of reserves obtained through auctioning foreign exchange options.

This system enabled the Bank of Mexico to auction 200 million dollars on a daily basis, with a minimum price that resulted from multiplying the fix exchange rate (used to meet debt obligations in foreign currencies that can be liquidated in Mexico the

following day) by 1.02) from the day prior to the auction.

This system was in force until June 2001 and was only used in practice on 14 occasions, to a total value of 1,950 million dollars.

Almost two years later, in March 2003, the Exchange Commission announced a mechanism aimed at reducing the speed at which reserves were accumulated by channelling a fraction of the currency flows that could increase reserves to the market, a system that operated regardless of the level and trend of the exchange rate.

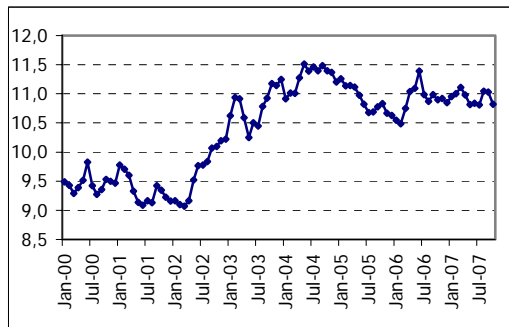
This system involves selling dollars directly on the market every three months. A press release must be issued to inform of the amount of dollars on offer in the foreign exchange market, the amount being calculated on the basis of the net accumulation of reserves in previous quarters.

For this reason the Bank of Mexico auctions a fixed amount of dollars on a daily basis, following a pre-established timetable, transactions which only Mexican credit institutions can participate in.

The latest press release from the Bank of Mexico states that from November 1 2007 to January 31 2008, the bank will auction nine million dollars a day.

These mechanisms, together with the large inflow of foreign currency through oil sales, family remittances and foreign direct investment have stabilised the exchange rate.

Figure 3: Peso/Dollar Exchange Rate 2000-2007



Source: elaboration with information from the Bank of Mexico

However, in order for economic policy to work, monetary policy must be accompanied by the other branch of economic policy, that is, fiscal policy.

Fiscal Policy Conditioned by Oil

Mexican public finances have traditionally suffered from marked structural problems, due to the fact that progress, including the recent tax reform that will be commented on anon, have has been insufficient.

There is a shortage of income due to Mexico having a small tax burden (in comparison to international standards), sources of income being concentrated and a small tax base, among other things. Revenue stemming from tax collection only represents approximately 11% of GDP, one of the lowest of all OECD member states.

Furthermore, the lack of income has an effect on government spending that is increasingly insufficient, with pressure in the near future that will have to be met in terms of pensions, an increase in capital expenditure and less oil income.

We also have to take into account the distortions in the Mexican tax system stemming from special treatment, subventions, exemptions, income tax deductions and zero rate products as is

the case with Value Added Tax. For example, a zero rate is levied on fresh food, medicine, books, newspapers and magazines. Most tax revenue comes from Income Tax, which is levied on work, while capital gains taxes are minimal.

In addition to this, it is worth considering the growth in the informal sector and tax evasion, which significantly reduce total tax revenue.

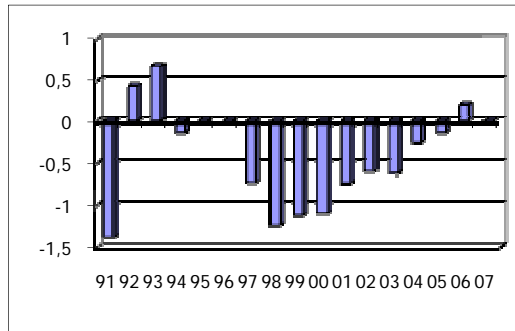
In light of this situation, economic strength in fiscal terms is traditionally due to the income stemming from oil sales. However, this aspect, which could be a strength, is also a weakness, due to the economy being overly dependent on this type of resource. The output of Cantarell, the main oil field, has decreased continuously over recent years. The lack of investment in maintenance, exploration and production in the sector, price volatility and strong petrol imports are issues that should lead Mexico to "depetrolize" its public financials.

Traditional Balance of the Public Sector

A great effort has been made over the last few years to balance public finances, reducing long term debt to a minimum. Central bank independence and more recently, the fact that this independence has become official after being included in the new Federal Law for Budget and Tax Responsibility published in the official gazette on March 30 2006 have gone a long way towards this.

For example, the long term deficit of 1.25% of GDP in 1998 (the highest in the last 16 years) is now expected to balance this year (0%).

Figure 4: Public Sector Accounts/GDP (1991-2007)



Source: elaborated with information from SHCP

The increase in oil income is mainly responsible for the decrease in the deficit, together with an increase in non oil income, albeit to a lesser extent, and a decrease in financial costs resulting from a smaller public debt (measured as a percentage of GDP) and the decrease in both domestic and foreign interest rates. The decrease in the deficit also has the other advantage of allowing more government spending.

Public Income Depends on Oil

Approximately a third of total public sector income comes from the oil sector, the rest corresponding to the non oil sector.

Table 1: Public Sector Budget Income 2001-2007 (% structure)

Year	Oil	Non oil	Tax	Non tax
2001	30.4	69.6	44.6	25.0
2002	29.8	70.2	44.8	25.5
2003	33.3	66.7	42.4	24.3
2004	36.0	64.0	40.5	23.6
2005	37.3	62.7	40.7	22.0
2006	38.0	62.0	41.1	20.8
2007	36.9	63.1	43.2	19.9

2007 figure is an estimate

Source: elaborated with information from SHCP

Over the last few years, the high price of oil has seen this share increase from 29.8% of GDP in 2002 to 38% in 2006 and is estimated at 36.9% in 2007, as can be observed in the table.

Similarly, public income is forecast to represent 23.8% of GDP, whereas in 2001 the figure was 21.9%.

The table above also shows how tax income has lost ground within non oil revenue, dropping from 44.6% in 2001 to 40.5% in 2004, recovering later to what is expected to be 43.2% in 2007.

This is due to an increase in tax collection over the last few years, both in terms of income tax (ISR) and VAT, certainly due to enhanced administrative efficiency. At present, the income tax rate for both individuals and companies stands at 28%, while VAT is 15%.

However, research carried out by the Mexican Tax Administration System estimated that income tax evasion in 2004 amounted to the equivalent of 2.07% of GDP, while VAT evasion represented 0.93%. As a result, total tax evasion amounts to a sum equivalent to 3% of GDP.

In 2006 oil tax income represented 9.4% of GDP, while non oil tax income represented 10.2%.

Among the reasons for such low tax income, we cannot ignore the impact that opening up the economy to foreign trade in 1985 had. This opening up was reinforced a year later after Mexico joined the GATT and the North American Free Trade Agreement (NAFTA) in 2004. We should also add the trade agreements that Mexico has with other countries, although it is worth recalling that four fifths of Mexican foreign trade is with the United

States. Opening up to foreign trade undoubtedly reduced tax income from foreign trade, on tariffs and import permits being reduced and eliminated.

Government Spending

Bearing in mind that the budget is tending towards equilibrium, government spending depends on income. Pensions have had a significant impact on government expenditure, which reduces capital spending.

Table 2: Total Net Government Budget Spending/GDP

Year	Total	Financial Cost	Primary Spending
2001	22.5	3.2	19.3
2002	22.5	2.8	19.7
2003	23.7	2.8	20.9
2004	23.2	2.7	20.5
2005	23.3	2.5	20.8
2006	24.5	2.7	21.8
2007	23.8	2.6	21.2

2007 figure is an estimate

Source: elaborated with information from SCHP

Over the last seven years, total net government spending as a percentage of GDP has remained practically unchanged, as can be observed in the table above. Financial costs have also decreased, albeit slowly. This item includes debt servicing and the debtor aid programme.

Within primary expenditure, almost 32% was used by central government bodies, 15.7% for pensions, both in the Mexican Institute of Social Security and the Institute of Social Security and Services for Civil Servants.

In a country where around half the population is poor, it is necessary to strengthen government spending by increasing income and reorienting it at the same time. More resources must be channelled mainly to education and health.

Public Debt

Foreign public debt is no longer a cause for concern, unlike the past when Mexico received and accepted loan offers after large oil fields were discovered in the second half of 1981, to the point where the country almost went into default the following year after a slump in oil prices.

At the end of 2006, gross Federal foreign debt, including the Federal Government, State run organisations and companies and the development bank amounted to 54,766 million dollars, the equivalent of 6.3% of GDP, whereas internal debt stood at 18.6%.

Table 3: Gross Federal Public Sector Foreign Debt 2001-2006

Year	Millions of US Dollars
2001	80,339
2002	78,818
2003	79,023
2004	79,225
2005	71,674
2006	54,766

Figures as of the end of the year

Source: elaborated with information from SHCP

Tax Reform

On June 20 2007, the Federal Government took a tax reform bill to Congress. The bill, which was finally passed, revolves around four main pillars: government spending, fiscal federalism, tax administration and public income. This tax bill can be consulted in greater detail in the OCEI's last economic environment report in September.

Economic Programme Recently Passed

In our last report we also commented on the contents of the Economic Programme for 2008, which was sent to Federal legislative bodies to be

analysed and, if suitable, passed. On October 30, the Mexican Congress passed the Federation Income Bill for the 2008 financial year. Meanwhile, on November 12, the Parliament passed the Federal Budget for 2008.

The approval of the tax reform bill in September boosted total income, which rose by 9.9% in real terms, for this coming financial year, while spending also rose to an almost identical proportion (9.8%).

Oil income is forecast to represent 11.5% of GDP in 2008, the highest figure ever recorded, despite current prices only increasing by 2.4%. As mentioned above, oil income represented 9.4% of GDP in 2006. The average price of the Mexican Export Mix was finally set at 49 dollars a barrel for budget purposes, with total exports expected to reach 1,683 million barrels a day.

The Tax Office estimates that the recently approved tax reform bill will boost income by 127,651 million pesos, the equivalent of 1.2% of GDP.

As regards spending, 39.4% will be channelled to public security, 30.1% to the environment, 13.6% to economic development and 8.8% to social development. The new tax called the Flat Rate Corporate Tax (*Impuesto Empresarial de Tasa Única* in Spanish) alone will generate income equivalent to 1.1% of GDP.

It is worth highlighting the 19.2% real increase in the Federal share in Federal bodies and the 45% hike in budgeted physical investment.

The tax reform bill will make it possible to set an official target growth rate for the economy of 3.7% for 2008, with a 3% target inflation rate, an average

exchange rate of 11.20 pesos to the dollar and average 28-CETES interest rates of 7%.

We believe that the tax reform, which is due to come into force in 2008, will spark an outbreak of inflation over the first few months of the year, which will see inflation spray from its target. However, inflation should converge with the target rate in the medium term, triggering a decrease in interest rates and country risk.

This reform is an advance, but it is not enough, as marked fiscal distortions persist.

Structural Reform

Mexico has also made progress in terms of the structural reform the country needs, particularly where pensions and taxes are concerned. The reform of pensions and retirements at the Mexican Institute of Social Security and more recently the Institute of Social Security and Services for Civil Servants, the law governing which was published in the Official Gazette on March 31, 2007.

Transformations remain pending in the fields of energy, the labour market and education, among others. For example, labour reform is necessary in order to raise productivity and, as a result, increase real wages, employment, and household purchasing power and, moreover, economic growth, providing worker rights do not suffer. As regards the rest, there is much to be analysed, which will be tackled in future reports.

Héctor Ruiz Ramírez
Toluca, Mexico. 26 November 2007