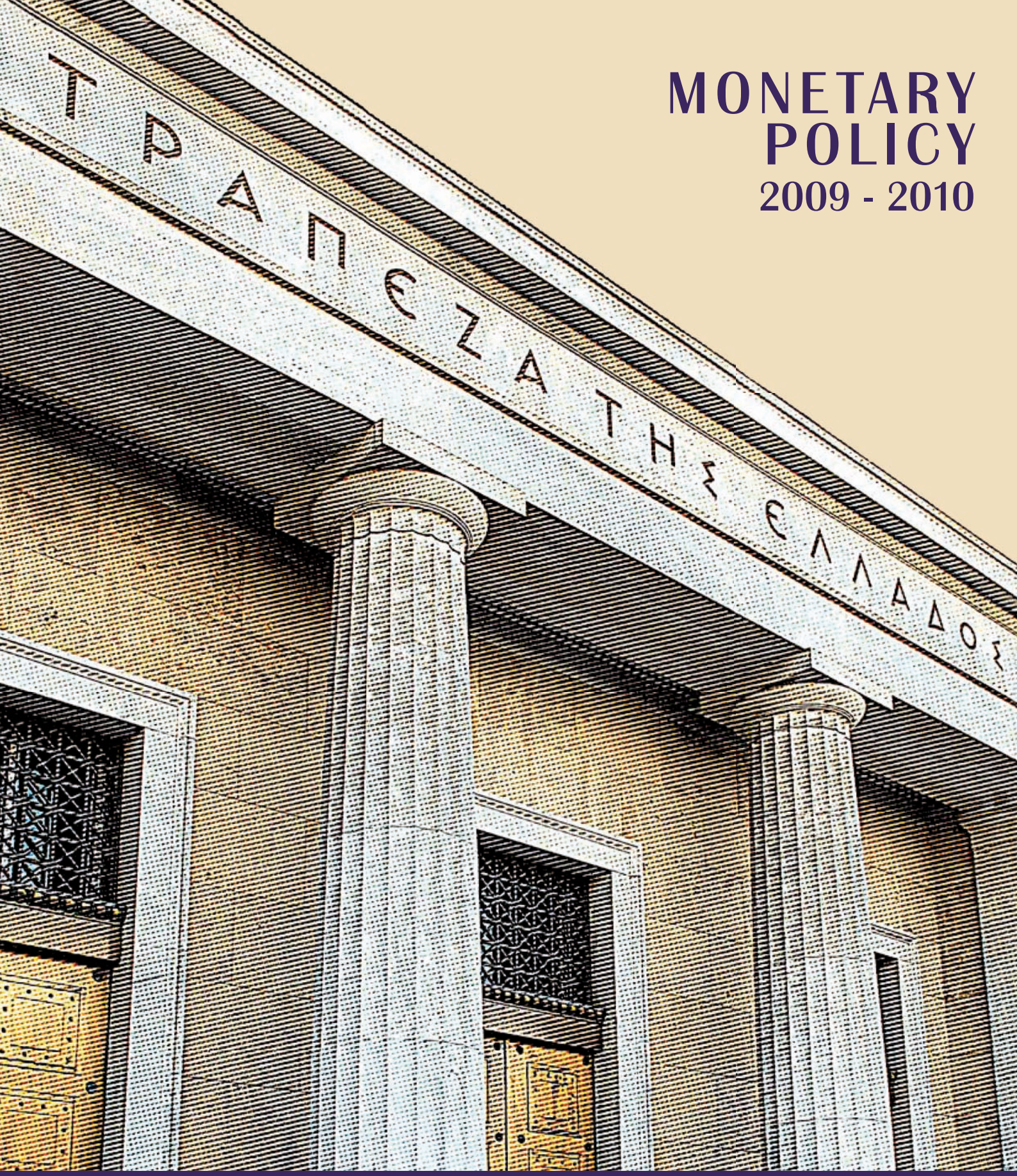
MONETARY POLICY 2009 - 2010



MARCH
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BANK OF GREECE
EUROSYSTEM

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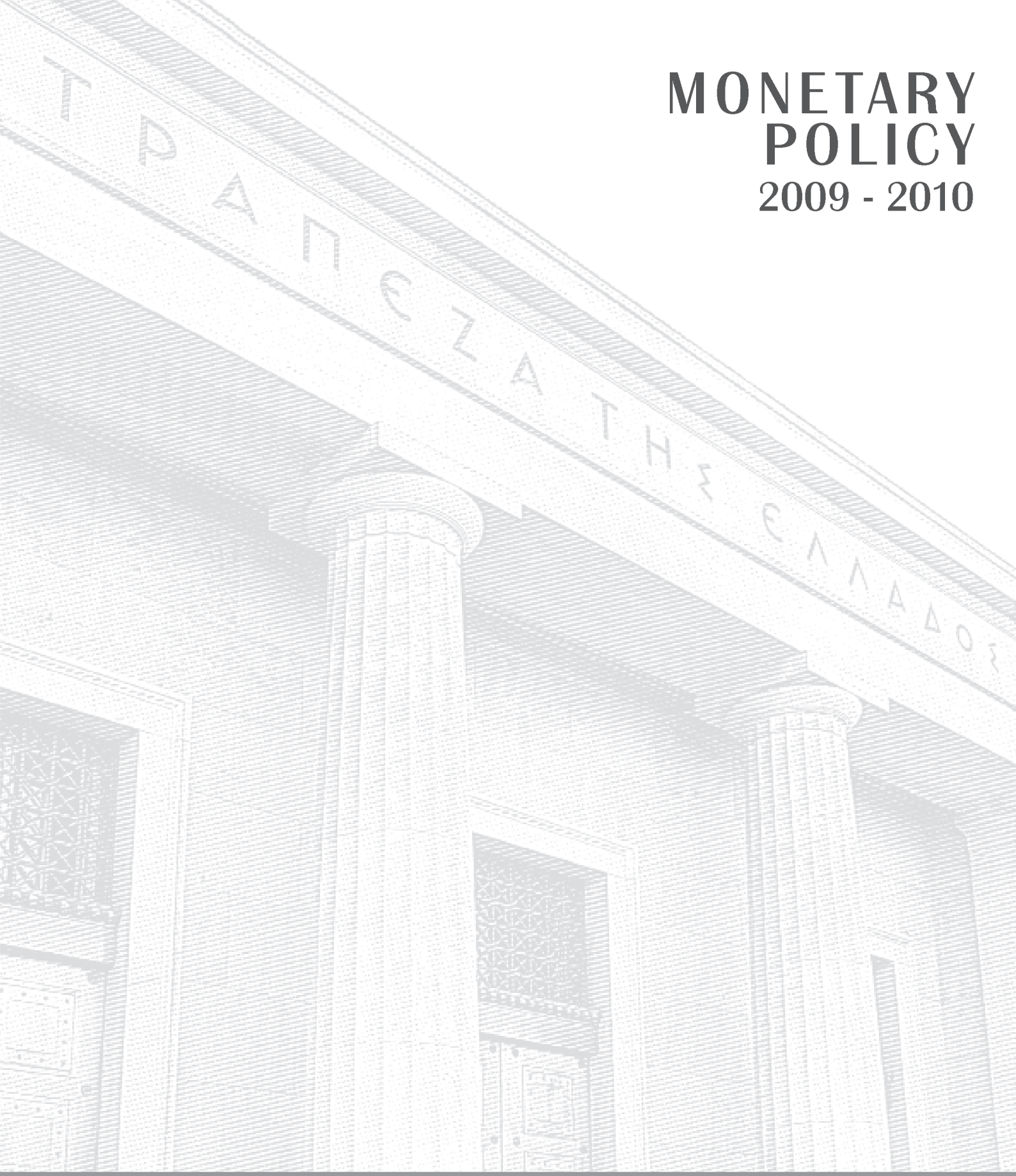

MONETARY POLICY 2009 - 2010

MARCH 2010

BANK OF GREECE
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To the Greek Parliament and the Cabinet

In accordance with its Statute, the Bank of Greece hereby submits the present Monetary Policy Report to the Greek Parliament and the Cabinet.

The report is submitted at a particularly difficult time. The Greek economy is in the midst of a deep crisis, characterised by a large fiscal deficit, a huge debt and the continued loss of its competitiveness. These problems are far from new. They date back to before the international crisis of 2008 and, without decisive corrective action, would sooner or later have led to an impasse. Such corrective action was not taken and the situation deteriorated to such an extent that it culminated in a derailing of the budget in 2008 and 2009. The international crisis amplified the cumulated negative repercussions of those chronic weaknesses and accelerated the downturn of the economy.

The Bank of Greece repeatedly issued early warnings about the seriousness of the situation:

- Back in October 2008, i.e. roughly a year and a half ago, the Bank of Greece stressed in its Interim Report on Monetary Policy that the Greek economy was at a crucial juncture and that, as the global economic situation worsened, its macroeconomic imbalances and structural weaknesses would become more severe and more difficult to address.

- In February 2009, in its next Monetary Report, the Bank of Greece warned about all that is happening today, stressing in particular the possibility of a rise in the cost of borrowing. As the Report then stated, a widening of the yield spread would increase the future burden on taxpayers.

- And again, in October 2009, the Interim Report on Monetary Policy stressed the need to send a clear message to the markets that Greece is determined to implement a multi-annual plan of fiscal consolidation and structural reforms.

Unfortunately, the developments of the past few months have confirmed the bleak projections and undermined confidence in the future of the Greek economy: Since April 2009, Greece has been subject to the Excessive Deficit Procedure, as the deficits of 2007 and 2008 both exceeded the reference value set in the Maastricht Treaty. In 2009, the general government deficit climbed to 12.9%, as the Bank of Greece had promptly warned, and public debt soared to 115% of GDP. These developments triggered a series of downgradings in Greece's credit ratings and a large widening in the yield spread between Greek and German government bonds, putting an additional burden on borrowing and debt servicing costs for the Greek government. This, in turn, worsened the country's budgetary position, made fiscal consolidation even more difficult to achieve, and seriously hurt the real economy and the banking system. The Greek economy is caught in a vicious circle, with only one way out: drastic deficit and debt reduction, i.e. through an immediate reversal of the adverse trend.

Of course, high public deficits and debts can also be found in other countries. Unlike Greece, however, these countries are able to finance their deficits and debt mainly from domestic saving, whereas Greece's gross national saving, public and private combined, was just above 7% of GDP in 2008 and 5% in 2009, and therefore could not even cover current investment. This shortfall in national saving is primarily due to Greece's large fiscal deficits, but also to the strong increase in private consumption over the past few years. During the five years from 2004 through 2008, private consumption at constant prices rose at an average annual rate of 3.8%, compared with 1.5% in the euro area.

Due to the low level of saving, the public debt cannot be financed from domestic sources, resulting in a rising external debt and a widening current account deficit. The fiscal deficit problem thus becomes intertwined with an external deficit and debt problem and the

twin deficits become the main factor fuelling the vicious circle.

The main visible aspects of this situation are the growing fiscal imbalances and debt and the loss of competitiveness, the latter being sharply reflected in the current account deficit. But the crisis extends even further. It adversely impacts the whole economy, hampers the functioning of the banking sector, hurts confidence, creates unprecedented uncertainties and questions social and economic behaviours and attitudes that have prevailed for decades. As the ramifications of the economic crisis spread across society, the society is now summoned to recognise the extent of the problem and to change its attitudes and practices.

The data presented in the Report shed light on the multiple facets of the crisis that the Greek economy is currently going through.

After a decade of robust performance, GDP contracted by 2% in 2009, mainly on account of a sharp drop in investment, private consumption and exports. Negative GDP growth is projected once again for 2010, although its exact rate will ultimately depend on the effectiveness and the pace of implementation of the economic policy measures already announced. At the moment, the decline in GDP appears likely to be around 2%. It is also important to note that the recession in the Greek economy is manifesting itself with a lag, now that the rest of the world is experiencing a recovery, albeit a faltering one. In the euro area, in particular, the recovery has been apparent since the third quarter of 2009, but nonetheless remains fragile, having been largely driven by expansionary fiscal policies, which will gradually have to be phased out, given that most advanced countries have accumulated large fiscal deficits and debts.

The recession in the Greek economy has spread across all sectors, negatively impacting employment and causing unemployment to rise. According to provisional data, total employment declined by 1.1% in 2009, while the number of employees is estimated to have fallen by roughly 1.5%.

The adverse economic developments and, above all, fiscal aggregates, together with impaired confidence, have also taken their toll on the banking system. Unlike what happened in many other countries, where the crisis first broke out in the banking system before spreading to the real economy, the Greek banking system, which is fundamentally sound, faced liquidity constraints when severe fiscal imbalances led to the downgrading of the country's credit rating, thereby restricting bank access to funding sources and raising funding costs. Meanwhile, the weaker growth in deposits, as a result of the recession, affected the supply of credit. It should, however, be noted that, in spite of these problems, year-on-year credit expansion to the private sector remained positive throughout 2009, contrary to the euro area where negative growth rates have at times been recorded. As the Bank of Greece has repeatedly stressed, the Greek banking system showed remarkable resilience during the international crisis. In order for it to maintain this resilience, it will be necessary to remove the exogenous factors that affect its functioning and to restore confidence in the future of the Greek economy.

In response to the serious challenges brought on by the crisis, economic policy has recently been centred on decisions signalling a strong resolve to reverse the negative trends of the previous years. Thus, the Budget for 2010 and the Stability and Growth Programme, which prescribes the general medium-term policy orientations, were supplemented by measures aimed to support the attainment of the fiscal targets set.

With this policy mix, an attempt is being made to reverse a long-standing trend that had led to the accumulation of problems. Changing course will not be easy or quick, and will require an equally long effort to break the

vicious circle that is pushing the economy into a state of decline and threatens to undermine the standard of living. The economic policy announced marks the beginning of this large-scale effort. If effectively implemented, this policy will lead to a durable virtuous circle that will bring the Greek economy back on a track of sustainable growth, as well as of economic and social well-being.

For this to happen, there can be no deviating, wavering or retracting. This is of decisive importance in order to restore confidence, which will have a beneficial effect on the cost of government borrowing, with positive chain reactions for bank funding costs as well as for businesses and households. In the present circumstances, fiscal consolidation is a *sine qua non* to set the economy back into motion.

The next step for economic policy will be to support the recovery process with structural policies aimed at bolstering competitiveness, steadily improving production conditions and creating a new growth model.

The crisis that the Greek economy is facing today is an all-encompassing and multi-faceted one, and therefore calls for a similar response: sustainable, ongoing and convincing fiscal consolidation, coupled with a policy of structural reforms aimed at improving market functioning and competitiveness. But most importantly: an eradication of the behaviours, attitudes and policies that have brought us to the situation we are in today.

Athens, March 2010

George Provopoulos

Governor

MONETARY POLICY COUNCIL OF THE BANK OF GREECE

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I THE PROFILE OF THE CRISIS

The current economic crisis in Greece is essentially the result of chronic problems. It also reflects the impact of the world crisis which, despite the activity rebound, has entered a second, challenging phase. As a result, the Greek economy also has a confidence and credibility deficit to overcome.

Almost a year and a half ago, in early October 2008, the Bank of Greece had stressed in its *Monetary Policy Interim Report* that the Greek economy was at a crucial juncture and that, as the global situation worsened, the macroeconomic imbalances and structural weaknesses of the Greek economy would become more apparent. That Report also suggested that in order to shield economy against external shocks and maintain high growth and low inflation rates over the long-term, the only safe method would be to effectually deal with imbalances and structural weaknesses, setting in motion a far-reaching, more outward-looking, dynamic and sustainable growth process. A process primarily based on enhancing the production base through investment and on qualitatively improving human capital, on strengthening the competitive operation of markets and on implementing extended structural reforms, mainly in the general public sector. It is worth noting that the October 2008 Report concluded that, if these are not achieved, the "negative impact will be even more pronounced and persistent and its burden will be largely borne by the more vulnerable social groups".

In the *Monetary Policy Report* that followed (February 2009), the Bank of Greece warned against what has eventually become a reality, especially in respect to financing domestic public debt. Indicatively, it noted that "the supply of government (and corporate) securities on the global market is expected to increase significantly, as a result of the fiscal stimulus measures and bank bailout programmes implemented in other countries" and that this would raise yields and possibly individual country yield spreads; thus the increase in the cost of borrowing for the Greek government will be even greater. It also warned that "the widening yield spread spills over to the entire economy, given that banks and non-financial firms are not usually able to raise funds on the international markets at better terms than the government is. In addition, the widening of the yield spread would increase the future burden on taxpayers". The Report proposed an immediate and drastic cut in the fiscal deficit, maintaining that "if the confidence of the markets and of domestic economic agents is restored, a *prima facie* restrictive fiscal policy could, under the current circumstances in Greece, have an expansionary effect. Conversely, a *prima facie* expansionary fiscal policy would turn out to be restrictive, as it would entail fiscal costs several times higher in both the short and the medium term".

The same message was repeated two months later, in the *Annual Report* (April 2009), which reminded that "there has never been a country that achieved sustainable growth based on chronic fiscal deficits" and that "on the contrary, there are numerous examples of countries in which high deficit and debt levels have hampered economic growth".

The latest warning was given in the *Monetary Policy Interim Report* (October 2009), according to which, countries like Greece, faced with twin deficits and debts, run the risk of a much more arduous and slow exit from the crisis, thus protracting the period of low growth rates. This is why the Report concluded that the required multi-year fiscal consolidation programme should go public as soon as possible, so that the markets will know right from the start what the Greek authorities plan to do (and how). The Report stressed that it is of paramount importance that the markets are given a clear message that Greece remains firmly anchored to the medium-term target of a strong fiscal position, as this would enhance the country's credibility in international markets and create positive expectations.

The Greek economy is going through a multi-faceted and multi-layered crisis which, on account of its severity, has involved the state, the institutions and eventually the society itself. What is the profile of this crisis?

First, the accumulated unfavourable effect of chronic structural weaknesses and macroeconomic imbalances has become apparent now, as the factors that kept it hidden, i.e. the factors that underpinned the fast growth of the Greek economy between 1996 and 2007 have been exhausted. The outburst of fiscal imbalances was coupled with a major credibility problem, which spilled over from the statistics to the economic policy itself and to the country's general reputation and prestige.

Second, the serious repercussions of the world crisis on real economy and the country's financial sector become apparent with a time lag. This means that Greece runs the risk of not being able to fully benefit from the recovery in the rest of the world.

Third, the crisis in the European and the world economy is currently going through its second phase, which is marked by the rebound of economic activity, albeit at uneven rates. In this phase, the dominant question is: How can a solution be found to the swelling fiscal deficit and public debt of developed economies, brought about by fiscal stimulus measures for the support of real economy and measures for the financial system's rescue? It is the issue of "exit strategies", which seek and must find the balance between the need to face risks to the sustainability of public finances and the need to avoid another recession, if support to the real economy is prematurely withdrawn. At the same time, a novel phenomenon was added to the surging public debt in developed economies, further complicating the situation: pressures have now been directed to sovereign securities markets. This was also fostered by the hesitant steps taken towards a new architecture of the international financial system, especially in respect to the expansion of the regulatory supervision framework to include more types of financial institutions and products, e.g. hedge funds and credit default swaps (CDS).

All these have contributed to the major confidence and credibility deficit of the Greek economy, arising from the negative estimates about both its current performance and its medium-term outlook, on which chronic structural weaknesses and macroeconomic imbalances weigh heavily. This confidence deficit is reflected primarily in the increased cost and the hampering of the public debt financing, issues that have received wide coverage by Greek and foreign media.

2 EMERGENCE OF THE "TWIN" CRISIS

The public deficit and debt problem is closely intertwined with the external deficit and debt problem, highlighting the crucial importance of (i) an increase in the national savings from their current extremely low levels, (ii) a substantial improvement of the country's international competitiveness and (iii) an upgrading of its productive capacity, in order to match domestic and foreign demand.

The country is currently going through a "twin" crisis, reflected in the twin deficits and debts.

Fiscal deficit and public debt

Greece's **high fiscal deficit** and **immense public debt** are only in part attributable to the economic recession. They are primarily the cumulative result of chronic macroeconomic imbalances, which were not resolved when conditions were still favourable; on the contrary, they spread because of the unnerved and, over the medium-term, inappropriate policies pursued. The world crisis only accelerated and intensified the deterioration of Greece's fiscal performance and outlook, which had begun in the second half of 2007 for reasons other than the decline in economic activity. Greece has been subject to the Excessive Deficit Procedure already since April 2009, as the deficits of

both 2007 and 2008 exceeded the reference value set by the Treaty. The general government deficit was 3.6% of GDP in 2007, 7.7% in 2008 and reached 12.9% in 2009. The criticality of the fiscal condition led to the downgrading of the country's credit rating and outlook by international agencies and to a large widening in the yield spread between Greek and German sovereign bonds in late 2009 and early 2010.

While in 2009 other countries, affected by the crisis, were recording high deficits as well, e.g. the US (12.5%), the UK (12.6%), Ireland (11.3%), Spain (11.2%) and Portugal (9.3%), Greece remains a sui generis case, as it is related to a dangerous mixture of problems that stem from the economy's structural weaknesses. The high public debt (115% of GDP in 2009 —the highest in the euro area along with Italy— and expected to keep rising up until 2011) and the medium- to longer-term outlook of further deteriorating public finances on account of population ageing (e.g. expenditure for pensions is expected to increase from 11.7% of GDP in 2008 to 24.0% in 2050, according to the Updated Stability and Growth Programme – USGP 2009-2013), point to **the prolonged large-scale fiscal effort required**. Previous Bank of Greece reports already pointed at what debt dynamics add up to. In particular, it was estimated that for the debt-to-GDP ratio to fall below the reference value set in the Maastricht Treaty (60%) after a decade, annual primary surpluses in excess of 6.5% of the GDP would be required, assuming low growth rates and a relatively moderate increase in the servicing cost of public debt.[1]

This effort however has to be made and bear fruit **in an environment of severe risks to the sustainability of public finances internationally**. These risks stem from: (i) the large increase in public deficits and public debt in developed economies, (ii) the unfavourable demographic outlook on account of population ageing, (iii) estimations that the return of potential output and employment to pre-crisis levels is not to be expected any time soon. Moreover, further risks arise from the exposure of public finances to shocks related to the markets, where uncertainty over the timing and strength of "exit strategies" translates into an increase in yield spreads. At the same time, there are concerns about some countries running the risk to go even bankrupt and investor appetite for sovereign securities lessens. It is therefore expected that, at the international level, rates on government loans will increase and growth rates will fall below pre-crisis levels. The larger the spread between these rates, the larger the amount of fiscal consolidation required to interrupt the upward course of the public debt-to-GDP ratio. This is why it is necessary for developed countries to proceed with fiscal reforms that will strengthen the potential growth rate. It goes without saying that all of the above are a *sine qua non* for Greece.

Under these circumstances, **the way the public deficit and debt are financed in each country is of crucial importance**. For example, in Japan the gross public debt is around 200% of GDP, but the national saving ratio is also high (23% of GDP), thus contributing decisively to the domestic financing of public debt. Moreover, the current account balance is in surplus (1.8% of GDP in 2009). In the US, public debt (85% of GDP in 2009, projected to rise to 94% in 2010) and the current account deficit (5% of GDP in 2008, 3% of GDP in 2009) are financed with US dollars, an international reserve currency, whereas national saving levels are relatively low (12.2% of GDP in 2009, against 18.8% in the euro area). In Italy, where public debt came to 115% of GDP in 2009 (same as in Greece), national saving levels were relatively high (16.7% of GDP) and dependence on external financing small (the current account deficit was just 2.4% of GDP in 2009). In Greece, however, national saving is very low (as detailed further on), resulting in a high dependence on inflows to finance the debt, as suggested by the high current account

1 See *Monetary Policy – Interim Report*, October 2009. In particular, the assumption was that the growth rate of nominal GDP would be 3.5% (real GDP 1.5%, deflator 2%) and the average rate on government borrowing 5.5%.

deficit. Portugal has similarities with Greece (national saving ratio of just 8.1% of GDP in 2009, current account deficit 10.2% of GDP and relatively high public deficit), but its public debt does not deviate much from the euro area average, despite its upward trend (2009: 76.6% of GDP, 2010: 85%).

The current account deficit

Greece's current account deficit has been constantly widening in the past years and in 2008 it reached 14.6% of GDP, before declining temporarily to 11.2% in 2009, exclusively on account of the recession. At the same time, total **gross external debt** (of the private and the public sector) is too high, rising from 151.6% of GDP at end-2008 to 171.0% of GDP in September 2009. The general government gross external debt was about 55% of total external debt and came to 94.2% of annual GDP in September 2009. In the past, it was often claimed that, thanks to the participation in the euro area, the current account deficit could be easily financed. The deficit cannot be ignored, however, for two reasons: First, because, as has become evident in the past few months, it can lead to an increase in the risk premium of government borrowing. Second, because over the longer-term it may undermine the living standards, as the economy runs the risk of getting trapped in a situation of balance between a low productive capacity and a significant transfer of resources and income abroad to service external borrowing.

The current account deficit by default reflects the shortfall of national saving against domestic investment expenditure, which equals the shortfall of total domestic output against total demand and expenditure. The latter is attributed to the extended, multi-year cumulated losses in international competitiveness.

The shortfall of national saving vis-à-vis domestic investment in the past decade stems from the contemporaneous rapid growth of consumption and investment, which was the result of a large decline in interest rates after Greece's accession to the EMU, relatively high credit expansion, the improvement of both household and business expectations and, last but not least, wide fiscal deficits. Evidence for the inadequate gross national saving, which has consistently followed a downward trend (as a percentage of GDP) in the past two decades, is given by national accounts data:[2] from 18.5% in 1992-1996, it fell to 14.0% (1997-2001), 10.5% (2002-2006), 7.5% (2007), 7.1% (2008) and subsequently to 5.0% in 2009. *These are the lowest shares among euro area countries.*

Gross private saving declined from 24.6% of GDP (1992-1996) to 14.5% (1997-2001), 12.4% (2002-2006) and 9.6% (2007) but rose to 10.7% in 2008 and is estimated to have increased further in 2009 (to about 15%).[3]

Finally, the evolution of general government's gross saving reflects the ebb and flow of fiscal policy. It was negative (-6.1% of GDP) in 1992-1996, became almost zero (-0.5%) in the five years that followed (1997-2001) and then further negative (2002-2006: -1.9%, 2007:-2.1%, 2008: -3.7%, 2009: -10.1%).

According to final national accounts data for 2008, gross national saving, amounting to just 7.1% of GDP, was unable to finance total investment, which was as high as 20.9% of GDP. As in previous years, it was the current account deficit (13.8% of GDP in 2008 on a national accounts basis or 14.6% of GDP according to balance of payment statistics of the Bank of Greece) that closed the gap. The problem is even harder, if one takes into consideration that **net national saving**, after the deduction of depreciations (which amounted to 12.2% of GDP in 2008), was **negative** during 2000-2008 (-5.1% of GDP in 2008), with the

2 See European Commission, *Autumn 2009 Economic Forecasts*, Tables 43-44-45 and USGP 2009-2013. NSSG data (March 2010) for 2009.

3 The private sector nominal disposable income rose in 2009 (reflecting the increase in pre-tax income but also in tax evasion and contribution evasion), while private consumption decreased in nominal terms, resulting in a rise in gross private saving.

exception of two years (2001 and 2004), in which it was positive but not exceeding 0.2% of GDP. In 2009, negative net national saving reached 8.1% of GDP.

These data show that the high deficit of the public sector and the low saving of the private sector fuelled external imbalances. This is also corroborated by special studies, according to which the deterioration of the external balance reflects both the increase in investment and the drop in saving; the latter is connected with the increase in household borrowing.[4] The 1996-1999 period is marked by the effort to achieve fiscal consolidation for the country's entry to the euro area and the parallel reduction in private saving due to the favourable conditions generated by financial liberalisation. By contrast, the 2000-2004 period is marked by strong investment activity, especially in infrastructure, in the run-up to the Olympic Games, and by a widening of fiscal deficits. The effort for limited fiscal consolidation during 2005-2006 was hindered in the three years that followed; over the same period, private saving was significantly reduced, mainly because the increase in residential investment was funded through loans. These developments make drastic fiscal consolidation absolutely necessary. The same goes for the promotion of an alternative growth model, as stressed in former reports of the Bank of Greece – a model that will not be exclusively based neither on private consumption, which in Greece was mainly import-oriented and excessively based on high credit expansion rates, nor on private residential investment.[5]

Competitiveness losses, which are the root of the high current account deficit, are mainly connected with structural weaknesses, such as rigidities in product and labour markets, the fiscal easing in a period when rapid growth not only compelled for but actually allowed bold fiscal consolidation and —finally— a vast, ineffective and constantly swelling public sector. Rigidities in labour and product markets helped keeping wage and price growth rates at levels constantly higher than those in the euro area. During 2001-2009 the average annual inflation rate in Greece exceeded by 1.1-1.2 percentage points the inflation rate in euro area as a whole, and the real exchange rate of the euro against Greece's 28 main trading partners increased by 20% in total, if calculated on the basis of the relative consumer prices, or by 28% if calculated on the basis of the relative unit labour cost in total economy. The subsequent sizeable losses in price competitiveness fostered the problems arising from the structural inefficiencies of production and had a decisive impact on the containment of "structural" competitiveness at low levels and on the ability of the domestic output to respond in an adequate and flexible manner to the components of and the changes in external and domestic demand. Relevant Bank of Greece essays,[6] which will be published shortly, confirm the above conclusions. According to these essays, the balance of payments deficit is not sustainable, because it is not due to temporary factors. Furthermore institutional problems (e.g. corruption, the quality of the legal framework, especially the large number of laws, etc.), together with a weak educational system and inadequate infrastructure, have a negative bearing on productivity. The shortfall of productive capacity is apparent both in manufacturing and in sectors where Greece traditionally had a comparative advantage, e.g. tourism.

3 CONDITIONS TO EXIT THE CRISIS AND ACHIEVE SUSTAINABLE GROWTH

The drastic cut of the fiscal deficit is a one-way road for the survival of the Greek economy. Fis-

4 Moschovis and Capo Servera (2009), "External imbalance of the Greek economy: the role of fiscal and structural policies". European Commission, DG Economic and Fiscal Affairs, *Country Focus*, Vol. 6 (6), and European Commission (2009), *Quarterly Report on the Euro Area*, Vol. 8 (1). See also: Brissimis et al. (2009), "Current account determinants and sustainability in periods of structural change", *mimeo*, Bank of Greece.

5 See Brissimis et al. (2009), *supra*, Moschovis and Capo Servera (2009), *supra*, European Commission (2009), *supra*. Also, Daniel Gros, "Greek burdens ensure some Pigs won't fly", *Financial Times*, 28.1.2010. The latter stresses the need to address both the fiscal problem and the low private saving in Greece, in order for the effort of exiting the crisis to be successful.

6 See also Special Feature 2 (2.A, 2.B, 2.C and 2.E).

cal consolidation is today a *sine qua non* for sustainable economic growth and for any step forward.

The dramatic deterioration of the fiscal condition and the large increase in the Greek - German sovereign bond yield spread (if not reversed) will continue to lead to higher borrowing and debt servicing costs, thus to an additional strain on public finances, depriving other sectors (public investment, education, healthcare, etc.) of public resources. Furthermore, these conditions entail increased borrowing costs and limited *access* to borrowing for Greek banks, thus for enterprises and households, with obvious repercussions to the growth outlook. Therefore the reduction in fiscal deficit and public debt is necessary for the survival and growth of the Greek economy.

The key guidelines for achieving such a reduction are described in USGP 2009-2013 that went public on 15 January and were later supplemented by the policy measures announced on 2-9 February and 3 March. Detailed policy proposals have been made in former reports of the Bank of Greece and are made anew in Special Feature 1 (1.A, 1.B and 1.D) of this report. On 3 February, the European Commission issued an opinion on the Greek stability programme, a recommendation in accordance with article 126, paragraph 9 of the Treaty on the correction of the excessive deficit and another recommendation in accordance with article 121, paragraph 4 of the Treaty on structural reforms. On 16 February, the ECOFIN Council issued its own opinion about the USGP, a binding resolution for the correction of the deficit by 2012 and a recommendation for the alignment of Greece's economic policies with the general economic policy orientations of the EU.

A key fiscal policy guideline is that a drastic and sustainable cut of the deficit and the public debt has to stem, besides the widening of the tax basis and the fight against tax and contribution evasion, from curbing the squandering of funds and rationalising and reducing primary expenditure, especially personnel outlays, operational expenditure and expenditure for social security and welfare. In particular, the top priority of an exit strategy should be to restore the sustainability of public finances by creating significant primary surpluses over a long period, as already mentioned. The effort for budgetary consolidation should involve a wide range of actions: (i) drastic containment of public debt, (ii) stronger institutional framework for the design and implementation of fiscal policy, (iii) pension system reform, (iv) auditing healthcare expenditure, (v) lower growth of other primary expenditure, (vi) widening the tax base, (vii) better management of government assets and liabilities, and (viii) an appropriate social protection network.

The quality of public finances is also of paramount importance. The efficient and effective use of sparse public resources and the improvement in the structure and efficiency of the tax system should improve the long-term growth potential, ensuring that fiscal consolidation will indeed contribute to the sustainability of public finances in the long run. Recent studies have shown that expenditure in sectors such as education, research and development, public infrastructure, healthcare or protection of the environment, strengthen economic growth. However, this relationship is not an automatic one, since it depends on the degree to which the desirable results are achieved (e.g. the improvement of the educational level or the increase in private expenditure for research) as well as on the regulatory framework. In the case of Greece, it has been estimated that the efficiency and effectiveness of public expenditure in some of these sectors falls below the EU-27 average. It is therefore pressing to reduce the squandering of funds and to restructure public expenditure towards more efficient actions, which support economic growth through a quality improvement of the human capital, the use of new technologies and better infrastructure (see also Special Feature 1.B).

The final effect of such measures on public deficit and the evolution of economic activity will

depend on the speed and effectiveness of their implementation as well as on the planned structural policy actions, which must be taken and implemented as soon as possible.

Today fiscal consolidation is a prerequisite for any step forward. It is obvious that, in order to recover competitiveness, improve production and ultimately increase the potential growth rate in the medium-term, deep and extended structural changes are urgently needed. Such changes:

First, will promptly reduce unit production costs and halt losses in terms of price and cost competitiveness.

Second, will conduce to modernising the production model, i.e. will increase productivity and restructure domestic production in order to meet domestic and external demand of 2015 (and not that of 1970 or 1990).

These changes must also contribute to the sustainability of the current account deficit. Therefore what is needed is a policy mix that will re-establish macroeconomic and microeconomic balance and permanently improve competitiveness and productivity. Since, over the long period of rapid growth, consumption patterns were actually in excess of the productive capacity, from this point onwards and in order to avoid a permanent decrease in consumption levels, productive capacity itself (i.e. the potential output and its growth rate, which have markedly declined in the past two years) has to increase.

Of course, due to the accumulated ramifications of past negligence or mistakes, not to mention delays after the outburst of the global crisis, there are no "magic solutions" for the Greek economy any more, which means that the policy decisions of the past few weeks were *de facto* a necessity. The *final* impact of the announced fiscal policy measures will depend on the effectiveness and speed of their implementation and on the relative balance between the restrictive and expansionary effect of both individual measures and the package as a whole. For example, a rise in VAT rates may increase public revenue, but will also weigh on inflation and may cause a further containment of demand; restrictive income policy measures may decrease income and demand, but also lower public deficit and unit labour costs, which may in turn lead to the moderation of inflation and an increase in competitiveness, encouraging investment. Although, under the current circumstances, forecasts incorporate an unusually high degree of uncertainty, the initial estimation is that GDP will fall at a rate of about 2%, if (apart from the policy measures already announced) we consider the downward revision of GDP in 2009 and the continued —in late 2009 and early 2010— adverse developments in some main short-term activity and confidence indicators.

At the same time, however, the result of the fiscal policy that will be implemented will also depend on the timely implementation of the structural and growth policy measures, giving priority to those of low or zero cost and fast results. Structural measures that are of the essence involve:

- fighting bureaucracy, eliminating barriers to the operation of product and labour markets;[7]

- rapid absorption of EU funds made available through the National Strategic Reference Framework (NSRF) – Fourth Community Support Framework;[8]

- promotion of clean or "green" growth and amendment of the current energy production and consumption model;[9]

- upgrading education and encouraging innovation and research.

These guidelines may bring about an increase in the rate of employment and fixed capital for-

7 See Special Feature 2.C.
8 See Special Feature 2.D.
9 See Special Feature 2.F.

mation, not to mention total productivity, and thus actually support the potential growth rate, which —as already mentioned— has markedly declined on account of the crisis.[10]

Moreover, in the current environment of reheated inflation, due to the increase in indirect taxation and the rise in oil and raw material prices, the strengthening of competition conditions in the markets takes on particular importance, in order for both wage increases and profit margins to be kept at levels compatible with the sought after improved competitiveness.

The speed at which the recent fiscal measures will be implemented and bear fruit, together with the speed at which the above-mentioned structural interventions will be decided and implemented are of vital importance. How fast the confidence of international and domestic agents (corporations, employees, households) is restored depends on the progress towards achieving those two goals. The restoration of confidence will lead to a reduction in the Greek government's borrowing cost, causing a favourable chain reaction in Greek banks' borrowing costs, thus in the cost of corporation and household financing. In turn, these favourable effects will offset —at least in part— the contraction effects of some fiscal measures. Of course, in order to ensure that the fiscal measures will enhance confidence and reduce borrowing costs, eventually exerting a positive influence on growth prospects, it is imperative that they are supported by structural policies as soon as possible. Such a policy must convince both foreign investors and domestic corporations and employees that it will not only bring about the necessary fiscal "tidying up", but will also ensure that the Greek economy will not go into a coma and that the growth engine will be set in motion again, this time running on a new kind of "technology" and "fuel".

In this climate of uncertainty, if fiscal consolidation measures are fragmented, there is a risk that only contraction will ensue. This is exactly why measures should be applied fast and effectively, they must be frontloaded and combined with the rapid promotion of legal initiatives for the tax system (as envisaged in the USGP), the procedures for drafting the budget and controlling public expenditure, as well as the specialisation and implementation of other structural reforms (also according to the USGP). This is the way to change the economic sentiment, dissolve uncertainty and speed up recovery.

As confirmed by the experience of many countries, fiscal consolidation is more effective and supportive of economic growth when households, convinced that their future tax outflows will be contained on account of fiscal consolidation, increase their consumption and investment expenditure, thus favouring economic activity, even in the short-term. The long-term influence on economic growth is undoubtedly positive, as fiscal consolidation contributes to a containment of debt and a decrease in long-term interest rates, while it frees resources for more productive investment or leaves room for lower taxation. Turning to individual components of fiscal consolidation, the international experience has shown that when consolidation is based primarily on expenditure cuts that are not directly productive (e.g. transfer payments, personnel outlays, etc.) it has more chances to succeed and exerts a positive influence on economic growth. Moreover, the possibility that fiscal consolidation will contribute to long-term economic growth is higher when the initial size of the public sector is large and when a high and unsustainable public debt-to-GDP ratio weighs on the economy. According to recent studies, when debt exceeds 90% of GDP, any further increase will have a negative impact on economic growth over the long term (due to higher long-term interest rates). In such cases, fiscal consolidation through expenditure cuts that are not productive exerts a positive influence on economic growth.

All these lead to the conclusion that, although there is the risk of a larger decrease

10 See Special Feature 2.A.

in GDP (e.g. if the implementation of measures is ineffective or if there are delays), there is also a possibility that things will develop better. This can happen if the measures are implemented without drifting, if they are complemented with structural changes directed towards product and labour markets and if there is also a drastic cut in government spending (e.g. abolition or merger of public entities, as the government is already planning). **This second scenario can create the conditions for a "virtuous circle" that will bring about growth and lead the Greek economy out of the impasse soon.**

4 CHALLENGES TO THE BANKING SYSTEM

The banking system is up against significant challenges in 2010. The rapid correction of fiscal imbalances is the main driver for restoring market confidence and eventually preserving the resilience of the Greek banking system in the crisis.

Developments in the Greek economy have inevitably affected the Greek banking system. Contrary to what has been observed in a number of other countries during the international crisis, the relationship between economy and banks in Greece has taken on the opposite direction. While during the crisis the majority of economic problems in most countries were rooted in the banking sector, this sector in Greece actually supported economic growth. Right now, however, it is suffering the negative impact of the crisis.

Lower economic activity caused a deterioration of the financial position of corporations and households, affecting the demand for loans. On the other side, uncertainty and the lower growth of deposits have affected the supply of loans. The quality of the banks' loan portfolio, as reflected in the significant rise of outstanding loans and provisioning, deteriorated. At the same time, the considerable slowdown of credit expansion to the private sector had a negative impact on banks' revenues. However, the annual credit expansion rate remained positive throughout 2009, contrary to the euro area average, where credit expansion moved at times into negative territory. This shows that Greek banks continued to finance real economy in 2009.

The liquidity of Greek banks was adversely affected by their waning access to liquidity and their increased borrowing costs. These reflect the cautiousness of the markets as to how fast the fiscal and growth outlook will be restored. Banks were largely supported by the ample and low-cost liquidity provision by the ECB. The capital adequacy of banks in 2009 improved both qualitatively and quantitatively.

For 2010 there remain significant challenges for Greek banks, which will have to meet increased needs for funds and liquidity in a period over which economic activity is expected to decline further. Banks are already tightening their credit standards for new loans and, according to estimates, their provisions will increase significantly too, on account of the expected further increase in non-performing loans, which usually appear with a time-lag relative to the business cycle. The determinants of liquidity will be: (i) the level of deposits and (ii) the ability of banks to diversify their sources of liquidity, in view of the anticipated gradual phasing out of the Eurosystem's "enhanced credit support".

A reduction in Greek government borrowing costs will play an important role in the facilitation of banks' access to international money markets. It is important to highlight that the ability of Greek banks to maintain their noteworthy resilience even in the most difficult phases of the world crisis is inextricably connected with the restoration and stabilisation of confidence (of households, corporations, markets and the international community) in the economic outlook of the country.

For these reasons, it is imperative for banks to keep large capital buffers, above the minimum set by supervisory rules, to use their profits prudently, to flexibly manage alternative sources of financing and rationalise operating costs.

5 ISSUES HIGHLIGHTED BY THE CRISIS

The current crisis is multi-layered and all-encompassing. What is needed is to radically reorient economic policy. We all have to assume our responsibilities in this demanding effort to exit the crisis – this year and the following ones.

Everything that is happening today highlights some key, particularly crucial, issues.

1) The crisis we are currently going through is multi-layered and affects all sectors of the Greek economy, the state, institutions and the society as a whole. As the crisis and its manifestations spread everywhere, the negative result for the economy is multiplied at the end. We cannot afford to look for piecemeal, single or short-lived solutions. What is called for here is the radical reorientation of the economic policy towards an entirely different direction, with twin medium-term targets, in response to the twin causes that led us to the crisis: sustainable fiscal consolidation and a policy of structural changes that will steadily enhance competitiveness.

2) The second issue is the exceptional urgency of required changes. The problems that we have been hesitating to face now stand before us. The cost of inertness will not only multiply, but also spill over the entire Greek economy and society.

3) The third and perhaps the most crucial issue lies with the historical responsibilities that we all have to take in the face of this great challenge. The road to exiting the crisis is long and rugged. We can never make it in just one year. This is why everybody has to travel an extra mile. The path that will be taken in the forthcoming years will be largely defined by the target we choose to achieve and our commitment to achieve it. Do we want Greece entrapped in a balance of low potential or do we want it to be a modern and dynamic country? We can certainly no longer rely on past methods, with prefabricated answers to problems that are phrased anew or are thoroughly new. Nor can we rely on biased interpretations of reality, satisfy requests to keep all benefits without considering the interests of the society as a whole, give in to the pursuit of short-term profit maximisation, to a selective and optional implementation of rules and laws, allow the transfer of responsibilities to others and deny any effort to reach a consensus.

The crisis brings us before a challenge: to rapidly implement the necessary reforms, rather than just talk about them. We have to face this challenge, since the cost that we will have to bear, if we do not proceed with the reforms, will be enormous. There are examples of economies that have achieved consolidation after a deep crisis, e.g. Finland, which succeeded in transforming itself into a state-of-the-art technology-intensive economy.[11]

Turning to Greece, this crisis is unlike anything we have experienced so far, at least in post-war history. This means that it is impossible to address it with obsolete measures. **On the one side, there is the huge cost of inertness. On the other, there is hope, i.e. the possibility of achieving a durable "virtuous circle" of progress that will lead from stagnation to growth, provided that we implement the policies decided without drifting and complement them with the necessary structural policies with no delay.** The sooner we understand what is at stake, the easier it will be to find and follow the lead that will guide us out of the crisis and set us on a sound and safe path of durable economic progress.

11 See Special Feature 2.C.

II THE GREEK ECONOMY IN CRISIS: DEVELOPMENTS AND PROSPECTS

1 THE EXTERNAL ENVIRONMENT

1.1 ECONOMIC DEVELOPMENT, PROSPECTS AND POLICY INTERVENTIONS IN THE WORLD AND THE EURO AREA[1]

The external environment of the Greek economy is showing signs of stabilisation. The **world economy**, having entered earlier in the deepest recession in post-war history, started recovering in the second half of 2009. This was mainly due to the extended measures of support to the financial system and the real economy. For the time being, recovery in advanced economies does not seem to possess the robustness usually charactersing economic activity after an economic recession as, in spite of the notable improvement of conditions in money and capital markets, the smooth operation of the financial system and the financing of the economy have not yet been fully restored. Recovery in emerging and developing economies is stronger, with China and India[2] having the lead. A major challenge for economic policy both in advanced and in many emerging economies is the way of implementation and the timing of exit strategies (see Special Feature 3.A), when growth will have to be self-sustained, so that fiscal stability be restored and price stability secured without jeopardising economic recovery.

GDP increased in the third quarter of 2009 in the three major economies, **the US, Japan and the euro area** (recovery in Japan had already started in the second quarter of 2009), following a decline for five consecutive quarters in the euro area and four quarters in the US and Japan. The reversal of the downward trend of global economic activity is attributable to a large extent to temporary factors, such as the unprecedented boosting of demand through fiscal and monetary measures, but also the **cyclical change of reserves**.

For 2009, however, the change of GDP in advanced economies was strongly negative (-3.2%, from +0.5% in 2008), reflecting the extraordinary simultaneity of the slowdown in all major economies during the 2008-2009 recession. Emerging and developing economies, which enjoyed stronger domestic demand and were comparatively less exposed to financial problems, were less affected and recorded a considerable slowdown of their growth rates, but not a recession (2.1% in 2009, from 6.1% in 2008).

Basic commodity prices kept increasing in 2009, mainly owing to the recovery of demand from emerging Asian economies, but also due to adverse weather conditions in North America and Europe. At end-2009, crude oil prices had almost doubled and the prices of metals had more than doubled in relation to December 2008. In average annual terms, however, basic commodity prices dropped notably in 2009 in relation to their historic highs in 2008. The average international price of crude oil fell to 62 USD in 2009 from 97 USD in 2008.

World trade was a key mechanism of contagion and geographic expansion of recession. After slowing down in 2008, world trade was heavily stricken in both volume and value. The plummeting of demand for consumer durables and industrial production, as well as lower credit for imports and exports, led to a large decline in world trade, mainly in countries exporting raw material and capital goods. Despite a recovery in the second half of 2009, IMF estimates point to a 12.3% decline in the volume of world trade in goods and services in 2009, against a 2.8% increase in 2008. For 2010, world trade volume is estimated to rise by 5.8%.

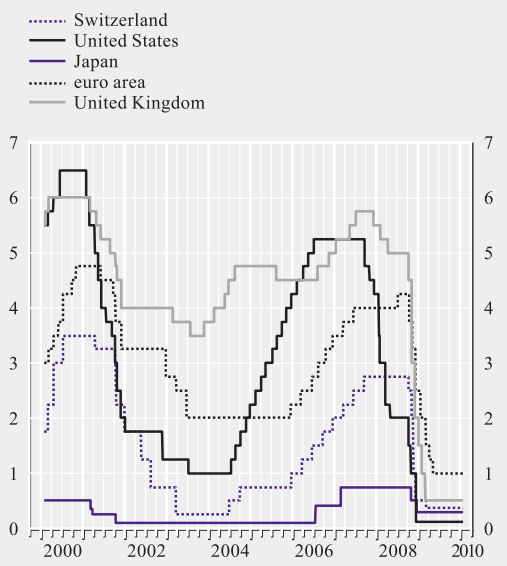
The large deceleration of **inflation** (in advanced economies down to 0.1% from 3.4% in 2008), due to the recession and the evolution of basic commodity prices, has allowed **mone-**

1 The analysis that follows is based on macroeconomic developments up to early March 2010, taking into account the latest forecasts by the IMF (*World Economic Outlook Update*, January 2010), the European Commission (Autumn Forecast, 3 November 2009 and *Interim Forecast*, February 2010), the OECD (*Economic Outlook*, Preliminary Edition, November 2009), as well as ECB staff projections (4 March 2010) and other available data.

2 GDP in China has already returned to pre-crisis levels, mainly because of the ongoing support to domestic demand. In fact, in the fourth quarter of 2009 it reached 10.7%.

Chart II.1 Central bank policy rates (January 2000-January 2010)

(percentages per annum, daily data)



Sources: Euro area: European Central Bank (ECB), interest rate on main refinancing operations; United States: Federal Reserve, federal funds target rate; Japan: Bank of Japan, official discount rate; United Kingdom: Bank of England, repo rate; Switzerland: Swiss National Bank, operational target range for the three-month Libor.

tary policy to remain exceptionally accommodative in most major economies up to early 2010.The key interest rates in US, Japan, the United Kingdom and the euro area have remained unchanged since May 2009, between 0% and 1% (see Chart II.1), while the implementation of quantitative easing programmes continued. To the extent that recovery proves sustainable and inflationary pressures gradually increase as a result of exceptionally high fiscal deficits, analysts estimate that monetary authorities are likely to proceed to a small increase in interest rates at end-2010, an action already taken in Australia and Norway (see OECD, *Economic Outlook*, No 86).[3]

As regards major currencies, **exchange rate volatility** declined in 2009, reflecting the gradual reduction of uncertainty in world markets on the possible implications of the crisis on global macroeconomic imbalances. This development was combined with the decrease in the effective exchange rate of the US dollar in 2009, while the yen reached the highest of the past 14 years against the US dollar. The broad index of the nominal effective exchange rate of the euro strengthened throughout 2009. In December 2009-February 2010 however, it decreased by 6%.

The **economy of the euro area**, after five consecutive quarters of negative GDP change, **entered a phase of mild recovery** in the second half of 2009, mainly as a result of the improvement of external demand, financial conditions and consumer and investors' confidence. This recovery, however, is still fragile, as it is, to a great extent, supported by an unprecedented expansionary macroeconomic policy, which will have to be gradually reversed. The rate of change in GDP in the euro area came to 0.4% in the third quarter of 2009 (compared with the previous quarter), from -0.1% in the second quarter and -2.5% in the first, while recovery continued at a noticeably lower rate (a mere 0.1%) in the fourth quarter. The increase in reserves and net exports —and, to a lesser extent, public consumption— were the main determinants of the increase in GDP in the third and the fourth quarter, while it is worth noting that the considerable negative contribution of investment during the recession was drastically reduced.

In spite of the ongoing recovery, **GDP in the euro area** for the whole of 2009 is estimated to have recorded the largest drop in the post-war era (-4.0% in 2009 from +0.5% in 2008). This was attributed both to the decline in final domestic demand (with a negative contribution of 2.4% percentage points, against a positive contribution of 0.4% percentage point in 2008), in reserves (-0.6% from +0.1) and net exports (-0.9 from 0 in 2008). The recession was deeper in Ireland (GDP fell by 7.5%), Slovenia (-7.4%), Finland (-6.9%), Slovakia (-5.8%) and Germany (-4.9%), while the smallest decrease was recorded in Cyprus (-0,7%)

3 On 18 February 2010 the Federal Reserve announced the increase in its discount rate from 0.50% to 0.75% with an aim to normalising liquidity supply to the credit system, while the monetary policy stance remains unchanged (see Special Feature 3.A).

and Greece (-2.0%). According to ECB staff projections (4 March 2010), the increase in GDP in the euro area will range between 0.4% and 1.2% in 2010.

Inflation in the euro area remained at very low levels in 2009, recording slightly negative annual rates, between June and October, mainly because of the very high international prices of fuel and other raw material in the corresponding period of 2008. Since November HICP became positive again and finally stood at 0.3% in 2009 from 3.3% in 2008. The effect of the high growth rate of unit labour costs (3.8%) on HICP was more that offset by the impact of higher spare capacity and the abrupt widening of the output gap (-4.5% of potential output, from +0.7% in 2008), as well as the drastic reduction of the international price of crude oil (by 32.3% in 2009 in euro terms). In January 2010 euro area inflation stood at 1.0% and in February at 0.9% (provisional data). According to ECB staff projections (4 March 2010), inflation will range between 0.8% and 1.6% in 2010, as excess supply will be maintained.

The repercussions of economic recession on the euro area **labour market** were noticeable, although employment was reduced less than GDP. Specifically, employment decreased by 2.3% in 2009 and the rate of unemployment increased by almost 2 percentage points, to 9.4%. However, there were important differentiations across the euro are countries. In Germany for instance, despite the large drop of GDP by about 5% in 2009, employment declined by a mere 0.5% and the rate of unemployment increased by just 0.4% to 7.7%.[4] By contrast, in Spain and Ireland, which were particularly affected by the steep drop in activity in constructions (which is a labour-intensity industry), employment was reduced by almost 6% and the rate of unemployment increased by 6 percentage points (to 17.3% in Spain and 11.7% in Ireland). According to European Commission forecasts, the deterioration of labour market conditions will continue in 2010, despite the anticipated higher GDP in the euro area – this is because the labour market responds to changes in economic activity with a time lag. In particular, employment is projected to decrease by 1.3% and the rate of unemployment is estimated at 10.7% in 2010.

As it was expected, the economic crisis and the large deceleration of economic activity had an adverse impact on the **public finances** of EU and euro area member countries. For the euro area as a whole, the general government deficit is estimated to have more than tripled in 2009, to 6.4% of GDP from 2.0% in 2008, while, according to European Commission forecasts, it will increase further to 6.9% of GDP in 2010. Furthermore, public debt is estimated to have increased by about 9 percentage points in 2009, to 78.2% of GDP, and is forecast to increase further to 84.0% of GDP in 2010. According to European Commission estimates, more than half of the increase in the euro area deficit in 2009 is attributable to the effect of the economic cycle, through the operation of automatic fiscal stabilisers.

On 2 November 2009 the ECOFIN Council decided to initiate the **Excessive Deficit Procedure (EDP)** for eight euro area members, i.e. Belgium, Germany, Italy, the Netherlands, Austria, Portugal, Slovenia and Slovakia (as well as the United Kingdom, from the non-euro area EU countries). As concerns Greece, the Council ascertained that the measures taken by Greece in order to respond to the Council recommendations of April 2009, when the EDP was initiated, were not adequate. On 16 February 2010 the ECOFIN Council stipulated that Greece should bring its excessive deficit to an end by 2012, by setting as intermediate target the reduction of the deficit by

4 The high resilience of the German labour market amidst the worst crisis of the past decades constituted the subject of extended research. The most important factors that seem to explain this resilience are the following: (a) the extended use of a facility sponsored by the German government that allows employees to keep their job by reducing working hours, (b) business policies aimed at keeping their specialised personnel in view of the difficulty in finding new staff in the recovery phase and (c) the reduction of structural unemployment in Germany, as the labour market reforms of the past years are still bearing fruit. See European Commission, *Autumn Forecasts*, p. 84, November 2009.

4 percentage points, to 8.7% of GDP, in 2010 (see also Chapter I and Section 4 of this chapter). Only three members, Cyprus, Luxemburg and Finland, remain outside the excessive deficit procedure. It is noted however that according to European Commission forecasts, and on the basis of the assumption that economic policy will remain unchanged, the general government deficit will exceed the reference value of 3% of GDP in all euro area members in 2010.

For 2010 the IMF forecasts a recovery of global GDP by 3.9%, following a 0.8% reduction in 2009 (see Table II.1). Recovery will follow a moderate pace in advanced economies, as the loss of income and the deterioration of the financial situation of households, businesses and the public sector will continue to burden final domestic demand and GDP for quite a while. Specifically, in advanced economies GDP is forecast to increase at a rate of 2.1% in 2010 – it will be higher in the US (2.7%) and clearly lower in Japan (1.0%) and the euro area (1.0%). The GDP growth rate in emerging and developing economies is forecast to come to 6%, while it is expected to be higher than the average in China and India (10.0% and 7.7% respectively). Among the non-euro area EU economies, the GDP growth rate in the United Kingdom (which receives about 15% of euro area exports to third countries) is forecast to reach 1.3% in 2010, against a negative 4.8% in 2009. Positive GDP growth rates are also forecast for the other non-euro area EU countries, following negative[5] rates in 2009. Although inflation is expected to increase slightly in 2010 in advanced economies (to 1.3% from 0.1% in 2009 – in developing countries it will accelerate to 6.2% from 5.2% in 2009), it will remain generally low, mainly reflecting the subdued capacity utilisation, the projected further increase in the rate of unemployment, as well as the start of the gradual withdrawal of support measures.

The unfavourable fiscal position of most major economies is not expected to improve in 2010. The fiscal deficit in the 30 OECD members is estimated to remain very high (8.3% of GDP from 8.2% in 2009), while in the euro area it will deteriorate (6.7% of GDP from 6.1% in 2009). The general government fiscal deficit is forecast to drop slightly in the US (10.7% of GDP), while it will rise in the United Kingdom (13.3%), France (8.6%) and Japan (8.2%).

Global macroeconomic imbalances were considerably reduced during the global recession and are expected to stabilise in 2010. The *deficit* of the current account balance as a percentage of GDP in the US is forecast to increase slightly (to 3.4% in 2010 from 3.0% in 2009) as well as the *surplus* of Japan (to 2.8% from 2.5%), while the *surplus* of China will drop (to 5.4% in 2010 from 6.4% in 2009) and the same applies to the *deficit* of the euro area (to 0.1% from 0.6%).

Overall, the IMF estimates that there is still a risk of a recurrence of recession, if the measures taken against the crisis are prematurely lifted. At the same time, it deems that the following are necessary for 2010: (a) support *sustainable* recovery, by utilising the measures to create jobs, (b) keep up efforts to transform the operation of the financial sector, as loose supervision and regulation were among the causes of the crisis and (c) keep up global cooperation, which was enhanced during the crisis.

Bank of International Settlements (BIS) analysts point out that recovery is characterised by uncertainty in developed economies, as employment will be further reduced, while credit expansion, particularly towards small businesses, remains weak. At the same time, the deterioration of fiscal conditions (owing to the large increase in public expenditure to address the crisis) may lead to a new abrupt decline of activity.

Turning to the euro area, at the present juncture, price stability underpins the purchasing

5 Except for Poland, where GDP rose in 2009 (1.2%) and is forecast to accelerate noticeably to 2.6% in 2010 (European Commission, *Interim Forecast*, February 2010).

Table II.1 GDP at constant prices: latest available estimates and projections by the IMF, the European Commission, the OECD, Consensus Economics and ECB staff

(annual percentage changes)

	2009 (estimates)					2010 (forecasts)				
	IMF	EU 4.11.09	OECD 20.11.09	Consensus Economics 11.1.2010	ECB staff 4.3.2010	IMF	EU 4.11.09	OECD 20.11.09	Consensus Economics 11.1.2010	ECB staff 4.3.2010
World economy*	-0.8	-1.2	...	-2.2	...	3.9	3.1	...	3.0	...
United States	-2.5	-2.5	-2.5	-2.5	...	2.7	2.2	2.5	2.9	...
Japan	-5.3	-5.9	-5.3	-5.4	...	1.7	0.1	1.8	1.3	...
China**	8.7	8.7	8.3	...	...	10.0	9.6	10.2	...	...
United Kingdom	-4.8	-4.6	-4.7	-4.7	...	1.3	0.9	1.2	1.5	...
Euro area – 16	-3.9	-4.0	-4.0	-3.9	-4.0	1.0	0.7	0.9	1.3	0.4 - 1.2

* On the basis of PPP for 2007 (Consensus Economics on the basis of exchange rates for 2008).
** For China, the most recent available data are those from the European Commission's Autumn Forecasts, 3 November 2008.
Sources: IMF, *World Economic Outlook Update*, 26 January 2010.
European Commission, *European Economic Forecast – Autumn 2009*, November 2009.
OECD, *Economic Outlook – Preliminary Edition*, November 2009.
Consensus Economics, *Consensus Forecasts*, January 2010.
ECB, *Monthly Bulletin*, March 2010.

power of households and, ultimately, consumption. On the other hand, higher unemployment limits consumption and the low degree of capacity utilisation inhibits business investment. Recovery remains hesitant as financial enterprises restructure their assets, non-financial enterprises reduce their investment and households cut back on consumption in order to increase their savings.

It must be stressed that the financial crisis was not a simple cyclical disturbance. Once it ends, the European economy will not return "as usual" to the pre-crisis state of things, which was not sustainable.[6] The recovery process will not be unhindered. Credit expansion will not resume the high rates of the past, while the potential growth rate has dropped, also because of the changes in relative prices and the composition of global demand. Furthermore, highly increased public debt servicing costs may "displace" private sector financing, while the continuing low degree of production capacity utilisation may soon counteract the measures for securing employment (reduction of working hours in order to avoid dismissals in countries such as Germany and France) causing a rise in unemployment, thus leading to lower confidence, lower demand and finally higher uncertainty.

Moreover, highly increased government borrowing requirements in euro area countries may result in an increase in medium- and long-term interest rates, with negative consequences for investment and growth. In order to avoid such a development, the following actions need to be taken: "exit" and consolidation strategies must be promptly shaped and implemented (see Special Feature 3.A), while emphasis should be placed on the restructuring of expenditure, the introduction of appropriate fiscal regulations and institutions, transparent procedures and reliable statistics, and the restructuring of the banking system. The latter is of particular importance and must aim at the consolidation of balance sheets, efficient risk management and the adoption of transparent and "robust" business standards that will be resilient to disturbances. The aim here is for banks to be able to respond when the recovery of credit demand by the euro area small and medium sized enterprises begins. Finally, overall restructuring is necessitated in all euro area countries at the recovery stage.

The prospects of the global and the euro area economy may be positively affected by a potentially stronger impact of policy measures, a more rapid enhancement of confidence and a faster recovery of global trade. But they may also be negatively affected by a potentially stronger and longer negative feedback of developments in real economy and the financial sector, new increases in oil and raw material prices, intensified protectionist measures and the likelihood of market disturbances owing to the "correction" of global imbalances.

1.2 THE ECONOMIES OF SOUTHEASTERN EUROPE[7]

The international financial and economic crisis still exerts an adverse impact on the economies of Southeastern Europe, as the level of activity keeps on shrinking. However, on the basis of third quarter data, the rate of decrease in real output is recording a slowdown in most countries (with the exception of Bulgaria, while Turkey recorded the most spectacular improvement), a development that potentially signals the end of the recession. On the basis of the latest forecasts by the European Bank of Reconstruction and Development (EBRD – January 2010), all the countries of the region are expected to record positive growth rates in 2010 (except Bulgaria, the growth rate of which is expected to remain unchanged – see Table II.2). Specifically, the EBRD forecasts that GDP in Southeast European countries (except Turkey) will increase this year by 1.2% (compared with a 5.4% decrease in 2009), while in Turkey it will

6 See also the speech by Lorenzo Bini Smaghi, "The euro area macroeconomic situation: Where do we stand, where are we going?", 18 January 2010 (www.ecb.int).

7 The analysis on the economies of Southeastern Europe concerns Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Former Yugoslavia Republic of Macedonia (FYROM), Romania, Serbia and Turkey.

Table II.2 Real GDP growth in Southeastern European countries*

(annual percentage changes)

Country	2006	2007	2008	2009 Q1	2009 Q2	2009 Q3	2009 (estimate)	2010 (forecast)
Albania	5.4	6.0	8.0	6.0	-	-	4.3	2.0
Bosnia-Herzegovina	6.9	6.0	5.4	-	-	-	-4.4	0.6
Bulgaria	6.3	6.2	6.0	-3.5	-4.9	-5.1	-4.8	0.0
Croatia	4.7	5.5	2.4	-6.7	-6.3	-5.7	-5.9	0.6
FYROM	4.0	5.8	4.8	-0.9	-1.4	-1.8	-1.2	2.0
Montenegro	8.6	10.7	7.0	-	-3.5	-4.0	-4.3	0.4
Romania	7.9	6.2	7.1	-6.2	-8.7	-7.1	-7.0	1.3
Serbia	5.2	6.9	5.4	-3.5	-4.2	-2.3	-3.1	2.4
Turkey	6.9	4.7	0.9	-14.3	-7.9	-3.3	-5.6	4.7

Sources: National central banks, IMF, European Commission, European Bank for Reconstruction and Development and Reuters.
* Estimates for 2009 and forecasts for 2010 are expected to be revised.

increase by 4.7% (compared with a 5.6% decrease in 2009).

Lower capital inflows and the slowdown of the rate of credit expansion constitute the key factors behind the considerable decline in domestic demand (both for consumption and investment) and consequently the decline in economic activity. At the same time, lower external demand continues to adversely affect export industries. However, as recession continued to affect mainly domestic demand and imports, current account balance deficits shrunk, reflecting an improvement of the trade balance.

Worsened fiscal positions in these countries constitute one of the worst implications of the crisis. The exception, however, is Bulgaria, which was expected to record a small surplus in its 2009 budget (nevertheless the European Commission, in its Autumn Forecasts, estimated that a deficit would be recorded on a general government level). The degree of fiscal imbalances differs across countries, as it depends, on the one hand, on the effect of the crisis on revenue and, on the other, on the effort made by each country to cut down costs. Undoubtedly, the evolution of the fiscal situation in 2010 will constitute a critical factor which, among other things, will affect investors' expectations and determine, to a large extent, the prospects of economic recovery.

In the monetary sector, the growth rate of deposits and credit, which was slowing down, is showing signs of stabilisation. In particular, the continuing, although at a milder pace, slowdown of the rate of credit expansion, reflects (apart from lower demand) the implementation of stricter lending criteria by banks, partly as a result of the rising share of non-performing loans. This rise has negatively affected the profitability of the banking system in the area, which, however, basically remains sound. Additionally, countries with fixed exchange rates had no problem in supporting their exchange rates while countries with floating exchange rates, after initial losses, saw a clear stabilising trend, which helped avoid strong pressures on the foreign exchange market and inflation. As a result several central banks further reduced their key interest rates in the fourth quarter of 2009.

In spite of its severity, the countries of the region have up to now demonstrated notable resilience in addressing the implications of the crisis. Specifically, they avoided the occurrence

of crisis both in the external sector, as capital inflows continued, mainly for foreign direct investment, and in the banking sector, where the presence of foreign banking groups deterred to a large extent the occurrence of serious liquidity problems. As already noted, 2010 is expected to mark the exit from recession for all countries. However, uncertainty regarding the prospect of –even a limited– recovery remains relatively high.

To the degree that foreign investors remain reserved, capital inflows will remain limited (but positive), making external financing more difficult and maintaining borrowing costs at high levels, thus undermining development prospects. Furthermore, fiscal imbalances have to be addressed soon so as to avoid further cautiousness from the part of foreign investors.

Finally, the prospect of long-term growth largely depends on the progress made towards structural changes. Consequently, it is mainly associated with strengthening the export base of the countries in the area in order to deter the recurrence of unsustainable imbalances in the external sector and reduce the dependence of domestic demand on imported products.

2 THE SINGLE MONETARY POLICY AND INTERVENTIONS BY THE EUROSYSTEM[8]

In January-May 2009, the ECB Governing Council continued the gradual reduction in key interest rates, which had started in October 2008. Between June 2009 and March 2010 the Governing Council kept key interest rates unchanged (see Table II.3).

During 2009 and up to March 2010, the Governing Council continued to further implement non-standard monetary policy measures.[9] Nevertheless, given the stabilisation of financial market conditions, the Governing Council specified the procedure for the phasing out of these measures. On 4 March 2010 this procedure was further specified and relevant announcements were made.

The ECB Governing Council designs the single monetary policy with a view to achieving the primary objective of price stability[10] in the euro area over the medium term. In 2009 and the first quarter of 2010, the Governing Council continued to stress that the monetary policy contributes to keeping medium and long term inflation expectations in line with price stability. The stabilisation of inflation expectations is a prerequisite for GDP and employment growth in the euro area and contributes to ensuring financial stability.

The commitment of the Governing Council to gradually withdraw, when the time is right, all extraordinary liquidity support measures which shall no longer be necessary to the same extent as they were in the past was particularly significant for the stabilisation of inflation expectations in 2009. As mentioned above, this commitment will be implemented in 2010. It has also been announced that the Eurosystem will proceed to liquidity absorption, whenever this is deemed necessary, in order to avoid medium and long term inflationary risks.

The ECB Governing Council has repeatedly stressed that following the last reduction in May 2009, key interest rates have reached the appropriate level so as to expect a stabilisation of prices over the medium term. Besides, this is also suggested by inflation expectations. Price stability will contribute to the enhancement of the purchasing power of households in the euro area.

8 According to the introductory statements made by the President of the ECB at the press conferences held each month after the first meeting of the ECB Governing Council –in which the monetary policy is formulated– in 2009 and during January-March 2010. Information contained in the ECB Monthly Bulletin has also been taken into account.

9 These measures are considered "non-standard" as they are associated with significant amendments on the operational framework –i.e. instruments and procedures– for the implementation of the monetary policy. These measures improve financing conditions and enhance the flow of funds from the financial system (mainly banks) to the economy, more than what would have been achieved only by cuts in key interest rates. They also smoothen conditions in the interbank market, thus safeguarding financial stability and facilitating the flow of bank credit to businesses and households in the euro area.

10 According to the definition included in the monetary policy strategy of the Eurosystem, price stability is achieved when the rate of inflation is below but close to 2%.

Table II.3 Changes in key ECB interest rates

(percentages per annum)

With effect from:[1]		Deposit facility	Main refinancing operations		Marginal lending facility
			Fixed rate tenders (fixed rate)	Variable rate tenders (minimum bid rate)	
2000	6 October	3.75	-	4.75	5.75
2001	11 May	3.50	-	4.50	5.50
	31 August	3.25	-	4.25	5.25
	18 September	2.75	-	3.75	4.75
	9 November	2.25	-	3.25	4.25
2002	6 December	1.75	-	2.75	3.75
2003	7 March	1.50	-	2.50	3.50
	6 June	1.00	-	2.00	3.00
2005	6 December	1.25	-	2.25	3.25
2006	8 March	1.50	-	2.50	3.50
	15 June	1.75	-	2.75	3.75
	9 August	2.00	-	3.00	4.00
	11 October	2.25	-	3.25	4.25
	13 December	2.50	-	3.50	4.50
2007	14 March	2.75	-	3.75	4.75
	13 June	3.00	-	4.00	5.00
2008	9 July	3.25	-	4.25	5.25
	8 October	2.75	-	-	4.75
	9 October	3.25	-	-	4.25
	15 October	3.25	3.75	-	4.25
	12 November	2.75	3.25	-	3.75
	10 December	2.00	2.50	-	3.00
2009	21 January	1.00	2.00	-	3.00
	11 March	0.50	1.50	-	2.50
	8 April	0.25	1.25	-	2.25
	13 May	0.25	1.00	-	1.75

Source: ECB.
1 From 10 March 2004 onwards, with the exception of the interest rate changes of 8 and 9 October 2008, changes in all three key ECB interest rates are effective from the first main refinancing operation following the Governing Council decision, not the date of the Governing Council meeting at which this decision is made.

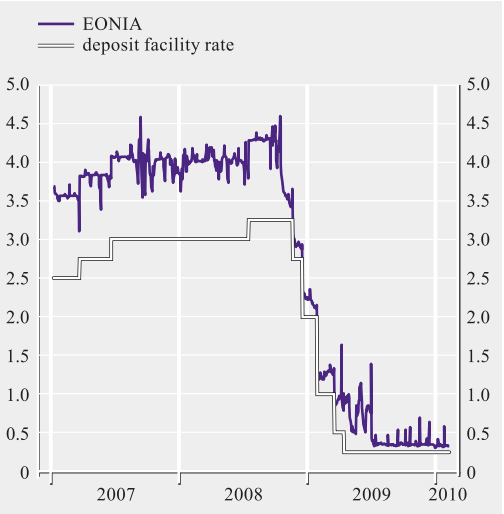
More specifically, between January and July 2009, inflationary pressures eased and stood at historically low levels. This development was attributed —against the background of the economic analysis conducted by the ECB Governing Council— primarily to the decline in the international prices of crude oil and other commodities in the second half of 2008. The easing of inflationary pressures was also attributed to the slowdown in economic activity, which increased after the intensification of the financial turmoil towards the end of 2008. The ECB Governing Council expects that GDP will grow moderately and that prices will demonstrate a small increase in 2010 and 2011. The prospect of maintaining inflationary pressures at low levels over the medium term is also corroborated by the monetary analysis.

Based on the conclusions of the economic and monetary analysis, the ECB Governing Council carried out successive reductions of the fixed rate on the main refinancing operations during January-May 2009. Specifically this rate was cut four times[11] in the period between January and May 2009, by 150 basis points in total, to 1% in May 2009 from 2.5% in December

11 By 50 basis points in January and March, and by 25 basis points in April and May 2009.

Chart II.2 Overnight interest rate (EONIA) and the interest rate on the deposit facility (January 2007-February 2010)

(percentages per annum; daily data)



Source: ECB.

2008 (see Chart II.2).[12] The key interest rates did not change considerably between June 2009 and March 2010, though additional, non-standard, monetary policy measures were taken.

The economic analysis reveals that GDP growth in the euro area accelerated at a quarterly 0.4% in the third quarter of 2009, after five successive quarters of slowdown in economic activity. The recovery continued in the last quarter of 2009 (at a much slower pace) and early 2010. In 2010, the quarterly GDP growth rate may fluctuate, though it is expected to remain at moderate levels. The outlook for GDP growth in the euro area primarily shows that the impact of various factors currently supporting economic activity shall only be temporary. Moreover, the efforts of financial and non-financial corporations and households —both within and outside the euro area— to consolidate their balance sheets are expected to negatively affect economic activity growth. Rising unemployment and low capacity utilisation in industry will contribute to the same direction. Finally, GDP growth is expected to accelerate in 2011.

Inflation had been decreasing from the beginning of 2009 up to July that year; in fact it was in negative territory from June to October 2009. In November 2009 it turned positive again and stood close to 1% between December 2009 and February 2010. The decline in inflation during the January-July 2009 period was mainly due to the fact that international crude oil and other commodity prices were significantly lower than in the corresponding period of 2008. Similarly, the acceleration of inflation as of August 2009 reflects the fact that crude oil prices —which had already started to rise by end-2008— were approaching the levels recorded in the corresponding period of 2008, while in October 2009 oil prices started exceeding these levels.

The ECB Governing Council expects that inflation will be maintained at around 1% in the months to come. Over the medium term, inflation is expected to remain at moderate levels, given that the recovery in total demand in the euro area and other economic areas is not expected to be rapid.

According to the latest ECB staff macroeconomic projections (4 March 2010) the average annual inflation rate is estimated to stand between 0.8% and 1.6% in 2010 and between 0.9% and 2.1% in 2011. However, the possibility of a —larger than expected— rise in indirect taxation and administered prices due to the effort of Member States for fiscal consolidation cannot be ruled out. Moreover, the outlook for economic activity and the prices of oil and other commodities is likely to be different than expected, in which case inflation will stand at different levels from what is currently projected. In any case, as mentioned above, throughout 2009 and between January and March 2010 the Governing Council had been stressing that, on the basis of inflation expectations, price stability would prevail in the euro area over the medium term.

12 Regarding the other Eurosystem key interest rates, the marginal lending facility rate was gradually reduced by 125 basis points, to 1.75% in May 2009 (3% in December 2008) and the deposit facility rate was gradually reduced by 175 basis points to 0.25% in April 2009 (2% in December 2008).

In the context of the monetary analysis, it was confirmed that inflationary pressures have eased and will remain at low levels over the medium term. This conclusion is drawn because the underlying pace of monetary expansion[13] declined due to the continuing slowdown of M3 growth in 2009 (December 2008: 7.5%, December 2009: -0.3%, January 2010: 0.1%) and of bank loans to the private sector (December 2008: 5.7%, December 2009: -0.1%, January 2010: -0,6%).

Non-standard monetary policy measures in 2009 (as well as in previous years) aimed at facilitating the refinancing of euro area credit institutions, given that the money market was not operating in the smoothest terms. The provision of liquidity to credit institutions was necessary in order to avoid an eventual shock in the stability of the banking system as a result of the financial turmoil and in order to make it possible for banks to keep on granting loans to enterprises and households on terms compatible with the Eurosystem's monetary policy stance. Non-standard measures provided ample liquidity, as the demand of credit institutions for financing was satisfied with full allotment, while their cost of financing was very low. Specifically, through non-standard measures, the provision of liquidity to credit institutions through open market operations doubled from €449 billion in mid-September 2008 (4.8% of euro area GDP in 2008) to €897 billion at end-June 2009 (10% of GDP in 2009). Subsequently, the provision of liquidity to credit institutions was reduced to €725 billion at the beginning of March, i.e. around 8% of the estimated GDP for 2010.

Specifically in 2009 the Eurosystem used non-standard monetary policy measures, *on top of interventions in the interbank market that had already been adopted in October 2008*. More specifically:

- Three longer-term refinancing operations with a maturity of one year, 12 with a maturity of six months, 24 with a maturity of three months and 12 with a maturity of one maintenance period were conducted.

- The Eurosystem started purchasing covered bonds in July. These bonds are linked to groups of loans granted by the issuing credit institutions and provide double security to their holders. Covered bond holders, contrary to holders of other securities linked to bank loans (e.g. structured bonds), are considered creditors of the bank. Moreover, covered bond holders have the right to put forward privileged claims —i.e. priority claims over any other bank creditor— on the loans that constitute the cover pool, which are selected to be relatively safe. By the end of February 2010 the Eurosystem had acquired covered bonds with a total value of €39 billion.

- Moreover, as of July, the European Investment Bank has been given the possibility to obtain liquidity from the Eurosystem.

As mentioned above, improved conditions in financial markets allowed the Governing Council to decide (in December 2009[14]) the phasing out of the non-standard monetary policy measures which are no longer necessary. The remaining non-standard measures will still be implemented for a certain period so as to preserve the enhanced credit support policy, through the provision of liquidity by the Eurosystem to the euro area banking system under favourable terms. However, as the Governing Council has pointed out, it should not be overlooked that the implementation of non-standard monetary policy measures for a long period of time may cause distortions.[15]

More specifically in 2010:

13 The underlying pace of monetary expansion is calculated by the ECB using various alternative methods (see ECB, *Monthly Bulletin*, May 2008, Box 1, p. 15) and the measures thus derived are not published. This concept is seen as being more closely related to the evolution of inflation (taking into account time lags) than the M3 growth rate.

14 The procedure for the phasing out of non-standard monetary policy measures was further specified on 4 March 2010.

15 The unlimited provision of low-cost liquidity from the central bank may, for instance, lead banks to complacency and thus delay the necessary adjustments to their balance sheets.

(a) Main refinancing operations will be conducted through fixed-rate full-allotment tenders for as long as it is deemed necessary, at least until 12 October 2010.

(b) No other open market operations with a maturity of one year will be carried out.[16]

(c) Only one last six-month refinancing operation will be conducted on 31 March through a full-allotment tender at the rate[17] of the last one-year operation.

(d) Fixed-rate (equal to the rate on main refinancing operations) full-allotment operations with a maturity of one maintenance period[18] will continue for as long as it is deemed necessary (at least until 12 October 2010).

(e) The three-month operations scheduled for the first quarter will also be carried out through a relevant procedure (the two first have already been conducted).[19]

(f) As of 28 April, the regular three-month operations will start again through variable-rate tenders. The allotment amounts will be set with the aim of ensuring smooth conditions in the money markets.

As non-standard measures implemented after September 2008 contributed to the creation of excess liquidity conditions in the interbank market, the EONIA rate remained below the rate of main (and longer-term) refinancing operations as from the fourth quarter of 2008 – except during a few, short periods.

The first twelve-month longer-term refinancing operation carried out at end-June 2009 had a significant effect on interbank market rates, as it contributed to a great increase of excess liquidity. As a result, the EONIA was further reduced and its negative differential from the fixed rate on refinancing operations widened. More specifically in July-December 2009 and then in the period from the beginning of 2010 until the end of February, the EONIA rate fluctuated slightly and stood for most of these days at around 0.35%, i.e. 10 basis points above the interest rate on the deposit facility.

As regards Euribor rates in euro area interbank loans, their decline continued in the January-December 2009 period as well as in the period from the beginning of 2010 until the end of February. However, the decline in Euribor rates gradually eased after the beginning of 2009.

The decline in Euribor rates is due to (a) lower Eurosystem key interest rates in January-May 2009, (b) stronger liquidity through the non-standard measures, (c) the consequently lower EONIA rate, as mentioned above, (d) weakened short-term expectations regarding the overnight money market interest rate and (e) lower counterparty risk in the interbank market. The latter was the result of enhanced credit support policy measures taken by the Eurosystem but also of the financial system support measures established by governments of EU Member States as of October 2008.

The reduction in interbank market rates and the evolution of yields on medium- and long-term government bonds[20] compared to 2008 have created the conditions for gradual (and overall notable) reduction in interest rates on all types of deposits and bank loans in the euro area throughout 2009. The lower cost of bank loans and fund-raising through debt securities has a favourable effect on economic activity.

16 The last twelve-month longer-term refinancing operation was conducted on 16 December 2009. The rate on this operation shall be calculated retrospectively as the average value of the fixed rate/minimum bid rate of the main refinancing operations, which will be conducted over the 53 weeks from the date of the tender until the date of repayment of the financing provided to credit institutions.

17 The interest rate on this operation shall be calculated retrospectively as the average fixed rate on main refinancing operations which will be conducted over the 26 weeks from the date of the tender until the date of repayment (30.9.2010) of the financing provided to credit institutions.

18 Typically one month.

19 The range of US dollar liquidity-providing open market operations for euro area credit institutions was gradually limited in 2009. The last liquidity-providing open market operations in USD that remained to be conducted (operations with a maturity of one week) and the provision of Swiss francs to euro area credit institutions, through EUR/CHF foreign exchange swaps (with a maturity of one week) were discontinued after January 2010.

20 If the yields are calculated on a three-month basis, it becomes evident that they followed a downward course after the third quarter of 2008.

As for banks, they face the challenge of making the necessary adjustments in the size and structure of their balance sheets, without limiting the availability of credit to the non-financial sector of the euro area, considering that many corporations have no access to open capital markets. To this end, banks will benefit from the improved conditions in the financial markets and further strengthen their capital base and, if necessary, take advantage of the financial sector support measures that have been taken by the Member States.

Following the monetary policy measures taken by the Governing Council after the intensification of the financial turmoil in September 2008 (i.e. reductions in key interest rates and enhanced credit support), the liquidity of credit institutions was ensured and the recovery of economic activity in the euro area has been supported. These measures will continue to favourably affect the economy of the euro area for a prolonged period of time, given that monetary policy usually takes time to work through economy.

3 MACROECONOMIC DEVELOPMENTS AND PROSPECTS IN GREECE FOR 2010

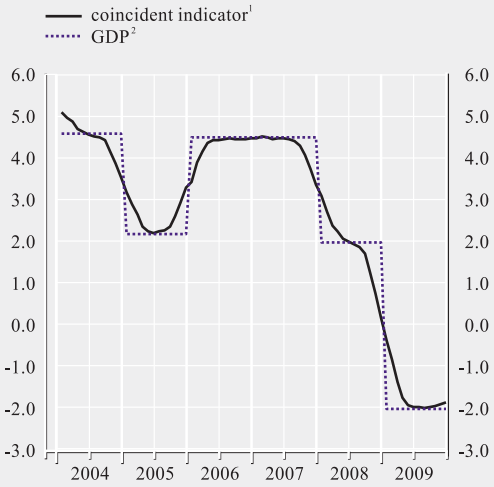
3.1 ECONOMIC ACTIVITY: DEVELOPMENTS AND PROSPECTS

Developments in 2009

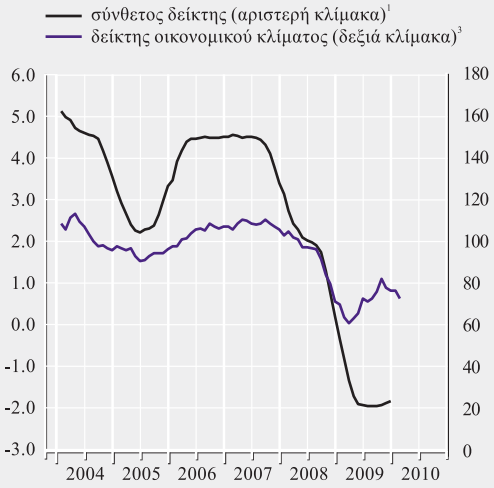
According to the latest national accounts estimates by the NSSG (11 March 2010, by which the former NSSG estimates were revised downwards), the annual rate of change in GDP remained in negative territory throughout 2009 (-1.0% in the first quarter, -1.9% in the second and -2.5% for both the third and fourth quarters) and stood at -2.0% for the year as a whole (2008: +2.0% – see Table II.4). The gradual deterioration is also confirmed by the evolution of the coincident economic activity indicator, which is compiled by the Bank of Greece (see Chart II.3A).[21] By contrast, the Economic Sentiment Indicator for Greece (compiled by

Chart II.3 Economic activity indicators

A. The coincident indicator of economic activity compiled by the Bank of Greece
(January 2004 - December 2009)



B. The coincident indicator of economic activity compiled by the Bank of Greece and European Commission's economic sentiment indicator for Greece
(January 2004 - January 20010)



Sources: Bank of Greece (coincident indicator and 2009 GDP), NSSG (GDP for 2004-2009) and European Commission (economic sentiment indicator).

1 Annualised monthly percentage changes.
2 Annual rate.
3 Monthly data.

21 The indicator is the combined result of a set of short-term indicators and reflects changes in the "underlying" economic activity, normalising the excess volatility of some short-term indicators.

Table II.4 Demand and gross domestic product: 2007-2009

(constant market prices of 2000; annual percentage changes)

	2007	2008	2009
Private consumption	3.3	2.3	-1.8
Public consumption	8.4	0.6	9.6
Gross fixed capital formation:	4.6	-7.4	-13.9
Housing	-8.6	-29.1	-21.7
Other construction	2.5	2.2	4.0
Equipment	20.9	6.3	-19.0
Other investment	-14.4	-14.6	33.8
Final domestic demand	**4.3**	**0.0**	**-2.4**
Change in inventories and statistical discrepancy (% of GDP)	0.8	1.9	1.8
Domestic demand	**5.0**	**1.0**	**-2.5**
Exports of goods and services	5.8	4.0	-18.1
Exports of goods	1.5	3.7	-11.6
Exports of services	9.0	4.1	-22.6
Imports of goods and services	7.1	0.2	-14.1
Imports of goods	6.6	-3.1	-14.4
Imports of services	9.0	13.6	-13.0
Gross domestic product at market prices	**4.5**	**2.0**	**-2.0**

Source: NSSG, National Accounts, provisional data for 2007-2009, March 2010.

Table II.5 Indicators of consumer demand (2008-2010)

(annual percentage changes)

	2008	2009	2010 (available period)
Volume of retail sales (excluding fuels and lubricants)	-1.4	-9.3	...
Food-beverages-tobacco[1]	-0.1	-6.0	...
Clothing-footwear	-5.5	1.4	...
Furniture-electrical appliances-household equipment	-4.3	-15.3	...
Books-stationery-other	-1.3	-24.0	...
Revenue from VAT (constant prices)	0.8	-10.2	...
Retail trade business expectations index	-15.3	-21.4	15.5 (Jan.-Feb.)
New passenger car registrations	-7.0	-17.4	9.1 (Jan.-Feb.)
Tax revenue from mobile telephony[2]	5.3	13.2	...
Outstanding balance of consumer credit[3]	16.0 (Dec.)	2.0 (Dec.)	1.6 (Jan.)

Sources: NSSG (retail sales, cars), Ministry of Finance (VAT revenue, tax revenue from mobile telephony), IOBE (expectations), Bank of Greece (consumer credit).
1 Including big food stores and specialised food-beverages-tobacco stores.
2 Monthly service fee per connection until July 2009. A new tiered fee on mobile subscriptions and a fee on prepaid phone cards have been levied as of August 2009.
3 Including bank loans and securitised loans and taking into account loan write-offs, foreign exchange valuation differences and a transfer of loans by one bank to a subsidiary domestic credit company in 2009.

the European Commission on the basis of IOBE business and consumer surveys) registered a relative improvement between April and October, but from November 2009 up to February 2010 it recorded an almost constant decline (see Chart II.3B).

In addition, it is estimated that the output gap was negative in 2009 and that the potential growth rate decelerated considerably against 2008. This reflects a significant decline in the contribution of capital, as a result of lower investment.[22]

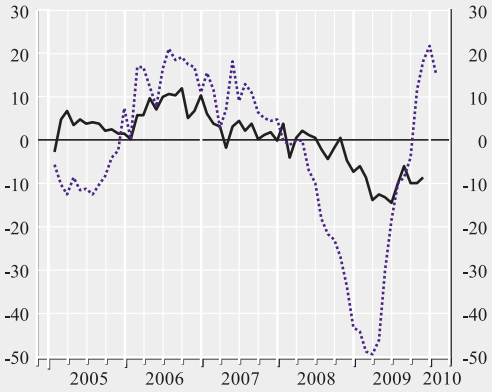
In 2009 **domestic demand** (including changes in inventories) had a negative contribution (for the first time since 1992) in GDP growth, mainly reflecting a decline in **investment** and **private consumption. Public consumption** had a positive contribution to the GDP growth rate. Adverse developments in final domestic demand was only partly offset by the positive contribution of the **real external balance** (i.e. **net exports of goods and services**), which reflected the fact that, because of the recession, imports decreased more than exports.

The 18% drop in **private consumption** at constant prices is reflected in a significant decline of 9.3% in the retail sales volume (excluding cars and fuel) and of 17.4% in new passenger car registrations (see Table II.5 and Chart II.4).

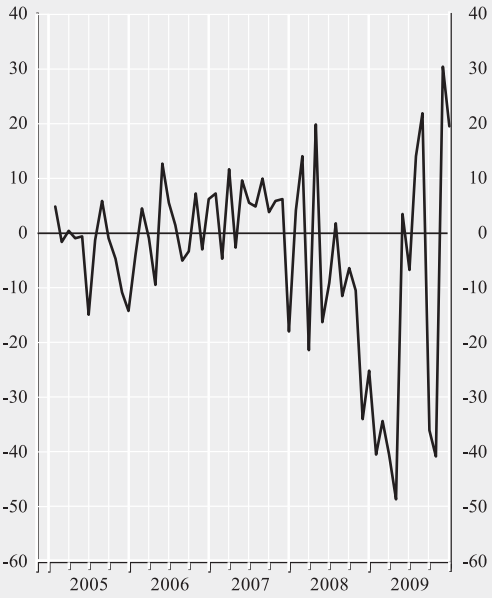
Subdued **private consumption** is due to a decline in employment (see Section 3.2 of this chapter) and a deceleration of the growth rate of disposable income, even that of workers who did not lose their jobs but saw their average working hours truncate. A slowdown in private consumption is also implied by the strong deceleration of consumer credit expansion (2.0% in December 2009, against 16.0% at end-2008), while at the same time it reflects the weakening of consumer confidence – notably consumers' negative perceptions about their financial situation in the next 12 months, which led to the suspension of expenditure for major purchases and a cutback in all other expenses. Furthermore, the

Chart II.4 Consumer demand indicators

A. Sales volume and business expectations in retail trade[1]
(January 2005 - January 2010)



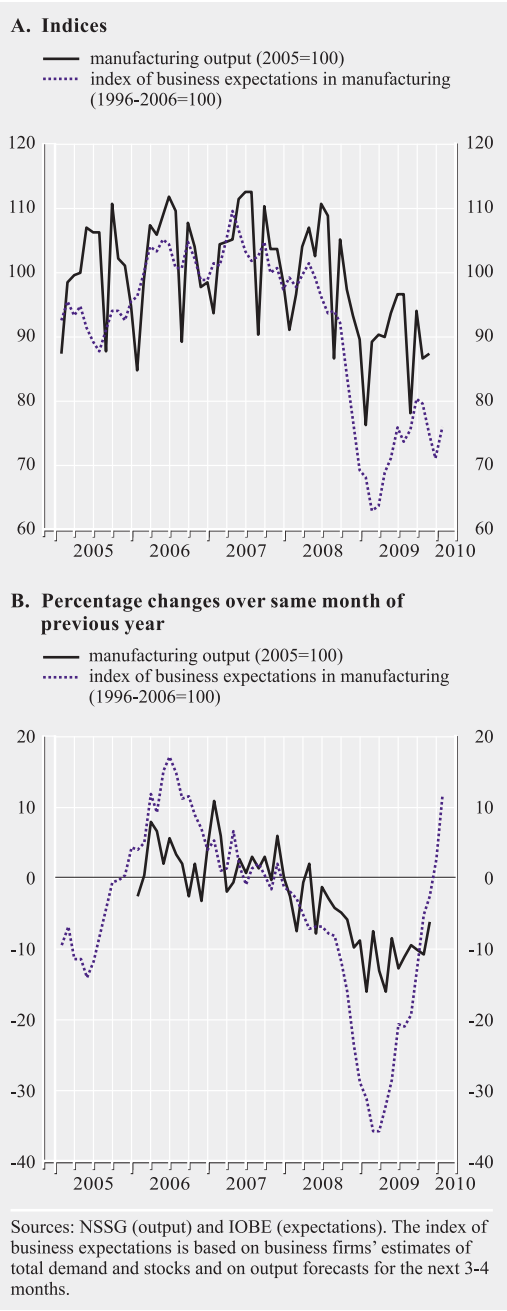
B. New passenger car registrations[1]
(January 2005 - December 2009)



Sources: NSSG (retail sales and cars), IOBE (expectations). The index of business expectations is based on firms' estimates of sales and stocks as well as on their forecasts of business activity over the next six months.
1 Percentage changes over same month of previous year.

22 The potential growth averaged 3.5% in the period 2000-2007; it decreased to 2.25% in 2008 and is estimated to have fallen below 1.5% in 2009.

Chart II.5 Output and business expectations in manufacturing (January 2005 - January 2010)



Sources: NSSG (output) and IOBE (expectations). The index of business expectations is based on business firms' estimates of total demand and stocks and on output forecasts for the next 3-4 months.

decreasing market value of households' assets (wealth) may have had a negative effect[23] as well, primarily on account of a nearly 4% decrease in house prices (see the Annex of Chapter II) and secondly as a result of an average annual decline (of 35.6%) in the composite share price index of the Athens Exchange (despite the recovery of this index between end-2008 and end-2009 – see Section 5.6 of this chapter).[24]

Public consumption rose by 9.6% at constant prices (against a mere 0.6% in 2008), reflecting both a surge in total expenditure for wages in the general government sector (see Special Feature 1.C) and an increase in the remaining consumer spending ("intermediate consumption") of the general government sector.

Total **gross fixed capital formation** (public and private) decreased by 13.9% at constant prices in 2009, after having decelerated by 7.4% in 2008. General government investment fell by approximately 2% at constant prices. The significant decline in private investment spending (see Table II.6) is primarily due to a 21.7% decrease in residential investment (following a 29.1% drop in 2008), which is also reflected in a strong deceleration in the annual growth rate of housing credit (3.7%) in December 2009, against 11.5% in December 2008. It is also associated with a sharp decrease in investment in equipment (-19%). The deterioration of business investment generally reflects the adverse business sentiment, as well as heightened uncertainty, especially in the last quarter of 2009, when the adoption of new economic policy measures was expected.[25] At the same time, the annual rate of credit expansion to businesses decelerated substantially to stand at 5.1% in December 2009, against 18.7% in December 2008. A slowdown in investment for the second consecutive year has negatively affected both GDP and potential output growth (see Special Feature 2.A and 2.C).

Turning to **supply**, according to the NSSG short-term indicators, **total industrial output**

23 However, such an effect has not been corroborated by empirical evidence for Greece.

24 Residential property is the main asset of Greek households, whereas the share of equity holdings is relatively small.

25 According to the investment survey conducted by IOBE in October and November 2009, for the first time in recent years the lack of available funds has negatively affected investment in 2009, while the adverse impact of economic policies as a whole, noticeable in 2008 as well, was also more pronounced.

Table II.6 Indicators of investment demand (2008-2010)

(annual percentage changes[1])

	2008	2009	2010 (available period)
Capital goods output	-7.4	-21.7	-8.5 (Jan.)
Capacity utilisation rate in the capital goods industry	(77.5)	(73.4)	(70.2) (Jan.-Feb.)
Loans to non-financial corporations[2]	18.7 (Dec.)	5.1 (Dec.)	4.5 (Jan.)
Disbursements under the Public Investment Programme	9.3	-2.8	-58.2 (Jan.-Feb.)
Volume of private construction activity (on the basis of permits issued)	-17.1	-27.6	...
Cement production	-3.1	-21.4	7.6 (Jan.)
Construction business expectations index	3.0	-31.4	-15.5 (Jan.-Feb.)
Outstanding balance of total bank credit to housing[3]	11.5 (Dec.)	3.7 (Dec.)	3.6 (Jan.)

Sources: NSSG (capital goods output, volume of private construction activity, cement production), IOBE (capacity utilisation rate, business expectations index), Bank of Greece (loans to non-financial corporations, disbursements under the Public Investment Programme, housing loans).
1 Except for the capacity utilisation rate in the capital goods industry, which is measured in percentages.
2 Including loans and securitised loans and taking into account loan write-offs, foreign exchange valuation differences, as well as loans and corporate bonds transferred in 2009 by domestic MFIs to their subsidiaries operating abroad and to one domestic subsidiary.
3 Including loans and securitised loans and taking into account loan write-offs, foreign exchange valuation differences and a transfer of loans to a subsidiary domestic credit company in 2009.

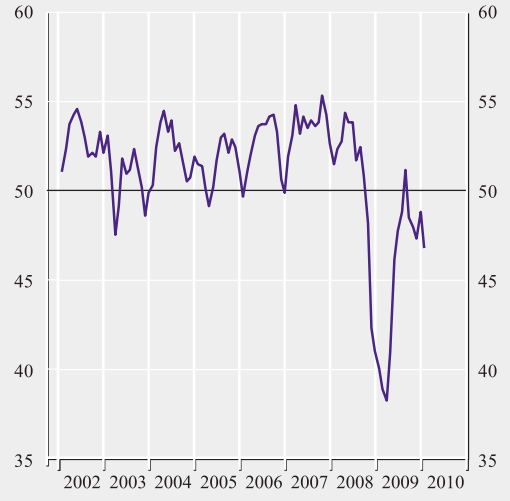
recorded a significant fall in 2009 (-9.3%), compared with a 4.0% decrease in 2008, while an even stronger decline was observed for the manufacturing sector (-11.0%, against -4.7% – see Table II.7 and Chart II.5).

The downturn in manufacturing is also evidenced by IOBE survey data and the **Purchasing Managers' Index (PMI)** for manufacturing (see Chart II.6). More specifically, **industrial capacity utilisation** (which is captured by the IOBE survey data) declined from 75.9% in 2008 to 70.5% in 2009, which is the lowest level recorded in recent years, while the Purchasing Managers' Index (PMI) averaged 45.3 in 2009, from 50.4 in 2008. All data (from both the NSSG and the individual sample surveys) indicate that, while indices showed signs of recovery from the beginning of 2009 onwards, this trend did not outlast the adverse conjuncture of the last months of the year and was reversed, even though these indices (output, expectations, industrial capacity utilisation) ended the year at somewhat higher levels than those observed in early 2009.

Negative developments were similarly manifested in 2009 for **construction**, as evidenced by the "output index" (compiled by the NSSG)

Chart II.6 Purchasing Managers' Index (PMI) for manufacturing (January 2002-January 2010)

(seasonally adjusted index; values over 50 indicate growth)



Sources: Markit Economics and Hellenic Purchasing Institute.

over the first nine months of 2009, by **cement production** (which decreased by 21.4% in 2009) and the considerable worsening of business expectations recorded by the IOBE survey data, which signal a slowdown in activity (both in private construction and public works) throughout the year, as a result of subdued

Table II.7 Indicators of industrial activity (2008-2010)

(annual percentage changes)

	2008	2009	2010 (available period)
1. Industrial production index (overall)	**-4.0**	**-9.3**	**-2.5 (Jan.)**
Manufacturing	-4.7	-11.0	-0.6 (»)
Mining-quarrying	-4.5	-11.5	-2.7 (»)
Electricity	-2.8	-4.2	-6.7 (»)
Main industrial groupings			
Energy	-2.4	-2.9	-4.6 (»)
Indermediate goods	-6.7	-18.2	2.6 (»)
Capital goods	-7.4	-21.7	-8.5 (»)
Consumer durables	-5.7	-20.6	6.4 (»)
Consumer non-durables	-2.0	-4.2	-2.5 (»)
2. Industrial turnover index[1]	**6.9**	**-23.0**	**...**
Domestic market	7.7	-22.2	...
External market	4.9	-25.8	...
3. Industrial new orders index[2]	**-1.9**	**-28.6**	**...**
Domestic market	-0.3	-25.6	...
External market	-3.8	-35.1	...
4. Index of business expectations in industry	**-10.6**	**-21.5**	**13.3 (Jan. - Feb.)**
5. Industrial capacity utilisation rate	**75.9**	**70.5**	**68.4 (Jan. - Feb.)**
6. Purchasing Managers' Index (PMI)[3]	**50.4**	**45.3**	**44.2 (Feb.)**

Sources: NSSG (industrial activity index, industrial turnover and new orders), IOBE (expectations, industrial capacity utilisation rate), Markit economics and Hellenic Purchasing Institute (PMI).
1 The index refers to the sales of industrial goods and services in value terms.
2 The index reflects developments in demand for industrial goods in value terms.
3 Seasonally adjusted index; values above 50 indicate expansion of manufacturing activity.

demand and insufficient financing[26] at least as far as private construction is concerned (see also Chart II.7).[27]

Turnover in several branches of the services sector, such as transport, telecommunications, trade (wholesale trade and car retail sales) and tourism (see Special feature 2.E) showed a significant decline in 2009 (see Table II.8). Estimates on the evolution of the banking sector during the first nine months of 2009 are presented in Section 5.7 of this chapter.

Prospects for 2010

According to the Updated Stability and Growth Programme (USGP – 15 January 2010) for 2010, a moderate decrease in GDP is projected (baseline scenario: -0.3%, alternative scenario: -0.8%). However, a markedly larger decrease (around 2%) is very likely, taking into account the following factors:

(i) the downward revision of GDP growth for 2009 to -2.0%, and more importantly a year-on-year -2.6% in the last quarter of 2009;

(ii) the continued negative developments in some key short-term activity and confidence indicators in late 2009 and early 2010; and

(iii) the contraction effect of the additional fiscal measures (other than those which had been taken into account during the preparation of the USGP) announced on 2-9 February and 3 March, implying a decline in incomes, cuts in

26 Annual credit expansion to construction firms decelerated from 35.2% in December 2008 to 2.7% in December 2009.
27 Regarding developments in public works, a large share of firms does not specify the reason behind this slowdown in activity.

government investment expenditure and a pick-up in inflation (leading to a stronger decrease in real incomes). However, this outlook is surrounded by a high degree of uncertainty. In any case, the final impact of all fiscal policy measures announced will depend on:

- the effectiveness and speedy implementation;

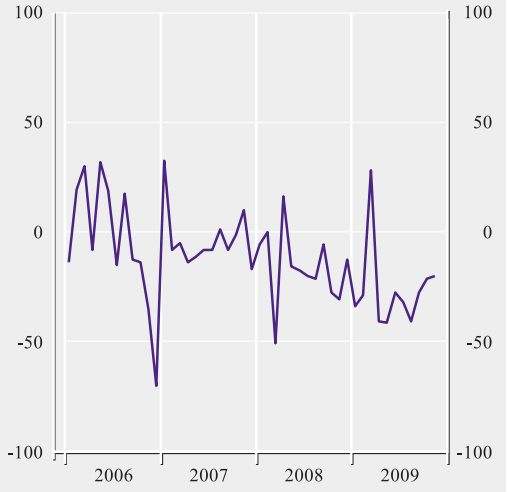
- the net balance between contraction and expansionary effects of each individual measure and of the overall package of measures. For instance, the increase in VAT rates will add to inflation and strict income policies will reduce income and demand but should also contribute to a reduction in both general government deficit and unit labour costs, which would lead to lower inflation and higher competitiveness, thus fostering investment;

- the timely promotion and implementation of other, non-fiscal, structural policy measures, giving priority to low- or zero-cost measures and measures of immediate effect, involving cutting down on red tape, the elimination of barriers in the functioning of product and labour markets, as well as the rapid absorption of available EU funds under the National Strategic Reference Framework – 4th Community Support Framework.

A factor of crucial importance will be whether, following the announcement of the recently adopted measures, their implementation will enhance the confidence of international markets and domestic economic agents (business firms, workers, households) in the fiscal and growth prospects of the Greek economy. If this is achieved, it could result in lower borrowing costs for the Greek government, triggering a chain of favourable effects on the funding costs of Greek banks and, ultimately, of firms and households. In turn, these favourable effects would offset – at least partly – the direct contraction impact of certain fiscal measures. Needless to say, the positive effects via the channel of boosted confidence and lower borrowing costs should, as soon as possible, be reinforced and supported by structural measures, as those outlined above.

Chart II.7 Volume of new buildings and extensions on the basis of permits issued (January 2006-November 2009)

(percentage change over same month of previous year)



Source: NSSG.

Available evidence for the first months of 2010 is not optimistic. As already mentioned above, the Economic Sentiment Indicator and the relating business and consumer confidence indicators continued their downward path in January and February, possibly reflecting the intensification of a general sense of uncertainty and uneasiness (in view of the finalisation of economic policy announcements). A similar behaviour was observed in the Purchasing Managers' Index (PMI) for manufacturing, which in February stood at the lowest level since April 2009. One should expect that following the announcements of 3 March, uncertainty would ease. Needless to say, negative expectations for a further weakening of domestic demand (public and private consumption, as well as investment) are partly offset by favourable expectations for a recovery in external demand, even though global economic performance in the last quarter of 2009 was more modest than initially expected, while in the first two months of 2010 it was surrounded by

Table II.8 Activity indicators in the services sector (2008-2010)

(annual percentage changes)

	2008	2009	2010 (available period)
Services turnover indicators			
Car retail sales	-7.9	-15.6	...
Wholesale trade	9.4	-9.3	...
Telecommunications	-1.0	-8.7	...
Land transport	5.1	-39.5 (Jan.-Sept.)	...
Sea transport	10.2	-23.6 (» »)	...
Air transport	6.5	-10.2 (» »)	...
Storage and transport supporting activities	3.1	-39.6 (» »)	...
Travel agencies and related activities	3.5	-14.0 (» »)	...
Tourism (hotels and restaurants)	3.2	-9.1	...
Legal, accounting and management consulting services	10.9	-12.4	...
Architectural and engineering services	9.0	-18.6	...
Advertising and market research	2.6	-18.3	...
Passengers			
Passenger-kilometres of Olympic Airlines	-8.6	-17.4 (Jan.-Sept.)	...
Passenger-kilometres of Aegean Airlines[1]	14.4	9.9	...
Piraeus port passenger traffic	0.7	-4.3 (Jan.-Nov.)	...
Business expectation index in the services sector	**-8.3**	**-28.3**	**2.5 (Jan-Feb.)**

Sources: NSSG (services turnover), Olympic Airlines, Aegean Airlines, Piraeus Port Authority and IOBE (expectations).
1 Including charter flights.

volatility (partly because of extremely unfavourable weather conditions in large parts of Europe and North America).

Furthermore, it is worth mentioning the **first results of the survey on business developments and prospects, launched by the Bank of Greece** on a sample of 100 large enterprises across all sectors of the Greek economy. The responses from 53% of the sample enterprises, as they were recorded until 24.2.2010, corroborate the adverse economic conjuncture, although firms do not seem to be more pessimistic for the next half of the year than they were for the previous one. As regards the impact of the crisis on the functioning of firms and desirable policy interventions, the following should be noted:

- The financial crisis has driven most business firms to suspend or curtail their investment programmes.
- Construction, shipping and commercial enterprises are planning to diversify their funding sources, shifting them from bank lending to corporate bonds and the stock exchange.
- Business firms reduced their prices, renegotiated terms and conditions with customers and suppliers, and restructured their activities.
- The alleviation of the tax burden, the introduction of incentives for capital stock purchases and borrowing cost subsidies are considered to be effective policy interventions in the present conjuncture.

Business firms estimate that productivity shortfalls in the Greek economy are mainly attributable to the lack of appropriate incentives (for instance, the link between wage and productivity is quite weak) and infrastructure, as well as the low level of vocational training. Manu-

facturers also seek to reinforce their exports through their price-setting strategies.

The number of firms (27) believing that business activity prospects in the Greek economy will deteriorate in the next 1-2 years is higher than that of firms believing that prospects will remain unchanged (15) or that they will improve (6). As for the improvement of prospects, most firms believe that economic climate should be immediately restored and a stable tax system should be adopted, coupled with better infrastructure, education and a more efficient public sector. A significant number of firms mention the role of banks in restoring liquidity in the short term.

* * *

With respect to certain **key factors that influence the main components of demand in 2010**, the following should be noted:

(i) Private consumption will be adversely affected, as real disposable income of households, which increased in 2009 (see Section 3.3 of this chapter), is expected to decrease in 2010, on account of lower pre-tax incomes (at least of employees) in nominal terms, coupled with a continuous decline in employment and the projected pick-up in inflation (see Sections 3.2. and 3.3. of this chapter).

(ii) Private consumption, as well as residential and corporate investment, will be adversely affected, as the annual rate of credit expansion to the private sector is estimated to further decelerate and stand at a remarkably low level by end-2010 (see Section 5.3 of this chapter).

(iii) In addition, according to the USGP, public consumption is already expected to decline by 4.4% in 2010, but this decline may be higher if the additional measures announced on 3 March are also taken into account.

(iv) Business investment will probably be affected by weakening demand, lower profitability in 2009 and the (anticipated) tightening of bank credit standards. On the other hand, the implementation of investment-related institutional and administrative initiatives foreseen in the USGP[28] is expected to help improve the business climate, although the impact on the amount of investment outlays will not be felt before mid- or end-2010.

(v) Residential investment (approximately 1/3 of total investment) is estimated to continue its decline, albeit at a diminishing rate, as evidenced by the decreasing volume of private construction activity on the basis of permits issued (with an annual rate of 27.6% in 2009, which was reduced to -21.3% in the last quarter of 2009 – see Chart II.7). At the same time, the rate of expansion of housing credit is expected to decelerate, reflecting the evolution of both loan demand and supply.

(vi) According to the USGP, public investment was expected to follow an upward trajectory and an increase of €800 million was projected. However, on 3 March it was announced that the Public Investment Programme is eventually reduced by €700 million; thus, expenditure under this Programme will increase by only €100 million or 1.1% at current prices.

(vii) Finally, as already mentioned above, a moderate recovery of exports of goods and services is expected, while imports will continue to fall, although less than in 2009.

3.2 EMPLOYMENT AND UNEMPLOYMENT: DEVELOPMENTS AND PROSPECTS

Labour market conditions worsened gradually in 2009, as evidenced by the final data of the Labour Force Survey (LFS) for January-September 2009 and by provisional data from the same survey for the last quarter of the year. This reflects a deceleration in economic activ-

28 Among these initiatives are: reorientation of business programmes towards "green" actions, amendment of administrative procedures of Law 3614/2007, revision of the development law within the first half of 2010, speeding-up of the evaluation of 2,700 business plans (totalling €8 billion), further enhancement of projects co-financed by the public and private sectors (Public-Private sector Partnerships) and promotion of legislative regulations to remove investment counterincentives.

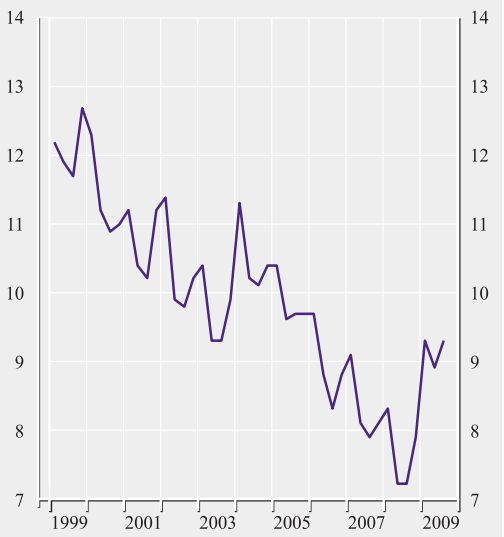
Chart II.8 Employment (1999-2009)

(percentage changes over corresponding quarter of previous year)

Source: NSSG, Labour Force Surveys (LFS).
New revised data for 1998-2003, released in January 2005. No changes are shown for 2004, as data are not fully comparable, due to a change in the survey sample.
• Non-employees = self-employed with staff (employers) + self-employed without staff + family workers.

Chart II.9 Total unemployment rate (1999-2009)

(percentage of labour force)



Source: NSSG, Labour Force Surveys.

ity and competitiveness. In January-September 2009 the **average number of employees** fell by 0.9% against the corresponding period of 2008. The annual rate of decrease accelerated between the first (-0.6%) and the second quarter (-1.1%) and stabilised at -1.1% in the third quarter (see Chart II.8). The average **employment rate** of persons aged 15-64 stood at 61.4% in the first nine months of 2009, against 61.9% in the corresponding period of 2008. According to provisional data, the number of employees in the last quarter of 2009 was 1.5% lower than in the last quarter of 2008.

Lower employment in the first nine months of 2009 against the corresponding 2008 period is mainly due to higher layoffs or non-renewal of contracts and, to a lesser extent, to lower job creation. However, new salaried jobs involved fixed-term contracts to a greater extent than in previous years (January-September 2007: 52.2%; January-September 2008: 56.4%; January-September 2009: 57.3%).

The decline in employment was more pronounced among **employees** (see Chart II.8), falling by 1.4% in the first nine months of 2009. However, the annual rate of decline decelerated between the second and the third quarter (first quarter -1.2%, second quarter -1.8% and third quarter -1.4%). In the first nine months of 2009, the total number of the **self-employed** rose, though marginally (+0.5%), owing to the rising number of the self-employed without personnel during that period. The increase in the number of the self-employed reflects a rise in the labour force and movements from salaried employment to self-employment.

Real average **working hours** per employee (normal working time and overtime) also declined by 0.8% in the private non-agricultural sector in January-September 2009, against the corresponding period in 2008.

At **branch level**, lower employment in the first half of 2009 stemmed from the secondary sector (manufacturing and construction), while overall employment in agriculture and services

did not decline, despite falling in individual branches. However, in the third quarter total employment in the secondary and the tertiary sector decreased. Declining employment in the tertiary sector resulted from significantly lower jobs in retail trade, professional services and the financial sector, which was only partly offset by higher employment in communication, transport and hotel and restaurant services.[29]

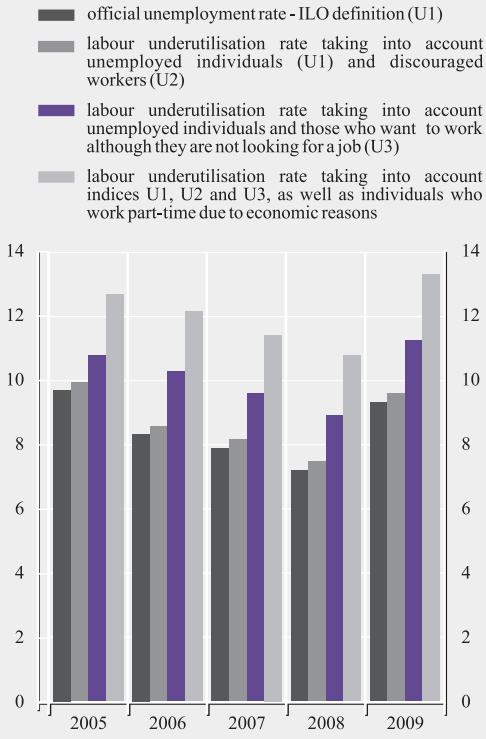
Low-skilled workers (salespersons, unskilled workers and technicians) as well as **younger workers** were more heavily affected and their rate of participation in the total number of laid-off workers was higher than in total employment in January-September 2009. Due to the relatively high rate of unskilled workers among immigrants (whose average age is lower than that of Greek workers), the employment rate of immigrants fell even more between 2008 and 2009 (January-September 2008: 68.8%; January-September 2009: 67.0%) than total employment rate.

The average number of the unemployed as defined by the International Labour Organisation[30] was 456,700 in the first nine months of 2009, i.e. 83,700 more than in the corresponding 2008 period. The average rate of unemployment in the first nine months of 2009 stood at 9.2%, i.e. 1.6 percentage points higher than in the corresponding period of 2008 (see Chart II.9). The increase in the rate of unemployment became stronger during the year, from one percentage point in the first quarter of 2009, to 1.7 percentage points in the second quarter of 2009 and to 2.1 percentage points in the third quarter, while provisional data for the fourth quarter show an even stronger rise in unemployment (10.2%).

The gap between the increase in the number of the unemployed and the decrease in the number of the employed accounts for the rise in the labour force (+0.8% in the first nine months of 2009) and reflects the higher number of immigrants and women, as registered by the LFS.[31] As a result, the **participation rate of persons aged 15-64 in the labour force** rose from 67.1% in the first nine months of 2008 to 67.7% in the first nine months of 2009.[32] The

Chart II.10 Alternative measures of labour underutilisation (2005 - 2009)

(percentages - Q3 data)



Source: NSSG, Labour Force Surveys (2009).

29 According to LFS data, in the first nine months of 2009 the change in employment in the construction, manufacturing and financial sectors contributed by -0.6, -0.5 and -0.2 percentage point, respectively, to the rate of decrease in employment.

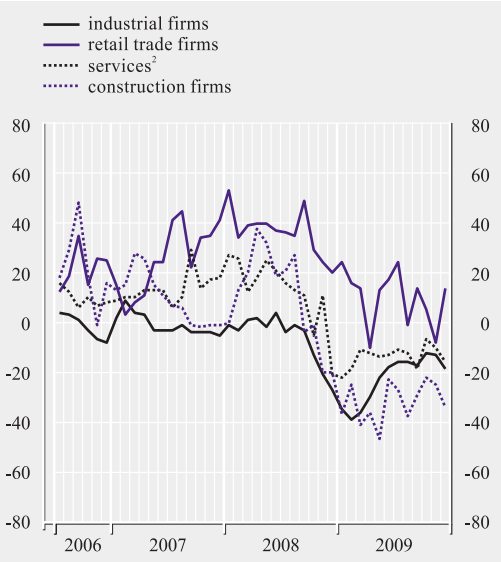
30 According to the ILO definition, "Unemployed persons comprise persons aged 15-74 who were without work during the reference week, i.e. neither had a job nor were at work, were available for work and actively seeking work or who found a job to start later, i.e. within a period of three months. Employed persons comprise persons aged 15 years and over who, during the reference week, worked one hour or more for wages or salary or persons doing unpaid work for family gain, or persons having a job (as employee or self-employed) but being temporarily absent (because of sickness, leave etc.)". See NSSG, http://www.statistics.gr/portal/page/portal/ESYE/BUCKET/A0101/Other/A0101_SJO01_MT_QQ_01_1998_04_2009 _01_F_GR.pdf.

31 It is difficult to assess whether increased participation of immigrants is explained by the recently higher inflow of immigrants into Greece or their full registering into the survey as a result of their legalisation. However, it should be noted that, according to LFS data on the number of years foreign citizens stay in Greece, immigration inflows continue in recent years.

32 In the first nine months of 2009 the participation rate for men was 79.1% (same as in the first nine months of 2008) and for women 56.4% (first nine months of 2008: 55.0%). The participation rate of immigrants in the first nine months of 2009 was 74.6% (first nine months of 2008: 73.5%).

Chart II.11 Business expectations[1] for employment (July 2006-December 2009)

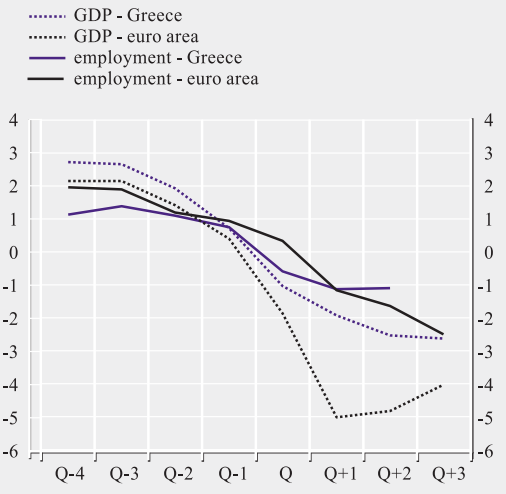
(percentage balances)



Source: IOBE, Business Surveys.
1 Firms are asked to assess the prospect of an increase in their number of employees over the coming period.
2 Excluding banks and retail trade firms.

Chart II.12 GDP and employment: Greece and the euro area

(annual percentage changes, quarterly estimates)



Sources: NSSG, national accounts data and Labour Force Surveys, and Eurostat.
Q stands for the quarter in which GDP fell for the first time on an annual basis. For the euro area Q=Q4 2008, for Greece Q=Q1 2009, Q-1, Q-2 ... indicate 1,2... quarters earlier.

rate of unemployment for immigrants (10.1%) is higher than the corresponding rate for Greeks (9.1%).

Higher labour supply is also evident in the higher percentage of employed wishing to work longer hours per week (January-September 2008: 3.7%, January-September 2009: 4.3%).

The rate of unemployment, according to the ILO definition, is an indicator of underemployment. Chart II.10 presents common alternative underemployment and labour force availability indicators (e.g. as used by the US Bureau of Labor Statistics). Naturally, a change in the definition causes a change in the rate of unemployment; however, the real question is how big is the gap between the two indicators and whether this changes over time. According to the chart, there is a gap between the two indicators. For example, taking into consideration both the unemployed according to the ILO definition and persons not seeking employment because they believe they will not find a job, persons that would like to work but do not seek a job for any reason, as well as people working on a part-time basis because they cannot find full-time employment, the rate of underemployment in the third quarter of 2009 rises from 9.3% to 13.3%. Recently, however, the gap between the indicators has not widened significantly (although it is higher than in 2005).[33]

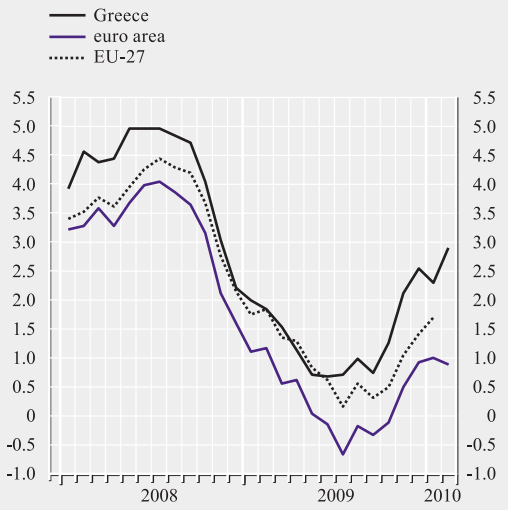
In February 2010, business estimates on **short-term prospects** for employment, as reflected in IOBE business surveys (see Chart II.11) were negative for all branches except retail trade. Business expectations regarding employment in construction and services were particularly unfavourable and much lower than average expectations in 1998-2008.

Comparing developments between the Greek and other euro area labour markets after the outburst of the financial crisis (see Chart II.12)

33 The rate of underemployment should also be taken into account in the assessment of the potential output of the economy.

Chart II.13 Harmonised index of consumer prices in Greece, the euro area and the European Union (January 2008 - February 2010)

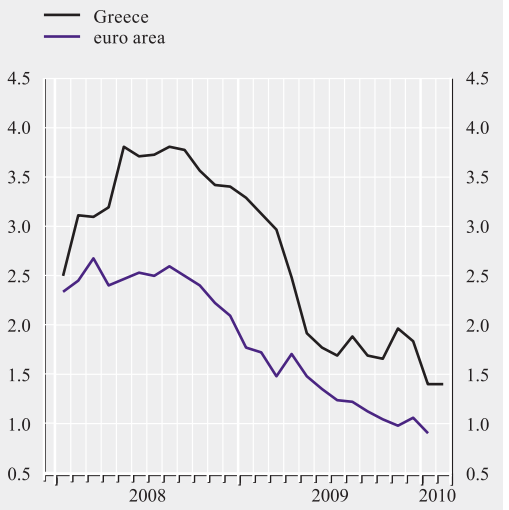
(percentage changes over same month of previous year)



Sources: NSSG and Eurostat.

Chart II.14 Core inflation in Greece and the euro area on the basis of the HICP excluding energy and unprocessed food (January 2008 - February 2010)

(percentage changes over same month of previous year)



Sources: NSSG and Eurostat.

shows that until now —on the basis of provisional national accounts data— the impact of the slowdown of economic activity on employment was stronger in Greece than in the euro area as a whole. This is probably attributable to the relatively high rate of unskilled workers in the Greek economy, as well as the fact that construction in Greece is much more significant than in several other countries.

On the basis of available evidence and forecasts (see Section 3.1 of this chapter), employment is expected to decline further in 2010, at a rate similar to that observed in 2009 or even stronger (depending on developments in economic activity).

3.3 INFLATION: DEVELOPMENTS AND PROSPECTS

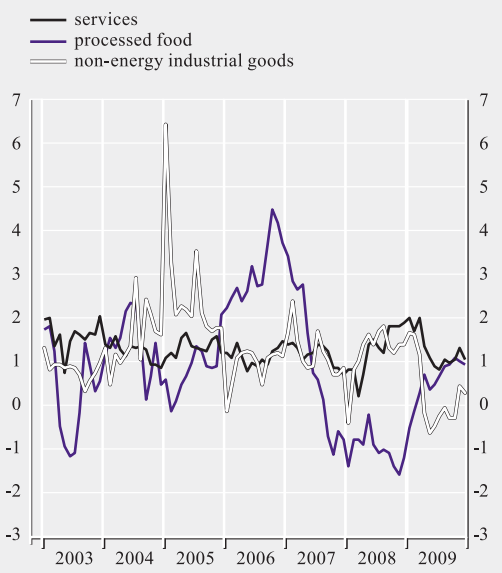
Price developments in 2009

The annual rate of inflation (on the basis of the Harmonised Index of Consumer Prices – HICP), which had been decelerating since August 2008, continued to decline through to September 2009, when it stood at 0.7%. However, as from October, particularly in November, it started rising again —mainly as a result of the significant increase in fuel prices compared with their very low levels in the last two months of 2008— to reach 2.6% in December (see Chart II.13), while average annual inflation in 2009 stood at 1.3% from 4.2% in 2008. Core inflation, which does not include the prices of energy and unprocessed food, recorded an almost continuous decline from October 2008 onwards and, as a result, it stood at 1.8% in December 2009, while its average level for 2009 was significantly lower than in 2008 (2.2% compared with 3.4% – see Chart II.14).

The significant drop in headline inflation in 2009 largely reflects the sharp decline in the prices of oil and other commodities globally in the second half of 2008. Although the price of crude oil (in US dollars) in the global market started to increase in early 2009, its *annual rate of change* in euro remained negative through to October, thereby contributing to low infla-

Chart II.15 Annual inflation differentials between Greece and the euro area (2003-2009)

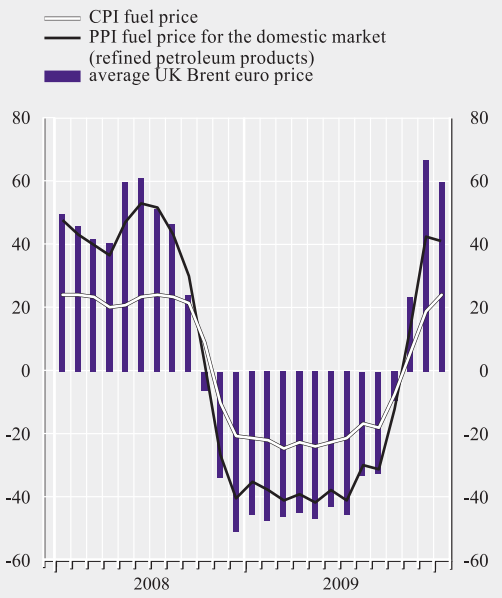
(selected indices, differentials in percentage points)



Source: Calculations based on Eurostat and ECB data.

Chart II.16 Evolution of CPI/PPI fuel prices and of the euro price of Brent crude oil (January 2008-January 2010)

(percentage changes over same month of previous year)



Source: Calculations based on NSSG data and, for crude oil prices, on ECB data.

tion levels. In addition, the decrease in overall demand contributed significantly to the decline in core inflation. In 2009, the demand side exerted *disinflationary pressures*, as opposed to previous years. The weakening of demand was accompanied by a decrease in corporate profit margins and a significant deceleration labour cost growth – i.e. developments in the supply side that also contributed to the decline in core inflation.

However, core inflation was –and still is– higher than in the euro area as a whole (by 0.9 percentage point in 2009, compared with 1.0 percentage point in 2008), because the Greek economy is still characterised by imperfect competition in factor markets. These conditions have an adverse effect on price formation. Similarly, with regard to the annual HICP inflation, the differential against the euro area was 1.0 percentage point in 2009 (compared with 0.9 percentage points in 2008 – see Tables II.9 and II.10 and Chart II.15).

Main determinants of inflation in 2009

The **international price of the Brent blend** (in US dollars) had kept rising up to July 2008, then followed a downward course up to December, while from January 2009 it showed a recovery. Thus, in December 2009 the euro price of oil was 60.7% higher than in December 2008. Nevertheless, the average annual euro price of oil for 2009 as a whole fell by 32.3%. These developments affected the prices of imported and domestically sold fuel (see Charts II.16 and II.17).[34] Moreover, the average annual growth of **non-energy import prices** (according to the relevant NSSG index for industry) recorded a significant decline in 2009 (to 0.5% from 2.5% in 2008 – see Chart II.18), which also contributed to the decline in

34 In Greece, according to the Import Price Index in Industry (NSSG), the prices of imported energy raw material (crude oil and natural gas) fell in 2009 at an average annual rate of 2.4%, while the prices of imported final fuel products fell at an average annual rate of 25.9%. Moreover, *in the domestic market and at wholesale level*, the prices of fuel (final products) included in the Industrial Producer Price Index for the domestic market fell at an average annual rate of 28.6% in 2009. The *retail prices of fuel included in the CPI* fell at an average annual 15.7% in 2009.

Table II.9 Harmonised index of consumer prices: Greece and the EU (2008-2009)

(annual percentage changes)

Country	2008 (year average)	December 2008	2009 (year average)	December 2009
Austria	3.2	1.5	0.4	1.1
Belgium	4.5	2.7	0.0	0.3
Bulgaria	12.0	7.2	2.5	1.6
Cyprus	4.4	1.8	0.2	1.6
Czech Republic	6.3	3.3	0.6	0.5
Denmark	3.6	2.4	1.1	1.2
Estonia	10.6	7.5	0.2	-1.9
Finland	3.9	3.4	1.6	1.8
France	3.2	1.2	0.1	1.0
Germany	2.8	1.1	0.2	0.8
Greece	**4.2**	**2.2**	**1.3**	**2.6**
Hungary	6.0	3.4	4.0	5.4
Ireland	3.1	1.3	-1.7	-2.6
Italy	3.5	2.4	0.8	1.1
Latvia	15.3	10.4	3.3	-1.4
Lithuania	11.1	8.5	4.2	1.2
Luxembourg	4.1	0.7	0.0	2.5
Malta	4.7	5.0	1.8	-0.4
Netherlands	2.2	1.7	1.0	0.7
Poland	4.2	3.3	4.0	3.8
Portugal	2.7	0.8	-0.9	-0.1
Romania	7.9	6.4	5.6	4.7
Slovakia	3.9	3.5	0.9	0.0
Slovenia	5.5	1.8	0.9	2.1
Spain	4.1	1.5	-0.3	0.9
Sweden	3.3	2.1	1.9	2.8
United Kingdom	3.6	3.1	2.2	2.9
European Union - 27	3.7	2.2	1.0	1.4
Euro area	**3.3**	**1.6**	**0.3**	**0.9**

Source: Eurostat.

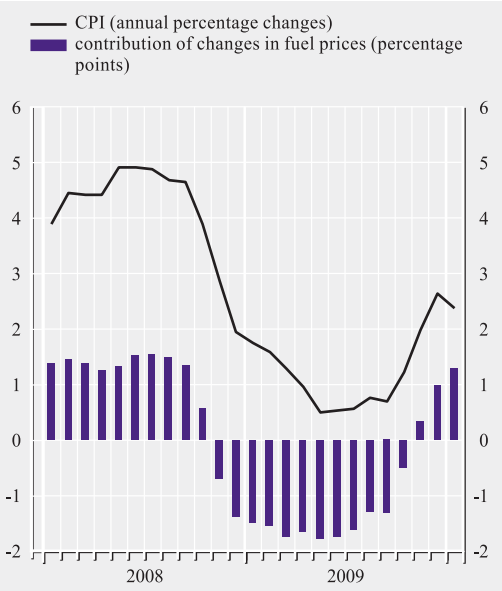
Table II.10 Contributions to the inflation differential between Greece and the euro area (2004-2009)

(percentage points)

	2004	2005	2006	2007	2008	2009
Differential of average annual rates of HICP change	0.9	1.3	1.1	0.9	1.0	1.1
Contributions:						
Core inflation	1.16	1.40	1.15	1.00	0.77	0.91
of which						
Services	0.48	0.51	0.43	0.50	0.56	0.64
Processed food	0.20	0.10	0.44	0.13	-0.14	0.14
Non-energy industrial goods	0.48	0.79	0.28	0.35	0.35	0.13
Unprocessed food	-0.36	-0.30	-0.12	-0.06	0.03	0.39
Energy	0.10	0.20	0.11	-0.03	0.24	-0.25

Source: Calculations based on Eurostat and ECB data.

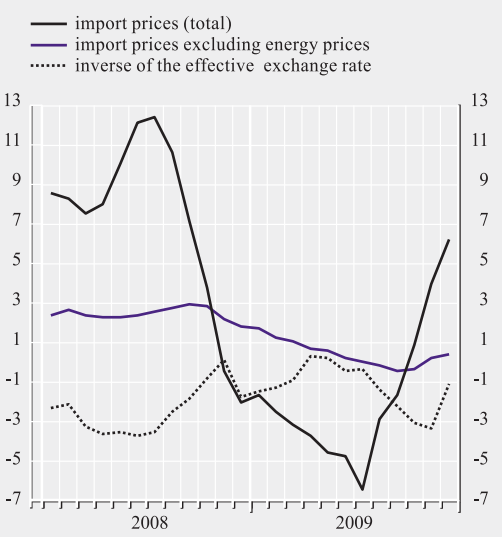
Chart II.17 Inflationary contribution of changes in fuel prices (January 2008 - January 2010)



Source: Calculations based on NSSG data.

Chart II.18 Import price index in industry and the inverse of the effective exchange rate of the euro, weighted on the basis of Greece's external trade (January 2008 - December 2009)

(percentage changes over same month of previous year)



Sources: NSSG and Bank of Greece.

inflation. The slowdown in import prices in euro reflects the significant decrease in the dollar prices of non-energy commodities[35] and in the rates of inflation globally, which more than offset the fact that the average annual growth of the nominal effective exchange rate of the euro weighted on the basis of Greece's external trade was lower in 2009 than in 2008 (1.0%, compared with 2.3%).

According to available estimates, the marked **decrease in demand** in 2009 implies that the "output gap" in the Greek economy was negative in 2009,[36] while it had been positive in recent years. As already mentioned, the negative "output gap" contributed to the deceleration of core inflation. In fact, core inflation would have been lower had the economy not been characterised by conditions of imperfect competition. The evolution of demand and the negative "output gap" are also reflected in the slowdown of unit labour cost growth and the narrowing of profit margins for 2009. The slowdown in unit labour cost growth was lower than the slowdown in the growth of average earnings, reflecting the cyclical decline in productivity, which (measured on the basis of GDP per employee) is estimated to have decreased by 0.5% in 2009, compared with an increase by 0.4% in 2008.

In particular, **unit labour cost growth** is estimated to have slowed down in 2009 to 5.7% for the economy as a whole,[37] compared with 6.4% in 2008. Therefore, this growth rate remained higher than the relevant rate in the euro area (which increased at an average annual 4.7% in January-September 2009, i.e. it accelerated because of the high decrease in productivity

35 According to the IMF, the prices of non-energy commodities fell by 18.9% in 2009, compared with a 7.5% increase in 2008 (*World Economic Outlook Update*, January 2010).

36 According to the European Commission (*Autumn 2009 Economic Forecast*), the output gap was negative in 2009 (-0.2), while it had been positive in 2008 (2.8). According to the OECD (*Economic Outlook*, No. 86, November 2009) the output gap will be -4.6 in 2009, compared with -0.7 in 2008. (These forecasts were made prior to the downward revision of GDP for 2009.)

37 This growth rate, as calculated by the Bank of Greece, satisfactorily proxies the unit labour cost growth in the economy's non-agricultural sector (see *Monetary Policy – Interim Report 2008*, October 2008, p. 81).

Table II.11 Average earnings and unit labour costs in total economy: Greece and the euro area (2001-2010)

(annual percentage changes)

	Average earnings		Unit labour costs	
Year	Greece	Euro area	Greece	Euro area
2001	4.7	2.8	3.9	2.4
2002	6.6	2.7	5.5	2.5
2003	5.6	2.9	2.3	2.2
2004	7.2	2.6	4.1	1.0
2005	4.4	2.2	3.5	1.3
2006	5.7	2.6	3.2	1.1
2007	5.2	2.6	3.5	1.6
2008	6.2	3.4	6.4	3.4
2009	5.0	1.6	5.7	3.4
2010 (forecast)	-0.9	1.6	0.6	-0.5

Sources: For Greece, Bank of Greece estimates. For the euro area: European Commission, *European Economic Forecast – Autumn 2009*, and *Statistical Annex of European Economy*, Autumn 2009. In the euro area, unit labour costs rose at an annual rate of 4.7% in the first nine months of 2009.

due to the recession – see also Table II.11). In the business sector (which includes public and private enterprises and banks), it is estimated to have reached 3.5% from 5.6% in 2008.

Average pre-tax earnings in the economy as a whole are estimated to have increased by 5.0% in 2009, compared with 6.2% in 2008 (see Table II.12),[38] while productivity fell by about 0.5%. Specifically:

- **In central government**, according to the Introductory Report on the 2010 Budget, the wage bill rose by 7.9% in 2009 and the wage bill plus pension expenditure rose by 8.5%.[39] On the basis of the incomes policy announced on 18.3.2009,[40] an extraordinary one-off financial aid was granted in 2009 (instead of an increase in basic salaries) to civil servants with low and medium earnings, while no increase was granted to civil servants with high earnings. Similar arrangements also applied to central government pensioners.[41] Given that the number of employees increased by 1%, average gross earnings of civil servants increased by 6.9%, reflecting the special wage arrangements for the judiciary and doctors of the National Health System. These arrangements were implemented prior to the wage freeze and the granting of the one-off aid (see also Special Feature 1.C).

- **In the non-bank private sector**, the biennial National General Collective Labour Agree-

38 Compensation per employee including employers' social security contributions (and civil servants' pensions) is estimated to have risen by 5.2% (compared with 6.8% in 2008). From the estimated 1.5% decrease in salaried employment in 2009 (against an 1.6% increase in 2008), it follows that the total compensation for dependent employment increased by 3.6% in 2009 from 8.5% in 2008. *These estimates are made by the Bank of Greece.* National accounts estimates by the NSSG for 2008 are quite different: total remuneration of dependent employment rose by only 5.9% in 2008 (*inter alia*, because, on a national accounts basis, salaried employment is estimated to have remained unchanged, although the Labour Force Survey conducted by the NSSG shows an increase by 1.6%). For 2009, NSSG estimates point to a 3.9% increase in total compensation and 5.5% in compensation per employee.

39 According to the Introductory Report, outlays for wages and pensions rose by 11.5%, *because the additional benefits provided for in the now abolished Special Accounts (amounting to €728 million) have been integrated in the figures for 2009, which are thus not comparable to the ones for 2008 (which had incorporated an amount of only €36 million).* The integration of the Special Accounts was completed in 2009.

40 Article 17 of Law 3758/2009.

41 In particular, public servants whose gross earnings (excluding family benefits) on 31.12.2008 amounted to a maximum of €1,500 per month received an extraordinary one-off financial aid of €500. Respectively, public servants with gross earnings of up to €1,700 per month received an extraordinary one-off allowance of €300. No increases were granted in 2009 to public servants with higher earnings. Public sector pensioners entitled to a basic pension of up to €800 received an extraordinary financial aid of €500. Respectively, pensioners entitled to a basic pension of up to €1,100 received an aid of €300.

Table II.12 Earnings and labour costs (2003-2010)

(annual percentage changes)

	2003	2004	2005	2006	2007	2008	2009	2010 (forecasts)
Greece								
Average gross earnings (nominal):								
– total economy	5.6	7.2	4.4	5.7	5.2	6.2	5.0	-0.9
– central government[1]	5.9	9.7	2.3	3.1	3.8	7.1	6.9	-6.9
– public utilities	10.9	9.9	7.6	7.0	7.1	8.2	7.7	-1.9
– banks	3.1[2]	8.0	1.5[2]	10.8	8.9	0.0	6.8	2.9
– non-bank private sector	5.8	5.8	5.6	6.8	6.1	6.5	2.8	2.7
Minimum earnings	**5.1**	**4.8**	**4.9**	**6.2**	**5.4**	**6.2**	**5.7**	**2.7**
Average gross earnings (real)	**2.0**	**4.2**	**0.9**	**2.4**	**2.2**	**1.9**	**3.8**	**-3.8**
Total compensation of employees	**8.3[3]**	**8.9**	**5.8**	**7.8**	**8.2**	**8.5**	**3.6**	**-1.4**
Compensation per employee	**5.5**	**7.6**	**3.9**	**5.9**	**5.6**	**6.8**	**5.2**	**0.1**
GDP[4]	**5.9**	**4.6**	**2.2**	**4.5**	**4.5**	**2.0**	**-2.0**	**-2.0**
Unit labour costs:								
– total economy	2.3[3]	4.1	3.5	3.2	3.5	6.4	5.7	0.6
– business sector[5]	2.6[3]	2.8	3.9	3.8	4.3	5.6	3.5	3.0

Sources: NSSG (GDP 2002-2009), Bank of Greece estimates (for the 2010 GDP and the other annual aggregates in 2003-2009).
1 Average compensation per employee.
2 The relatively low growth rate of bank employees' average earnings mainly reflects changes in staff structure.
3 Taking into account the increase (of 0.1% of gross earnings) in employees' and employers' contributions to the Workers' Fund.
4 For 2003-2009: NSSG. For 2010: Bank of Greece estimates.
5 The business sector includes private and public enterprises and banks.

ment of 2008 provided for a 5.7% average annual increase in minimum wages in 2009. In addition, the also biennial collective agreements concluded at sectoral and occupational level entail an average annual increase in contractual earnings of 5.8%. This envisaged increase in contractual earnings did not result in a similar increase in *average actual earnings*, owing to the adverse economic conditions. Indeed, it was observed that economic conditions contributed to a cut-back on overtime work and a decrease in the average working hours (and in the relevant compensation) in several enterprises, while —in a relatively small number of enterprises— there were also cases where regular salaries were cut. Taking into account the above, it can be calculated (also considering the limited impact of "seniority")[42] that the increase in average *actual earnings* in the non-banking private sector was limited to 2.8% in 2009 (compared with 6.5% in 2008).

• Turning to **banks**, some agreements were concluded in individual banks in the course of 2009, while the relevant arbitration decision (issued in end-September) provided for increases in basic salaries by 3.0% as of 4.6.2009 and by 2.5% as of 1.10.2009. Together with the "charge carried forward", which resulted from a previous arbitration decision and concerned 2008, these arrangements entail an average annual increase in contractual earnings of 7.4% in 2009. However, it is estimated that actual earnings increased to a lesser degree, due to the reduction in overtime work. (It will be possible to make final estimates once

42 This indicative calculation is based on the following proxy assumptions: (i) the increase in actual earnings includes the entire increase in contractual earnings and a very small positive "seniority" effect only for 40% of the persons employed in the non-bank private sector; (ii) the increase in actual earnings is much less than the one in contractual earnings for 50% of the total, as average weekly working hours were reduced by 4% due to the elimination of overtime work; and (iii) there is a 10% temporary cut in the earnings of 10% of the employees.

the annual profit and loss accounts of banks are published.)

• Finally, the biennial collective agreements signed in 2008 for certain **public utilities** entailed an average annual increase in contractual earnings of 6.2% in 2009, while it is estimated that actual earnings increased (due to "seniority") by about 7.5%.

On the basis of the above, it follows that **average real (deflated) earnings in the economy as a whole** increased by 3.8% in 2009, from 1.9% in 2008. Taking into account that the number of employees decreased by about 1.5%, it is estimated that total pre-tax income of employees increased by 2.2% in real terms. In the absence of this development, the decrease in domestic consumption in 2009 would have been much larger. However, this positive effect was offset to a significant degree by the decline in household confidence.

Despite the deceleration in the growth rate of unit labour costs in the economy as a whole, the **price and cost competitiveness of the Greek economy continued to decline** in 2009. It is estimated that in 2001-2009, the real exchange rate of the euro against Greece's 28 major trade partners increased by 20%, when calculated on the basis of the relevant consumer prices, or by 28%, when calculated on the basis of the relevant unit labour cost in the economy as a whole. The same indicator increased against Greece's partners in the euro area by 9.5% and 17% respectively (see Table II.13). These calculations suggest that the appreciation of the euro in the same period contributed to the aggregate increase in the real exchange rate by almost 10 percentage points.

It is estimated that in 2009 **corporate profits** increased less than corporate turnover and, as a result, profit margins continued to narrow. This development was driven by adverse demand conditions in the domestic and external markets. The reduced cost of imported raw materials and the decelerated labour cost growth compensated *only in part* the lower profitability resulting from weak demand. It is indicative that, according to data related to a sample of 221 Athex-listed firms,[43] sales decreased by 21.6% in the January-September 2009 period, while pre-tax net profits declined by 24.2% in comparison with the same period in 2008.

The outlook for inflation in 2010

HICP inflation fell slightly to 2.3% in January 2010 (compared with 1.0% in the euro area), to rise again in February to 2.9%. Core inflation fell to 1.4% in January (compared with 0.9% in the euro area) and remained at that level also in February. At the same time, after a general weakening in 2009, inflationary expectations of households for the next 12-month period seemed relatively strengthened in December 2009, as well as in January and February 2010, while firms' expectations regarding the level of their prices remained negative in the construction industry and —to a lesser extent— in retail trade and services, while they seemed marginally positive in manufacturing (i.e. the percentage of firms expecting an increase is slightly higher than the percentage of firms expecting a decrease in prices).

According to the Updated Stability and Growth Programme (USGP, January 2010) average annual inflation will reach 1.4% this year, i.e. almost the same as in 2009. However, taking also into account the policy measures announced after the drafting of the USGP, the net "balance" between the factors contributing to higher inflation and the factors contributing to lower inflation shows that average annual HICP inflation may stand at around 3% in 2010. Core inflation will also increase to around 2.5%.

• Factors contributing to a fall in inflation include the continued decline in domestic demand this year, the expected weaker growth of unit labour costs (see below) and the further narrowing of profits margins.

43 See similar estimates in Section 5.6 of this chapter.

Table II.13 Greece: revised nominal and real effective exchange rate (EER) indices[1]

(annual percentage changes in year averages)

	Nominal EER	Real EER	
		On the basis of relative consumer prices	On the basis of relative unit labour costs in total economy
2001	1.1	1.0	0.5
2002	1.9	2.8	4.4
2003	4.5	5.3	3.9
2004	1.4	1.9	4.2
2005	-0.7	0.3	1.0
2006	0.1	1.0	2.0
2007	1.4	1.9	2.7
2008	2.3	2.7	5.1
2009	1.0	1.3	1.3
Cumulative percentage change between 2001 and 2009	13.7	19.7	27.7

Sources: Exchange rates: ECB, euro reference exchange rates. CPI: ECB, Harmonised Index of Consumer Prices where available. Unit labour costs in total economy: Bank of Greece estimates for Greece, ECB for the other countries.
1 Revised indices (compiled by the Bank of Greece) comprise Greece's 28 main trading partners (including the other euro area countries, with the exception of Malta). The weights used reflect the share of each partner country in Greece's manufacturing trade (SITC 5-8) during 1999-2001 and take into account competition in third markets.

• Factors contributing to a rise in inflation include the expected evolution of oil and commodity prices in the world market combined with the depreciation of the euro against major currencies, on the one hand, and the rise in indirect taxes decided upon in February and on 3 March. In particular: **First**, according to the latest IMF forecasts (January 2010), the US dollar price of crude oil will record an average annual increase of 22.6% this year, while according to the ECB (4 March 2010) it will average $75.1 per barrel (21.3% increase). Non-energy commodity prices (in US dollars) are expected to rise by 5.8% according to the IMF or by 18.4% according to the ECB. **Second**, it is estimated that, if the rises in indirect taxes were fully passed through to prices, this would result in an HICP growth rate of over 3.5%, since their contribution would reach almost 2.5 percentage points. (It is noted that the contribution of the measures to core inflation is lower, as core inflation does not include fuel prices.) However, there are already indications that –mostly owing to adverse demand conditions– an important part of indirect tax rises will be absorbed and will not pass through to consumers. Thus, it is estimated that inflation could be limited to about 3%.

Moreover, taking into account (i) the announcements made on 9 February and 3 March on the wages in central and general government (which entail an important decrease in earnings – see also Special Feature 1.C,[44] as well as Table II.12) and (ii) the "working assumption" that collective bargaining in the private sector will lead to rises in the order of

44 In addition to what is provided for in relation to civil servants, the decisions of 3 March stipulate that the earnings of workers in legal entities in private law which are owned by the State or are regularly subsidised by the State budget or constitute public enterprises in the meaning of Article 1, paragraphs 1, 2 or 3 of law 3429/2005, shall be lowered by 7%, while the Christmas, Easter and holiday allowances shall also be cut by 30%. Cuts in earnings do not extend to allowances related to family status or career progression, unhealthy or hazardous occupations and post-graduate degrees. It is estimated that this measure applies to about 50% of employees of public utilities (for example, it does not apply to employees of the Hellenic Telecommunications Organisation (OTE) and the Public Power Corporation (PPC)).

1% (which, together with the "charge carried forward" (1.7-1.9%) as a result of rises granted in the course of 2009, entail an average annual rise of 2.7-2.9%), it is estimated that average gross earnings in the whole economy will fall by 0.9% in nominal terms, for the first time in the past 35 years (while in 2009 they had increased by 5.0%). In real terms average gross earnings will decrease by 3.8%.[45] Compensation per employee (which includes employers' social security contributions and civil servants pensions) is estimated to remain virtually unchanged (+0.05%), compared with a 5.2% increase in 2009. Assuming at the same time that GDP and employment will decline by 2% and 1.5% respectively, productivity will fall by some 0.5% (i.e. as much as in 2009). In this case, labour costs in whole economy would slowdown significantly and register an increase of about 0.5% (2009: 5.7%). In the business sector, however, labour costs would increase by about 3% in (2009: 3.5%), which means that the slowdown would be limited, mainly as a result of the "charge carried forward" originating from increases granted in 2009.

Lastly, corporate profit margins will continue to narrow owing to weakening demand, but this year the higher cost of imported raw material will come on top of this. It is most likely that these developments will not be fully offset by the further slowdown in the growth rate of labour costs (which, for the business sector, will be limited).

3.4 EXTERNAL BALANCE: DEVELOPMENTS AND PROSPECTS

3.4.1 Current account

The current account deficit fell considerably (by €8.1 billion or 23.3%) to €26.7 billion or 11.2% of GDP in 2009, from 14.6% of GDP in 2008. In addition, the combined current and capital account deficit, which reflects the economy's external financing requirements, decreased by €6.0 billion or 19.6% to 10.4% of GDP (2008: 12.8%).

The decline in total domestic demand and economic activity in Greece, as well as a number of external factors such as low international crude oil prices and limited net imports of ships, led to a significant decrease in the net payments for the import of goods. The narrowing of the trade deficit and, secondarily, of the income account deficit contributed to a large decline in the current account deficit, despite a steep fall in the surpluses of the services and the current transfers balances.

These developments, however, are conjunctural, as the structural weaknesses of the economy persist, feeding into the current account deficit. It should be recalled that, by definition, the current account deficit reflects the shortfall of domestic savings relative to domestic investment spending, and is directly attributable to heavy international competitiveness losses. This shortfall of savings relative to investment is due to the concurrent rapid increase in consumption and investment, as a result of a steep fall in interest rates with Greece's EMU entry, a strong increase in credit growth, drastically improved expectations of households and firms and, certainly, large fiscal deficits.

Underlying competitiveness losses are mainly the structural weaknesses of the Greek economy, such as product and labour market rigidities, fiscal relaxation and overspending at a time when rapid growth allowed and warranted bold fiscal adjustment and —finally— a large, inefficient and ever-expanding public sector.

Labour and product market rigidities helped maintain wage and price growth rates higher than in the euro area as a whole, thereby leading to a substantial appreciation of the real effective exchange rate, as already mentioned (see Section 3.3 of this chapter). These serious losses in price competitiveness intensified problems relating to the structural weaknesses

45 For the past 35 years, the Bank of Greece estimates that average real earnings fell by 0.1% in 1979, 3.4% in 1980, 0.4% in 1981, 2.5% in 1983, 8.7% in 1986, 4.7% in 1987, 4.0% in 1991, 3.5% in 1992 and 1.7% in 1993.

of production and have decisively contributed to keeping "structural" competitiveness low and restricting the capacity of domestic supply to adequately and flexibly match the composition of, and changes in, both external and domestic demand.

In the coming years, the likelihood of low price and cost competitiveness of Greek products and rising international oil and raw material prices may lead to a further widening of the trade deficit. Of course, a noticeable slowdown in unit labour cost growth is forecast for 2010 (as is also the case in many competitor countries), while imports are expected to continue to decelerate, albeit less than in 2009.

As regards the services balance, since the global economy is recovering, it is reasonable to expect an increase in net shipping receipts, while it is estimated that tourist receipts will stabilise (see Special Feature 2.E). Overall, it should be noted that the financing of the current account deficit with such receipts should not always be taken for granted, since they are volatile and sensitive to the effects of external factors.

Finally, with respect to the income account balance, the rise in the cost of external borrowing in the past few months, as well as the prospect of rises in interest rates globally, may lead to increased interest payments in the coming years.

Therefore, *on the basis of currently available data*, the current account deficit will continue to stand at high levels. The deficit may be reduced by, *inter alia*, the implementation of fiscal policy, insofar as it will lead to lower borrowing costs for the Greek State and —by extension— for Greek banks, firms and households, as well as by effectively tackling the structural weaknesses of the economy.

Trade balance

The considerable reduction in the trade deficit in 2009 (€13.3 billion) stemmed from decreases of €7.4 billion, €4.6 billion and €1.3 billion in the trade deficit excluding oil and ships, the net oil import bill and net payments for purchases of ships, respectively.

As regards the trade balance excluding oil and ships, the import bill declined by €9.9 billion or 24.0%,[46] i.e. much more than export receipts, which fell by €2.5 billion or 17.8%.[47] According to provisional NSSG data on trade transactions, the value of Greek non-oil exports to EU markets fell by 18.5% and to third countries by 10.5%.

Services balance

The surplus of the services balance shrank by €4.6 billion in 2009, due to a decrease in net transport receipts and, to a lesser extent, travel receipts.

Gross transport receipts (mainly merchant shipping) fell by 29.4%; as a result, net receipts decreased by €3.4 billion. This is mainly attributable to the fact that the average annual level of freight rates for both dry cargo vessels and oil tankers declined by about 60% in 2009 compared with 2008 (see also Special Feature 2.E).

Gross travel receipts (i.e. travel spending by non-residents in Greece) fell by 10.9% and travel spending by residents abroad by 7.9%; as a result, net travel receipts decreased by €1.1 billion. Lower gross tourist receipts are due to a 6.6% drop in arrivals, coupled with declines in both average spending and average length of stay.

46 According to disaggregated Bank of Greece data, this decrease is broadly based across all product categories, while imports of agricultural and chemical products declined at a slower rate than total imports.

47 According to available provisional NSSG data for January-December 2009, the value of non-oil exports dropped by 15.8% and the value of non-oil imports by 20.2%. Moreover, total export value decreased by 17.5%, while total import value (excluding ships) by 24.4%. It should be recalled that discrepancies between Bank of Greece and NSSG data on trade transactions are largely attributable to the fact that Bank of Greece data concern receipts and payments mainly through the domestic banking system, while NSSG data are based on customs data on transactions with non-EU countries and on tax data (INTRASTAT) on intra-EU transactions.

Income account balance

In the reviewed period, the income account deficit narrowed by €840 million, reflecting lower net interest, dividend and profit payments. However, net interest payments on Greek government bonds and Treasury bills increased, due to a 16.9% rise in non-residents' public debt holdings in the form of bonds and Treasury bills (between end-December 2008 and end-September 2009[48]). The **total gross external debt of both the private and the public sector** —which is fed by the current account deficits— came to 171.0% of annual GDP at end-September 2009 (end-2008: 151.6%).[49]

Current transfers balance

The surplus of the current transfers balance shrank by €1.5 billion, mainly due to a decrease in EU transfers to general government and, to a lesser extent, to a decline in the other sectors' receipts, while payments by general government and the other sectors to the EU remained broadly unchanged.[50]

3.4.2 Capital transfers balance

The surplus of the capital transfers balance narrowed to €2.0 billion, from €4.1 billion in 2008.[51] Thus, the combined current and capital transfers balance posted a surplus of €3.3 billion, compared with €6.8 billion in 2008. The lower capital transfers surplus is mainly attributable to the fact that —while some 98% of the envisaged Community financing by Structural Funds[52] has been absorbed since the start of the implementation of CSF III— disbursements by the Structural Funds (which now include the Cohesion Fund) under the National Strategic Reference Framework-NSRF (CSF IV) 2007-2013 were limited,[53] because of delays in the implementation of projects. Such delays were also observed in other Member States and are partly attributable to the new, stricter institutional framework for management and control.[54] In 2009, total net EU transfers (current transfers plus capital transfers less payments to the Community Budget) came to €3.0 billion, compared with €6.0 billion in 2008 (1.2% and 2.5% of GDP, respectively).

Turning to EU transfers in 2010, it is expected that, along with the remaining disbursements under CSF III, payments for NSRF projects[55] will accelerate and available Community funds will be put to more effective use, because of the anticipated review of the NSRF operational programmes and the simplification of administrative procedures for their management[56] (see Special Feature 2.D). In addition, direct financial assistance and subsidies in the context of the CAP will remain substantial[57] and are estimated close to €2.4 billion.[58] Accordingly, total net EU transfers (current transfers plus capital transfers less payments to the Community Budget) are estimated to reach approximately €4.0 billion in 2010.

48 From €176.3 billion to €206.3 billion (released Bank of Greece data).
49 At end-September 2009, 55.1% of the gross external debt was incurred by general government and the rest mainly by the business sector (financial and non-financial corporations).
50 EU current transfers mainly include direct financial assistance and subsidies in the context of the Common Agricultural Policy (CAP), which are not distributed evenly across the year, as well as receipts from the European Social Fund, while current transfers to the EU chiefly include Greece's contributions (payments) to the Community Budget.
51 EU capital transfers mainly include receipts from the Structural Funds —except for the European Social Fund— and the Cohesion Fund under the Community Support Framework.
52 The absorption of funds from the Cohesion Fund has not been equally satisfactory.
53 Specifically, from the start of the implementation of NSRF to end-October 2009, Greece had received mainly advances of €1.5 billion (€614 million in 2007, €401 million in 2008 and €485 million in 2009), including the additional advances approved by the European Commission to address the financial crisis. However, based on the course of implementation of NSRF projects until mid-February 2010, about 5% of the envisaged Community financing was absorbed (see the Announcement of the Ministry of Economy, Competitiveness and Shipping dated 17 February 2010).
54 European Commission, *Analysis of the budgetary implementation of the Structural and Cohesion Fund in 2008*, May 2009.
55 The target is for the NSRF absorption rate to exceed 15% by end-2010. In this context, the Public Investment Programme funds will be made available by priority to co-financed projects (see the Announcement of the Ministry of Economy, Competitiveness and Shipping dated 17 February 2010).
56 See Ministry of Economy, Competitiveness and Shipping, *Updated Stability and Growth Programme*, January 2010, p. 47.
57 For the entire period until 2013, it seems that direct financial assistance and subsidies in the context of the CAP will remain broadly unchanged. The future of the CAP after 2013 will be reviewed in the context of the EU financial perspectives 2014-2020.
58 It should be underlined that full direct aid payments to Greek farmers were ensured for 2009 and 2010, provided that the digitisation of parcels will be completed before the submission of payment applications for 2010 (see Announcement by Commissioner Mariann Fischer Boel IP/09/1970, 18 December 2009). Additional sums may be paid in 2010 for previous years (see the Ministry of Rural Development press release of 26 January 2010).

3.4.3 Financial account

Net inflows of €24.2 billion were recorded under total financial investment in 2009, compared with €29.9 billion in 2008. Specifically, net inflows were recorded under direct investment (€1.1 billion) and portfolio investment (€27.1 billion), while net outflows were recorded under "other" investment (€3.6 billion).

The most important inflows of non-residents' funds for direct investment in Greece are related to the increase in the participations of Crédit Agricole SA (France) in the share capital of Emporiki Bank and of Deutsche Telekom AG in the share capital of the Hellenic Telecommunications Organisation (OTE). For the year as a whole, non-residents' net inflows for direct investment in Greece came to €2.4 billion (2008: €3.1 billion), while residents' net outflows for direct investment abroad came to €1.3 billion (2008: €1.6 billion). The bulk of outflows concerned investment activity in the Balkans and Malta. The relatively low level of foreign direct investment in Greece reflects the structural problems of the economy, especially product and labour market rigidities, weaknesses in infrastructure and red tape.

Under portfolio investment, non-residents' inflows of €31.1 billion for purchasing Greek government bonds and Treasury bills (2008: €19.9 billion) were recorded, while residents' outflows for purchasing foreign bonds and Treasury bills reached €3.0 billion (2008: €2.2 billion).

"Other" investment recorded a net outflow of €3.6 billion, which is mainly attributable to a €23.4 billion increase in domestic credit institutions' and institutional investors' holdings of foreign deposits and repos. This outflow was largely offset by a €15.6 billion hike in foreign credit institutions' and institutional investors' corresponding holdings in Greece, as well as by an inflow of €4.6 billion for non-residents' loans to the public and the private sector.

At end-2009, Greece's reserve assets stood at €3.9 billion.

4 FISCAL DEVELOPMENTS AND PROSPECTS

4.1 FISCAL DEVELOPMENTS IN 2009 BASED ON ADMINISTRATIVE DATA

The international financial and economic crisis brought to the fore the long-time structural weaknesses and macroeconomic imbalances of the Greek economy. Among other things, the international crisis accelerated and intensified the worsening of public finances in Greece, something that had already started in the second half of 2007, i.e. before Greece was hit by the economic crisis. In 2007 the deficit exceeded the reference value of the Maastricht Treaty (3.0% of GDP). The deficit kept rising in 2008 and stood at high levels (5.6% and, after the revision, 7.7% of GDP), while the debt to GDP ratio increased[59] for the first time, after falling for eight years. Due to high deficits in 2007 and 2008, which exceeded the reference value of the Treaty, an Excessive Deficit Procedure was initiated against Greece in April 2009. Thus, when the international crisis hit the Greek economy at end-2008, fiscal developments and prospects were already bleak. Despite the rapid deterioration of fiscal aggregates, the measures taken in 2009 were in short supply compared with the extent of the problem and were not part of a comprehensive programme to deal with the crisis; thus, the crisis was manifested as a fiscal crisis in Greece.

The sharp widening of the spread between Greek and German bonds observed at end-2008 and in the first quarter of 2009 was naturally a result of the fact that during that period the international crisis had peaked. At the same time, it reflected market concerns about worsening fiscal developments, very high public debt (99.2% at end-2008), failure to

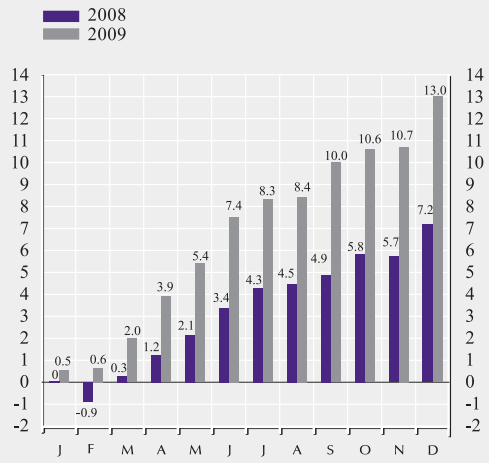
59 Debt dynamics had already strengthened in 2007. See Bank of Greece, *Annual Report 2007*, April 2008, pp. 111-113.

control fiscal deficits and the very large current account deficit (14.6 % of GDP at end-2008).

In 2009 a further rapid deterioration in fiscal aggregates was observed (see Chart II.19).[60] Despite deteriorating fiscal aggregates, the unprecedented widening of spreads between Greek and German bonds in the first months of 2009 and the Excessive Deficit Procedure, neither care was taken in order to address the problem in a timely manner nor was a concrete programme prepared for submission to the European Commission by 27 October 2009 – in accordance with the ECOFIN Council decision. The relaxation of the tax collecting mechanism was already evident since 2008, it worsened in 2009, while certain measures taken in 2009 led to higher expenditure; as a result, the general government deficit rose further to stand at a double-digit percentage of the GDP.

Chart II.19 Net borrowing requirement of central government on a cash basis (January 2008 - December 2009)

(percentage of GDP)



Source: Bank of Greece.
"Monthly" data refer to the cumulative sum of the period from the beginning of the year up to the reference month.

According to General Accounting Office data, the state budget deficit rose to 13.0% of GDP in 2009 against 6.1% in 2008 and an updated[61] annual target of 5.0% of GDP. Moreover, the primary budget deficit widened to 7.8% of GDP, from 1.4% in 2008 (see Table II.14).

The widening of the budget deficit stemmed mainly from the ordinary budget and was primarily due to a large shortfall in revenue, as well as the marked overrun of expenditure compared with the overambitious[62] targets set in the 2009 budget, as amended in January 2009 with the 2008-2011 USGP. It should be noted that the widened deficit in 2009 includes expenditure to the amount of €1,200 million for the repayment of older public hospital liabilities, as well as payments to the amount of €500 million for the distribution of the first part of the social solidarity benefit. Expenditure, which increased the deficit by almost 0.7% of GDP, were not included in budget forecasts for 2009 and were decided upon at the end of the year. Moreover, the higher deficit is also attributable to the Public Investment Budget (PIB), as receipts from EU Structural Funds were significantly lower than the budget forecast and 2008 receipts, whereas expenditure exceeded budget forecasts.

Ordinary budget revenue in 2009 was 3.5% lower than in 2008, while the annual (adjusted[63]) target provided for an increase of 13.8% (see Table II.14). Bearing in mind that during the year (in February, March and June) additional tax measures were taken, and it was expected that they would yield revenue of €3,177 million, the shortfall in ordinary budget revenue in 2009 reached[64] €12,744 million (or

60 The *Monetary Policy 2008-2009* report of the Bank of Greece (February 2009) analyses budgetary problems and the high risks entailed in the fiscal position; an immediate fiscal adjustment was proposed, while concrete proposals for keeping public expenditure under control, combating tax evasion and urgently stabilizing the debt-to-GDP ratio were made (see pp. 12-13, Box I.1 pp. 29-34, pp. 85-90 and other points in that report).

61 The initial target (2009 budget) was a decrease of the deficit to 3.4% of GDP. However, the target was updated to 5.0% of GDP in January 2009.

62 The Bank of Greece had pointed out that "...meeting the revenue target is considered to be difficult...", see *Annual Report 2008*, April 2009, p. 113.

63 The "adjustment" takes into consideration data and information from USGP 2008-2011, according to which 2009 revenue should fall by €2,420 million compared with the 2009 budget forecast. This figure was slightly altered in the 2010 budget.

64 According to final estimates for 2009 included in the December 2009 Budget Execution Bulletin.

Table II.14 State budget balance

(million euro)

	Annual data								Percentage changes				
				2009			2010				2009/2008		2010/09
	2006	2007	2008	Budget	Stability Programme 2008-11	Implemen-tation*	Budget	Stability Programme 2009-13	2007/06	2008/07	Stability Programme	Implemen-tation*	Budget/ Implem.
I. Revenue[1]	**52,460**	**56,652**	**60,352**	**69,272**	**66,687**	**55,461**	**62,210**		**8.0**	**6.5**	**10.5**	**-8.1**	**12.2**
1. Ordinary budget	48,685	51,777	55,334	65,572	62,987	53,420	58,350		6.4	6.9	13.8	-3.5	9.2
(of which extraordinary revenue)[2]	773	437		1,372	1,372	1,128	280						
2. Public investment budget	3,775	4,875	5,018	3,700	3,700	2,041	3,860	3,710	29.1	2.9	-26.3	-59.3	89.1
– Own revenue	212	64	350	200	200	183	150	150	-69.8	446.9	-42.9	-47.7	-18.0
– Revenue from the EU	3,563	4,811	4,668	3,500	3,500	1,858	3,710	3,560	35.0	-3.0	-25.0	-60.2	99.7
II. Expenditure[1]	**60,692**	**67,166**	**74,920**	**78,078**	**79,378**	**86,342**	**84,746**		**10.7**	**11.5**	**6.0**	**15.2**	**-1.8**
1. Ordinary budget	52,508	58,357	65,296	69,278	70,578	76,754	74,446		11.1	11.9	8.1	17.5	-3.0
– Interest payments	9,589	9,796	11,207	12,000	12,100	12,325	12,950	12,950	2.2	14.4	8.0	10.0	5.1
– Ordinary budget primary expenditure	42,919	48,561	54,089	57,278	58,478	64,429	61,496		13.1	11.4	8.1	19.1	-4.6
of which: tax refunds	*2,392*	*2,623*	*3,654*	*3,300*	*3,700*	*4,952*	*4,650*		*9.7*	*39.3*	*1.3*	*35.5*	*-6.1*
new expenditure[3]			*710*	*1,672*	*1,672*	*1,407*							
extraordinary expenditure[4]		*1,948*				*2,890*	*500*						
2. Public investment budget	8,184	8,809	9,624	8,800	8,800	9,588	10,300	10,300	7.6	9.3	-8.6	-0.4	7.4
III. State budget balance	**-8,232**	**-10,514**	**-14,568**	**-8,806**	**-12,691**	**-30,881**	**-22,536**						
% of GDP	**-3.9**	**-4.6**	**-6.1**	**-3.4**	**-5.0**	**-13.0**	**-9.2**						
1. Ordinary budget	-3,823	-6,580	-9,962	-3,706	-7,591	-23,334	-16,096						
2. Public investment budget	-4,409	-3,934	-4,606	-5,100	-5,100	-7,547	-6,440						
IV. State budget primary surplus	**1,357**	**-718**	**-3,361**	**3,194**	**-591**	**-18,556**	**-9,586**						
% of GDP	**0.6**	**-0.3**	**-1.4**	**1.2**	**-0.2**	**-7.8**	**-3.9**						
V. General government deficit													
% of GDP (on a national accounts basis)	**-2.9**	**-3.5**	**-7.7**	**-2.0**	**-3.7**	**-12.9**	**-9.1**	**-8.7**					
Amortisation payments	16,954	22,544	26,246	29,129	29,129	29,135	19,510	19,510	33.0	16.4	11.0	11.0	-33.0
Ministry of National Defence programmes for the procurement of military equipment	2,075	2,129	2,597	2,200	2,200	2,129	2,000	2,000	2.6	22.0	-15.3	-18.0	-6.1
GDP (current prices)	210,459	226,437	239,141	260,248	254,519	237,508	244,233	244,233	7.6	5.6	6.4	-0.7	2.8

Source: State General Accounting Office.
* Provisional data.
1 For comparability purposes, tax refunds are included in expenditure and have not been deducted from revenue, a practice followed by the Ministry of Finance in the past few years.
2 Including: for **2006**: an amount of €149.7 million from the settlement of revenue collected by the Hellenic Communications and Post Commission (EETT), €299.3 million (not included in the 2006 Budget) from the decrease in the capital of the Postal Savings Bank, €34 million from the decrease in the capital of the Agricultural Bank of Greece and €290 million from additional dividends of the Deposits and Loans Fund; for **2007**: "notional" revenue of €437 million arising from the settlement of positions vis-à-vis Olympic Airlines; for **2009**: revenue from special accounts (now abolished), amounting to €1,081 million, as well as revenue from the liquidity support package, amounting to €47 million; for **2010**: revenue from the liquidity support package, amounting to €280 million.
3 Including: for **2008**: payment of €710 million to the Insurance Funds of DEH's personnel in exchange for property; for **2009**: payments out of special accounts (now abolished), amounting to €827 million, as well as expenditure of €580 million for the Intergenerational Solidarity Fund.
4 Including: for **2007**: "notional" expenditure of €840 million arising from the settlement of positions vis-à-vis Olympic Airlines, as well as additional contributions to the Community Budget (€1,108 million) due to the upward revision of past GDP figures; for **2009**: an amount of €350 million paid to the National Fund for Social Cohesion (home heating subsidies to pensioners entitled to the Social Solidarity Allowance (EKAS), unemployed and disabled persons), and extraordinary social solidarity aid amounting to €500 million, payments of €294 million to Olympic Airlines following an arbitration decision, of €1,502 million to hospitals, as well as election expenditure amounting to €244 million; for **2010**: an extraordinary social solidarity aid amounting to €500 million..

5.4% of GDP). As expected, the significant decline in economic activity had a negative effect on revenue for 2009, particularly revenue from indirect taxation. However, budget receipts were also negatively affected by less tax audits, which contributed to the intensification of tax evasion, particularly VAT receipts, as well as the non-implementation of certain tax measures taken during the year (e.g. arrangements for semi-outdoor spaces, gambling taxation etc.).

Revenue from direct taxation rose by 2.7% in 2009, while the (adjusted) target provided for an increase of 24.1%. This shortfall is mainly due to personal and corporate income tax revenue as well as receipts from the taxation on real estate, given that the largest part of the ETAK (single real estate duty) for 2009 has not been collected yet.[65] By contrast, receipts from extraordinary taxes on income and the extended deadline for the settlement of pending tax cases decided upon in March 2009 (Law 3758/2009), as well as from taxation on dividends[66] with a tax rate of 35% (instead of 25%, as was the case until 2008) had a positive effect on revenue from direct taxation. Receipts from personal income tax withheld at the source (wages and pensions), which rose by 5.5% despite falling employment and working time, also had a positive effect. By contrast, all other sub-categories of personal income tax declined against 2008.

Receipts from indirect taxes *fell* by 6.4%, against an annual targeted increase of 7.3%, despite the positive effect of the measures taken in February and June 2009.[67] This decline is stronger than would be justified by the contraction of nominal GDP (-0.7%) and suggests an income elasticity from indirect taxes of 9.1, which has never been observed in the past. Lower indirect tax revenue came mainly from: (i) VAT[68] (down by 9.1%, against a targeted increase of 6.7%), owing to a decline in economic activity and higher tax evasion, (ii) property transfer tax (-25,0%), owing to a strong fall in demand for real estate, (iii) tax on stock exchange transactions (-38.7%), due to falling stock prices and transactions, (iv) car registration fees (-43.6%), after a sharp annual drop in demand for cars and despite 50% reduced duties for four months, and (v) tariffs on imported goods (-20.4%), as a result of lower imports from third countries.

Lastly, non-tax revenue in 2009 decreased by 12.8%, mostly due to a 21.4% decline in receipts from business activity of the public sector (individual dividends or gains from the Deposits and Loans Fund, the Bank of Greece, casinos and public enterprises).

Ordinary budget expenditure (including tax refunds) rose by 17.5% in 2009 against an annual (adjusted[69]) targeted increase of 8.1%, resulting in an overrun to the amount of €6,176 million. This also includes an amount of €1,200 million for the repayment of public hospital liabilities from previous years. Excluding this amount, the increase in expenditure in 2009 comes to 15.7% against 2008. According to available data, the major expenditure categories exceeding budget forecasts are grants to insurance funds (up by 29.4%, against a targeted 4.2%), payments for tax refunds (up by 35.6%, against a targeted 1.3%) and operating costs, after a judicial decision providing for the government to pay €294 million to Olympic Airways. Expenditure for interest payments also rose significantly

65 The relevant notifications were to be sent to tax payers in September 2009, but sending was suddenly suspended.

66 In the eleven-month period from January to November, revenue from taxation on dividends rose to €365 million and from the extraordinary tax to €265 million. Receipts due to the extended deadline for the settlement of pending tax cases is estimated to around €350 million for the year as a whole. But for these receipts, the rate of change of the revenue from direct taxes would have been negative (around -1.4%, assuming that €320 million out of €350 million were collected during this eleven-month period).

67 February 2009 measures included higher tobacco and alcohol taxes, while June 2009 measures incorporated taxation on liquid fuels, car registration fees "green fees" and tax revenue from mobile telephony (these are the measures that were ultimately implemented). Receipts due to these measures, excluding the collection of car registration fees which started in December, is estimated to reach €479 million, while the bulk was collected during the period under review.

68 It should be noted that revenue from VAT on imported goods from third countries fell by 27.7%, while revenue from VAT on domestic goods fell by 7.0%.

69 The "adjustment" takes into consideration data and information from USGP 2008-2011, according to which 2009 expenses should increase by €1,300 million compared with the 2009 budget forecast. Out of this amount, €400 million come from higher tax refunds.

(around 10.0%), though this increase had been taken into consideration in the budget.

By contrast, given the restrictive incomes policy in 2009 ("freezing" of wages and pensions in central government), expenditure for the individual item "central government wages" decreased on an annual basis[70] by almost €240 million, while pension expenditure stood close to forecasts. However, an amount of €140 million should be deducted from these savings, as it was given as a tax-free benefit on a one-off basis (€300 and €500) to low-wage earners and pensioners of the public sector. Considering that the amount of €240 million would also be subject to taxes, at least with an average tax rate of 25%, net savings[71] from the incomes policy implemented by the government in 2009 stand at very low levels. *Moreover, according to 2009 estimates included in the Introductory Report on the 2010 Budget, total ordinary budget expenditure for personnel outlays (including various extra benefits, as well as hospital personnel wages etc.) and pensions registered a €299 million overrun.*

Lastly, 2009 expenditure was burdened by certain decisions taken during the year, such as grants for the replacement of obsolete air-conditioners, free computers to pupils, certain grants to registered unemployed and low-pension earners etc.

As regards the Public Investment Budget (PIB) deficit, it rose to €7,547 million (or 3.2% of GDP) in 2009, against €4,606 million (or 1.9% of GDP) in 2008 (see Table II.14). This development was mainly due to decreased revenue from the PIB both against the corresponding receipts in 2008 (by 59.3%) and against budget forecasts (an expected decline of only 26.3%), but also to the overrun of expenditure by €788 million. PIB payments had increased strongly (45.1%) in the first half of the year, as CSF III ended in 30 June. Then, however, the growth rate of expenditure fell and payments stood at around the 2008 levels on an annual basis (down by 0.4%), exceeding the budget forecast, as mentioned above.

4.2 FISCAL DEVELOPMENTS IN 2009 BASED ON CASH DATA

Throughout the year, cash data showed a continuous and intensifying deterioration of the fiscal deficit compared with the corresponding figure for 2008 (see Chart II.19). Thus, for the year as a whole the cash deficit of the central government rose to 13.0% of GDP, against 7.2% in 2008 and 6.0% of GDP in 2007. It should be noted that the deficit for 2009 was contained thanks to the large surplus (€1,778 million or 0.7% of GDP from 0.1% in 2008) of the Special Agricultural Products Guarantee Account (ELEGEP), as 40% of the subsidies to farmers was paid in December 2009, due to delays in the "digital recording" of Greek farms. However, if the ELEGEP results are not taken into account,[72] the cash deficit for 2009 reaches 13.7% of GDP, against a deficit of 7.3% in 2008 (see Table II.15). Deficits of this size have not been seen since the beginning of the '90s and also imply the magnitude of the efforts that have to be undertaken for the consolidation of public finances.

The widening of the cash deficit stems mainly from the ordinary budget (its deficit doubled from 5.3% of GDP in 2008 to 10.7% in 2009) and the public investment budget, which showed a significantly higher deficit (2008: 2.0%, 2009: 3.1%). Ordinary budget expenditure on a cash basis include, apart from the amount of €1,200 granted to pay part of the public hospital liabilities, an amount of €2,200 million for defence expenditure which is not included in the ordinary budget expenditure on an administrative basis.[73] As regards the PIB, the wider cash deficit is mainly due to the large shortfall in

70 According to estimates for 2009 included in the Introductory Report on the 2010 Budget, expenditure savings come to €288 million, but more recent estimates of the General Accounting Office of the State show higher expenditure savings of around €400 million.

71 It should be noted that other insurance funds probably showed no savings, given that most pensions are lower than those in the public sector, thus there was a larger number of beneficiaries for the €300 or €500 one-off tax-free benefit.

72 Thus the cash deficit is closer to the state budget deficit on an administrative basis.

73 However, they are included in the deficit on a national accounts basis.

Table II.15 Net borrowing requirement of central government on a cash basis[1]

(million euro)

	January-December		
	2007	2008	2009*
1. State budget	**12,432**	**17,361**	**32,622**
Percentage of GDP	5.5	7.3	13.7
– Ordinary budget[2]	8,512[4]	12,585[5,6]	25,318[7]
– Public investment budget	3,920	4,776	7,304
2. ELEGEP – OPEKEPE[3]	**1,160**	**-254**	**-1,778**
3. Central government (1+2)	**13,592**	**17,107**	**30,844**
Percentage of GDP	6.0	7.2	13.0

Source: Bank of Greece.
* Provisional data.
1 As shown by the respective accounts with the Bank of Greece and other credit institutions.
2 Including movements in public debt management accounts.
3 Payment and Control Agency for Guidance and Guarantee Community Aid. It replaced DIDAGEP (Agricultural Markets Management Service) as from 3 September 2001.
4 Including proceeds of €1,107.5 million from the sale of OTE shares and €502.8 million from the sale of Postal Savings Bank shares, as well as expenditure of €465.7 million for a grant to the Farmers' Insurance Fund (OGA).
5 Including proceeds of €430.8 million from the sale of OTE shares, as well as expenditure for a grant of €570.8 million to OGA, but excluding the payment of Greek government debt to the Social Insurance Fund (IKA) by the issuance of bonds (€1,172 million).
6 During the strike of the Bank of Greece personnel in March 2008, public debt service payments of €1,537 million were effected through commercial banks, of which €359 million were interest payments. If the latter amount is also taken into account, the net borrowing requirement of the State budget rises from 7.3% to 7.4% of GDP and the net borrowing requirement of central government from 7.2% to 7.3% of GDP.
7 Not taking into account expenditure of €3,769 million for the acquisition of preference shares of Greek banks at the Greek State's disposal pursuant to Law 3723/2008 and of €1,500 million for the issuance of bonds to cover the capital increase of the Guarantee Fund for Small and Very Small Enterprises (TEMPME), but including revenue amounting to €673.6 million from the sale of OTE shares, of €72.3 from the privatization of Olympic Airlines, as well as a corporate bond of €531 million, the proceeds of which were given as a grant to OGA to meet its obligations to the Greek government.

receipts from the EU Structural Funds and, to a lesser extent, the overrun of expenditure.

4.3 REVISION OF THE GENERAL GOVERNMENT DEFICIT IN OCTOBER 2009

On 2 October 2009, in the context of the excessive deficit procedure, Eurostat was informed that the general government deficit for 2008 was updated to 5.6% of GDP (against the April notification for a deficit of 5.0%). Moreover, the deficit for 2009 was estimated at 6.0% of GDP, against a former estimate of 3.7% in April 2009. However, on 21 October, after a thorough reassessment of the situation in public finances, a new notification brought the deficit for 2008 to 7.7% and for 2009 to 12.5% of GDP (later to 12.7%). After the recent (12 February 2010) downward revision of previous estimates on the evolution of GDP for 2009, the general government deficit for 2009 now stands at 12.9% of GDP.

The upward revision of the 2008 deficit by almost 2 percentage points on 21 October 2009 is mostly attributable to a partial recording of the outstanding liabilities of public finances (€2.5 billion) and the €710 million ordinary budget grant to the insurance fund of the Public Power Corporation (DEH). Regarding 2009, the wide differential (from 6.0% to 12.7% of GDP) is mostly attributable to a revision[74] of the state budged deficit by €11.9 billion or 5.0% of GDP, in order to account for deteriorating macroeconomic developments, the evident large shortfall in receipts and expenditure overruns. Moreover, hospitals showed a deficit of €2.2 billion, the bulk of which refers to 2009, while a grant to the insurance fund of DEH to the amount of €770 million was also recorded.

74 In particular, the state budget deficit on an administrative basis was revised from €17,057 million (on 2 October) to €28,947 million (on 21 October).

4.4 DEVELOPMENTS IN THE YIELD SPREAD BETWEEN GREEK AND GERMAN GOVERNMENT BONDS

After the strong growth of the yield spread between Greek and German bonds in the December 2008-March 2009 period, which was also fuelled by the decision of Standard & Poor's (14 January 2009) to downgrade the creditworthiness of Greece, the spread started to decline. The downward trend continued throughout the summer, also supported by the easing of the international crisis and the gradual smoothing in the interbank market. Thus, on 1 September 2009 the yield spread of the ten-year government bond fell to 126 basis points, against 314 basis points on 6 May 2009. Meanwhile, short-term interest rates stood at very low levels. The interest rate on six-month Treasury bills issued on 13 October stood at 0.59% and the corresponding twelve-month rate at 0.91%. A week later (20 October), the interest rate on three-month Treasury bills was 0.35%.

However, on 22 October 2009 Eurostat officially announced that the 2009 deficit was estimated to reach 12.5% of GDP and the debt 113.4% of GDP, while Fitch lowered the country's creditworthiness on the same day, thus beginning a new cycle of reassessing the creditworthiness of the Greek economy and increasing the spreads, mostly for medium-term bonds. Although the submission of the Budget to the Parliament (20 November) confirmed the government's intention to reduce the deficit by 3.6 percentage points of GDP, markets considered that the reduction was insufficient and pressures continued, as markets expected more details on the measures included in the Budget. Moreover, the budget included expenditure totalling 0.9% of GDP in order to implement pre-election announcements, a fact that was unsatisfactory for markets.

Under the circumstances, both Fitch, within a month and a half after the first time, and Standard & Poor's downgraded the creditworthiness of Greece on 8 December and on 16 December, respectively, causing the yield spread between Greek and German ten-year and five-year bonds to rise by 58 and 93 basis points, respectively, within ten days.[75]

On 22 December Moody's downgraded again the creditworthiness of Greece. On 6 January 2010 it was announced that the deficit would be reduced by 4.0 percentage points in 2010, while the time-frame for a reduction below the reference value envisaged in the Maastricht Treaty (3.0% of GDP) was set at 3 (instead of 4) years. The Updated Stability and Growth Programme 2009-2013, announced on 15 January, had incorporated these announcements for front-loaded fiscal adjustment and gave a detailed description of measures to be taken in order to achieve these goals. However, the markets and the international press maintained a negative attitude, and yield spreads rose to 288 basis points for five-year and 266 basis points for ten-year bonds on 19 January 2010.

On 26 January a five-year bond was issued through syndication to the amount of €8.0 billion and a yield of 6.1%. The issue was oversubscribed (an offer of €20 billion), but with a high yield spread against the corresponding German bond (381 basis points). On the same day, the yield spread for the ten-year bond was 299 basis points. In the following days (27 and 28 January) the yield spreads against corresponding ten-year German bonds increased further (320 basis points on 27 and 369 basis points on 28 January), as markets were restless after various announcements. These developments suggest lingering market concerns, strengthened by rumours and negative announcements.

For the following period yield spreads continued to rise, reaching as high as 400 basis points. Hence, on 9 February 2010 additional meas-

75 In particular, the yield spread for five-year bonds was 184 basis points on 7 December and reached 277 basis points on 17 December. Accordingly, the yield spread for ten-year bonds was 195 basis points on 7 December and reached 253 basis points on 17 December.

ures were announced, including increased taxation on liquid fuels and "freezing" of earnings in the public sector, with the aim to save an additional €1 to €1.1 billion.

Further important fiscal measures were decided upon and announced on 3 March. These arrangements are estimated to reduce the deficit by at least €4.8 billion. Moreover, if other measures (their quantitative impact is difficult to estimate) are taken into account, the deficit will be reduced by more than €5 billion. These measures include: higher VAT rates, a further increase in excise duties and the introduction of new excise duties on luxury items, larger cuts to civil service benefits – including Christmas, Easter and holiday benefits,[76] lower earnings for large part of the rest of the public sector,[77] different regulatory provisions for the rationalisation of expenditure for compensations, freezing of pensions, cutting back expenditure under the Public Investment Budget, imposition of an extraordinary one-off financial contribution for high personal income. Overall, measures are expected to reduce the deficit significantly, contributing to the narrowing of the spreads between Greek and German government bonds and their return to reasonable levels.

Finally, on 4 March a ten-year bond was issued through syndication to the amount of €5 billion and a yield of 6.3%. This issue was also oversubscribed (an offer of €15 billion).

4.5 FINANCIAL RESULTS OF SOCIAL SECURITY AND WELFARE FUNDS

According to the financial results of the six[78] main social security funds included in the Introductory Report on the 2010 Budget, the deficit of these organisations continued to rise in 2009, reaching 5.2% of GDP, against 4.1% in 2008 and 3.5% in 2007.

Despite the large grants out of the ordinary budget, covering 74.2% of this deficit, increased bank lending was also necessary in 2009. Thus, while the six organisations borrowed only €248 million (or 0.1% of GDP) in 2007, net borrowing rose to €1,007 million (or 0.4% of GDP) in 2008 and stood at €3,220 million (or 1.3% of GDP) in 2009. An even stronger recourse to borrowing is projected for 2010, to the amount of €4,984 million or 2.1% of GDP.

The rapid increase in the indebtedness of social security funds is partly attributable to the marked increase in spending for pensions, but mostly to the limited increase in revenue, which, for the most part, was due to contribution evasion, lower employment (particularly in construction) and smaller income from dividends. For this reason, there is considerable interest in the expected new arrangements to be included in the social security law, aiming at reducing contribution evasion. Moreover, if various measures proposed by the relevant committee are adopted and the social security system turns towards the pay-as-you-go model, then this should "automatically" lead to lower contribution evasion and a more equitable tax system.

4.6 THE BUDGET FOR 2010 AND REVISION OF BUDGET FORECASTS THROUGH THE USGP AND THE MEASURES IMPLEMENTED

According to the 2010 Budget, the state budget deficit was expected to decline from 12.2% of GDP in 2009 (12.4% on the basis of the updated GDP figure) to 9.2% of GDP in 2010, while the primary deficit would fall from 7.8% to 3.9% in 2010. Accordingly, the general government deficit (on a national accounts basis) should decline from 12.7% in 2009 (12.9% on the basis of the updated GDP figure) to 9.1% of GDP in 2010 (see Table II.14).

However, in early January it was officially announced that the projected decline in the

76 See also Special Feature 1.C.
77 See Section 3.3 of this chapter.
78 These are the Social Insurance Fund (IKA), the Seamen's Pension Fund (NAT)-KAAN, the Farmers' Insurance Fund (OGA), the Manpower Employment Organisation (OAED), the Workers' Housing Organization (OEK) and the Workers' Fund.

general government deficit in 2010 will be stronger, i.e. 4.0 percentage points of GDP instead of 3.6 percentage points forecast in the budget, so as to make fiscal adjustment more frontloaded. Thus, the targeted general government deficit for 2010 was further reduced to 8.7% of GDP, against 9.1% in the Budget forecasts, and should stand below 3.0% of GDP in three years, i.e. in 2012 instead of 2013.

These new targets have been incorporated in the Updated Stability and Growth Programme (USGP) 2009-2013, submitted to the European Commission on 15 January 2010. However, the Programme does not specify the new target for the state budget deficit in 2010, which should correspond to a general government deficit of 8.7% of GDP. Nevertheless, if additional measures announced in early February and early March are taken into consideration, it is estimated that the bulk of further adjustments should come from the state budget.

According to data and information included in the 2010 Budget and the USGP 2009-2013, the improvement of the fiscal balance should mostly stem from higher tax receipts (by €6,540 million or 2.7% of GDP), attributable both to specific tax measures and lower tax evasion (by €1,200 million or 0.5% of GDP). Moreover, a marked increase in receipts from EU Structural Funds is projected (by €1,400 million or 0.6% of GDP). The decline will also be supported by a substantial containment of ordinary budget primary expenditure, which is expected to decline by 4.1% compared with 2009. By contrast, expenditure for interest payments and public investment should increase by 4.9% and 8.4% respectively. Total ordinary budget expenditure (including tax refunds) is estimated to fall by 2.8% (see Table II.14).

Specifically, 2010 revenue is expected to receive a substantial boost from:

- the extraordinary tax on profitable enterprises (€870 million);
- the extraordinary tax on large real property (€180 million);
- dividends and commissions associated with bank liquidity support measures (€280 million),
- adjustments of the tax scale and cuts in certain exemptions on personal income taxes (€1,100 million),
- the introduction of taxation on large real property and changes in taxation on inheritance, gifts and parental donations (€400 million),
- higher tobacco taxes (€650 million),
- higher liquid fuel taxes (€930 million),
- combating tax evasion (€1,200 million) and
- higher receipts from EU Structural Funds (€1,400 million).

Revenue will also be supported by the collection of the ETAK (single real estate duty) for 2009 and the measures introduced in the second half of 2009 (e.g. higher taxes on petrol, increased mobile telephony flat fees etc.), which should yield results on an annual basis in 2010.

Turning to expenditure, moderation is partly attributable to the fact that significant expenditure incurred in 2009 (to an estimated €2.7 billion) will not be repeated in 2010. However, it is also due to the containment of other expenditure categories, such as:

- "freezing" of wages in the public sector (additional savings of €150 million);
- 10% cuts to civil service benefits (on average), less overtime and recruitments (total savings of €775 million);
- lower operating costs (savings of €360 million); and

• reduced grants to insurance funds (savings of €540 million).

Budget forecasts also included significant increases in certain expenditure items: education (€500 million), interest payments (€600 million), investment (€800 million), higher pension costs for the Farmers' Insurance Fund (OGA, around €460 million), increased VAT refunds to farmers (€170 million) and the second instalment of the social solidarity benefit (€500 million).

However, measures announced on 3 March should also be taken into account, as they are expected to further reduce expenditure by €2,400 million (€1,700 million from the measures on wages and pensions and €700 million from cuts in the Public Investment Budget) and also increase revenue by €2,400 million (€1,300 million through higher VAT rates and €1,100 million due to a further increase in excise duties).

Non-central government entities

Some measures included in the USGP 2009-2013 concern non-central government entities. In particular, it is expected that combating tax evasion will also be accompanied by reduced contribution evasion by €1,200 million. Moreover, the deficit of public hospitals will be €1,400 million lower in 2010.

5 MONEY, CREDIT AND CAPITAL MARKETS IN GREECE

5.1 MONETARY AGGREGATES

In the last months of 2009 the annual growth rate of M3[79] continued to follow the downward trend which had started in the fourth quarter of 2008 and gradually moderated to 4.8% in the fourth quarter (2008 Q4: 14.4%, see Table II.16) to stand at 1.0% in January 2010. Throughout 2009 the rate was higher than that of the euro area, which turned negative in October. This slowdown of the M3 growth rate in Greece is mainly connected with the downturn of economic activity and a strong deceleration in total credit expansion.[80] To a lesser extent, it is linked with the reduction in short-term deposit interest rates,[81] which made investment in M3 components less attractive and contributed to the shift of savings from M3 assets (especially time deposits with agreed maturity of up to two years) to non-M3 assets. The decline in the growth rate in the last months of the year may also be due to a shift of savings abroad.

The evolution of M3 components was marked by opposite trends, since the narrowing of the differential between the overnight rate and the time deposit rate, coupled with a high degree of uncertainty amongst holders of savings accounts, also led to a reallocation of savings within M3 (towards more liquid assets). As a result, overnight deposits increased gradually, and their growth rate stood at a double digit level (11.4%) in the fourth quarter of 2009.[82] Conversely, the growth rate of time deposits recorded a sharp decline and turned negative in November, for the first time since March 2002 (2009 Q4: 2.7%, December 2009: -2.4%).[83]

Overall, deposits included in M3 increased at a slower pace in the period under review (2009 Q4: 6.6%, 2008 Q4: 15.3%, see Table II.16). Among the other M3 components, both repo holdings and holdings of money market fund units continued to decrease (see Table II.16 and Chart II.20).

5.2 BANK DEPOSIT RATES

After a sharp decline in the first eight months of 2009, interest rates on new short-term[84]

79 This aggregate comprises the Greek contribution to the euro area M3 (excluding currency in circulation).
80 See Section 5.3 of this chapter.
81 See Section 5.2 of this chapter.
82 It should be noted that in 2009 a net capital flow of €12,305 million was recorded into this category (2008: €-8,238 million). Thus, the contribution of overnight deposits to total M3 growth rose to 42.6% in December 2009 and 42.5% in January (December 2008: 38.6%).
83 In 2009 a net capital flow of €-3,825 million was observed (second half of 2009: €-6,652 million, January-December 2008: €40,280 million). Thus, the contribution of time deposits to total M3 growth fell to 55.4% at end-2009 and remained unchanged in January 2010 (December 2008: 58.5%).
84 The bulk of deposits in Greece has an agreed maturity of up to one year.

Table II.16 Greek contribution to the main monetary aggregates of the euro area

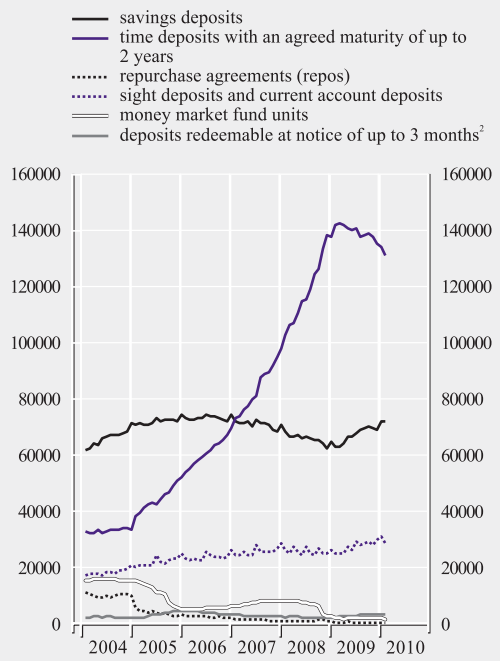
(non-seasonally adjusted data)

	Outstanding balances on 31.01.10 (million euro)	Annual percentage changes[1]											
		2004	2005	2006	2007	2008		2009					2010
		Q4[2]	Q4[2]	Q4[2]	Q4[2]	Q4[2]	Dec.[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	Dec.[3]	Jan.[3]
1. Overnight deposits	100,503	16.8	9.3	0.7	-0.9	-7.0	-8.6	-5.9	0.5	7.0	11.4	13.9	14.6
1.1 Sight deposits and current account deposits	28,653	19.1	20.2	1.8	10.3	-3.6	-8.5	-3.9	3.2	12.5	15.7	19.8	15.1
1.2 Savings deposits	71,850	16.1	6.3	0.2	-4.6	-7.9	-8.6	-6.3	-0.3	5.1	9.5	11.5	14.2
2. Time deposits with an agreed maturity of up to 2 years	130,888	5.3	45.2	37.5	42.2	39.1	37.3	31.5	21.5	11.5	2.7	-2.4	-6.5
3. Deposits redeemable at notice of up to 3 months[4]	3,214	2.8	105.2	-24.4	-20.3	-24.1	-23.1	-15.3	7.6	39.4	64.2	69.9	63.7
4. Total deposits (1+2+3)	234,605	13.1	20.7	12.1	15.9	15.3	13.8	13.4	12.0	9.8	6.6	4.6	2.2
5. Repurchase agreements	174	-12.6	-72.8	-35.7	-54.3	-11.4	-46.2	-55.3	-53.2	-55.1	-67.1	-50.0	-35.1
6. Money market fund shares/units	1,500	-1.9	-51.8	-2.5	40.5	-58.8	-71.4	-75.3	-79.7	-75.2	-44.8	-32.1	-26.9
7. Debt securities issued with a maturity of up to 2 years[5]	-75	-0.3	-42.2	24.2	-	-	-	-	-	-	-	-	-
8. M3 excluding currency in circulation (4+5+6+7)	236,204	9.2	6.9	10.6	14.7	14.4	12.3	11.2	9.2	6.7	4.8	3.2	1.0

Sources: Bank of Greece and ECB.
1 Annual rates of change in the corresponding index, which is compiled on the basis of outstanding stocks for December 2001 and cumulative monthly flows, adjusted for exchange rate variations, reclassifications, etc.
2 The quarterly average is derived from monthly averages (which are calculated as arithmetic means of two successive end-of-month figures) and is not the three-month average of end-of-month annual growth rates (see the Technical notes in the "Euro area statistics" section of the ECB *Monthly Bulletin*).
3 Based on end-of-month levels.
4 Including savings deposits in currencies other than the euro.
5 This aggregate is calculated on a consolidated basis with the other euro area countries and thus does not include domestic MFIs' holdings of debt securities with a maturity of up to two years issued by euro area MFIs.

Chart II.20 Deposits, repurchase agreements and money market fund units in Greece[1] (January 2004-January 2010)

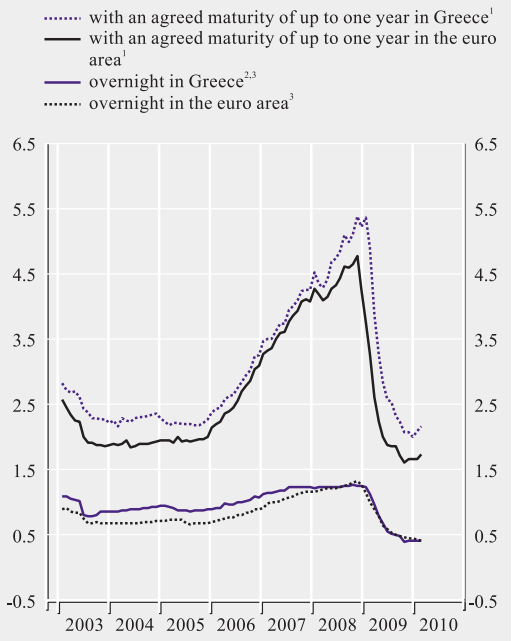
(end-of-period balances, million euro)



Source: Bank of Greece.
1 These aggregates are included in M3 according to the ECB definition and therefore constitute the Greek contribution to the corresponding euro area aggregates.
2 Including savings deposits in currencies other than the euro.

Chart II.21 Bank interest rates on new deposits by households in Greece and the euro area (January 2003-January 2010)

(percentages per annum)



Sources: Bank of Greece and ECB.
1 Monthly average rate.
2 Interest rate on savings deposits (these deposits represent the bulk of overnight deposits and their interest rate is almost identical to the overnight rate).
3 End-of-month rate.

deposits in Greece recorded a further small decrease in all individual categories up for the rest of the year (see Chart II.21). This downward trend which has been observed since the beginning of 2009 was consistent with the trend of the euro area money market interest rates, as well as with the reduction of ECB key interest rates (by 150 basis points), which took place during the first half of 2009, while at the same time it offset the increase which had been recorded in the previous two years.[85] The downward course of deposit rates was interrupted at end-2009. More specifically, the rate on new overnight deposits by households stood at 0.43% in December, remaining virtually unchanged against November (December 2008: 1.24%), while the rate on new deposits with an agreed maturity of up to one year by households rose to 2.10%, against 2.01% in November (December 2008: 5.36%, see Table II.17). Both categories of deposit rates had recorded their 10-year lowest in November. In the following months, the increase in deposit rates may continue and even be expanded, as adverse effects on Greek banks' borrowing costs and their ability to raise funds from the money and capital markets, because of current developments in public finances, tend to gear banks to seek liquidity within the domestic market, by offering depositors higher interest rates. In January 2010 the rate on new deposits with an agreed maturity of up to one year by households increased further to 2.18%, while the rate on new overnight deposits by households remained unchanged.

85 It should be reminded that at end-2008 deposit rates (mainly time deposits) had reached high levels, amid a climate of uncertainty after the collapse of major financial corporations worldwide and because Greek banks sought to strengthen their deposit base by offering depositors attractive terms.

Table II.17 Bank interest rates on new deposits by households in the euro area and Greece

(percentages per annum)

	December 2008	December 2009	Change Dec. 2008/ Dec. 2009 (percentage points)	January 2010	Change Dec. 2008/ Jan. 2010 (percentage points)
Overnight[1]					
Weighted average interest rate in the euro area	1.16	0.45	-0.71	0.43	-0.73
Maximum interest rate	2.21	1.21	-1.00	1.19	-1.02
Minimum interest rate	0.17	0.05	-0.12	0.06	-0.11
Interest rate in Greece	1.24	0.43	-0.81	0.43	-0.81
Interest rate differential between Greece and the euro area	0.08	-0.02	-0.10	0.00	-0.08
With an agreed maturity of up to one year[2]					
Weighted average interest rate in the euro area	3.75	1.67	-2.08	1.74	-2.01
Maximum interest rate	6.03	4.13	-1.90	4.15	-1.88
Minimum interest rate	2.59	0.49	-2.10	0.48	-2.11
Interest rate in Greece	5.36	2.10	-3.26	2.18	-3.18
Interest rate differential between Greece and the euro area	1.61	0.43	-1.18	0.44	-1.17

Sources: ECB and euro area NCBs.
1 End-of-month rate.
2 Monthly average rate.

Unlike the evolution of nominal interest rates, average real rates[86] on deposits increased in 2009,[87] despite their downward trend since mid-2009. On average, the real rate on time deposits with an agreed maturity of up to one year increased to 1.52% (January-December 2008: 0.71%).[88] These significant changes mainly reflect lower inflation.

Interest rates on deposits in the euro area as a whole also recorded a decline, although their decrease was smaller than that of the corresponding Greek rates.[89] In more detail, for time deposits with an agreed maturity of up to one year by households, which is the most important category of deposits, the positive differential between Greek and euro area interest rates decreased significantly (January 2010: 44 basis points, December 2008: 161 basis points, see Tables II.7 and II.8).

5.3 FINANCING OF THE ECONOMY

The annual growth rate of the outstanding total financing of the economy by domestic monetary and financial institutions (MFIs),[90] following the remarkable stability it had displayed in January-March 2009, slowed down

86 The average real rate of a period is obtained by subtracting average inflation from the period's average nominal rate.
87 Because average nominal interest rates decelerated less than inflation.
88 In January 2010 the real interest rate on overnight deposits stood at -1.97%, against -0.22% for time deposits with agreed maturity of up to one year.
89 It should be noted that in 2009 the decline (by 141 basis points) in the average interest rate on total euro area new deposits (January 2010: 1.14%) was about 1/4 less than the decrease (by 195 basis points) in the corresponding Greek rate (January 2010: 1.35%).
90 The *outstanding balance* of bank financing comprises the amounts of outstanding loans to general government, enterprises and households, total government debt securities and corporate bonds held by banks, as well as the balance of securitised loans and corporate bonds. The *change* in financing is calculated on the basis of the differential between the outstanding balances of bank financing on the two dates which set the reference period. This differential is then added to total write-offs by banks during the reference period and is adjusted for changes in the prices of Greek government bonds (incorporated in the outstanding balance of financing to the general government), as well as for foreign exchange valuation differences arising from the euro value of loans denominated in foreign currency, in order to obtain the *net flow* of total financing. More specifically, foreign exchange differences resulting from the appreciation of the euro vis-à-vis foreign currencies are added, while foreign exchange differences stemming from the depreciation of the euro against foreign currencies are deducted. Finally, it should be noted that in calculating the net flow and the rates of change in financing in 2009, account is taken of loans and corporate bonds transferred by domestic credit institutions to their affiliated banks abroad.

Table II.18 Bank interest rates on new deposits by households in euro area countries[1]

	Overnight[2]		With an agreed maturity of up to 1 year[3]	
	December 2008	January 2010	December 2008	January 2010
Austria	2.03	0.62	3.55	1.19
Belgium	0.79	0.33	2.88	0.69
Cyprus	1.58	1.19	6.03	4.15
Finland	0.87	0.38	3.26	1.42
France	0.18	0.09	3.27	1.45
Germany	1.85	0.73	3.21	1.12
Greece	**1.24**	**0.43**	**5.36**	**2.18**
Ireland	1.04	0.66	3.17[4]	1.62[5]
Italy	1.23	0.24	3.01	0.95
Luxembourg	2.21	0.77	2.59	0.48
Malta	0.57	0.30	3.05	1.95
Netherlands	0.72	0.43	4.30	2.15
Portugal	0.17	0.06	3.68	1.41
Slovakia	0.57	0.38	2.93	1.97
Slovenia	0.43	0.22	4.45	1.91
Spain	0.69	0.31	4.17	2.08

Sources: ECB and euro area NCBs.
1 Despite the efforts to harmonise statistical methodologies across the euro area, considerable heterogeneity remains in the classification of banking products, which is partly due to differences in national conventions and practices as well as in regulatory and fiscal arrangements.
2 End-of-month rate.
3 Monthly average rate.
4 The interest rate applies to all time deposits irrespective of maturity.
5 The interest rate applies to all time deposits irrespective of maturity. The latest available data refer to December 2009.

substantially in the ensuing months to stand at 6.7% in December (2009 Q4: 6.6%, 2008 Q4: 16.6%, see Chart II.22 and Table II.19). The slowdown which was observed in 2009 reflects the ongoing decline in the annual rate of credit expansion to the private sector (businesses and households) to 4.2% in December (2009 Q4: 4.5%, 2008 Q4: 18.3%), while the rate of credit expansion to the general government accelerated (2009 Q4: 18.9%, 2008 Q4: 8.1%). This rate, after having increased markedly in the first five months of 2009, followed a downward path and stood at 21.1% in December.[91]

As already stressed in previous reports, lower credit expansion to the private sector, noticeable throughout 2009, is due to the subdued demand for and supply of bank lending. On the demand side, canceled investment plans, lower sales and production in 2009, worsening households' expectations, higher uncertainty regarding their income and cautiousness about prospects in the real estate market made both businesses and households more reluctant to undertake further lending obligations. On the supply side, a noticeable rise in banks' loan losses, the projected worsening of economic activity and heightened credit risk led to tighter financing conditions. In this context, the rate of credit expansion decelerated to 5.1% for enterprises and 3.1% for households in December 2009 (2009 Q4: enterprises: 5.5%, households: 3.3%, 2008 Q4: enter-

91 The high rates of credit expansion by domestic MFIs to the general government in the course of 2009 reflect higher investment by credit institutions in Greek government securities. On the supply side, these investments were strengthened by increased issues of Greek government securities in 2009. This was also observed in other euro area countries, as a result of fiscal developments. On the demand side, both in Greece and in the euro area as a whole, banks' holdings in such securities were reinforced by reduced supply of new loans to the private sector, on account of a rise in non-performing loans and credit risk of this sector in 2009.

Table II.19 Total credit[1] to the economy by domestic MFIs

(annual percentage changes, non-seasonally adjusted data)

	2005	2006	2007	2008		2009					2010
	Q4[2]	Q4[2]	Q4[2]	Q4[2]	December[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	December[3]	January[3]
1. Total credit by MFIs	13.8	15.6	13.5	16.6	13.4	14.4	13.5	9.4	6.6	6.7	6.8
2. Credit to general government	-0.6	-1.8	-16.1	8.1	1.4	16.7	33.3	26.7	18.9	21.1	23.9
3. Financing of enterprises and households	19.8	21.7	21.7	18.3	15.9	14.1	9.9	6.4	4.5	4.2	3.8
3.1 Enterprises	12.3	17.3	20.1	21.6	18.7	17.0	11.8	7.6	5.5	5.1	4.5
3.2 Households	30.3	26.9	23.6	14.8	12.8	11.1	7.8	5.0	3.3	3.1	2.9
of which:											
3.2.1 Housing loans	31.1	28.4	23.3	13.4	11.5	10.1	7.3	5.1	3.9	3.7	3.6
3.2.2 Consumer loans	30.3	23.7	22.6	18.4	16.0	13.5	9.1	5.3	2.4	2.0	1.6

Source: Bank of Greece.

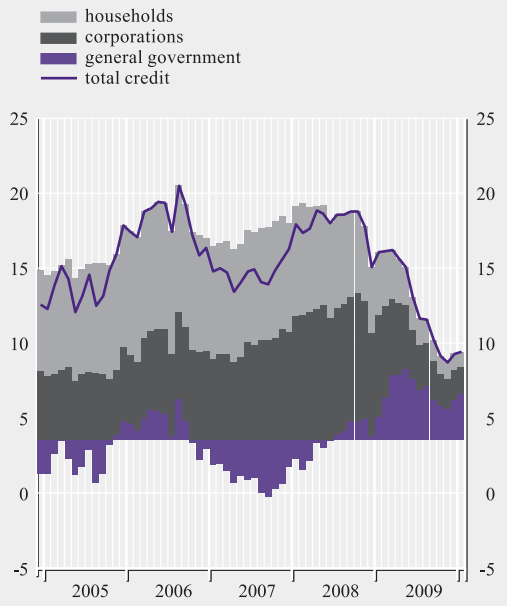
1 Including MFI holdings of bank loans, corporate bonds and government securities, as well as securitised bank loans and corporate bonds. The rates of change take into account loan write-offs and foreign exchange valuation differences in respect of loans denominated in foreign currencies. It should be noted that the rates of change in financing to enterprises take into account loans and corporate bonds transferred by MFIs to subsidiaries abroad in 2009.

2 The quarterly average is derived from monthly averages (which are calculated as arithmetic means of two successive end-of-month figures) and is not the three-month average of end-of-month annual growth rates (see the Technical notes in the "Euro area statistics" section of the ECB *Monthly Bulletin*).

3 Based on end-of-month levels.

Chart II.22 Greece: Total credit to the economy by domestic MFIs and its sectoral breakdown (December 2004-January 2010)

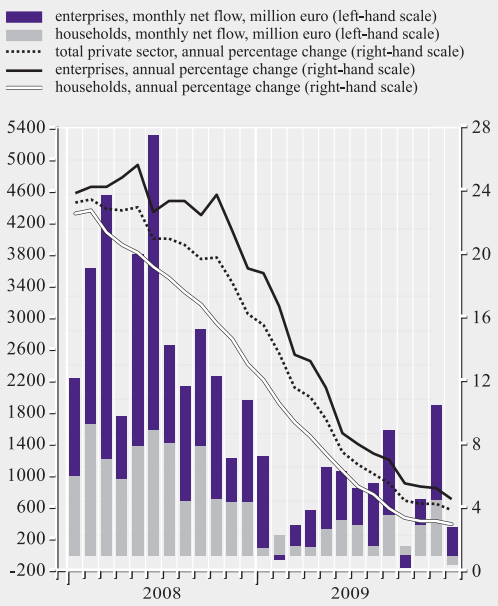
(annual percentage changes, shares in percentage points)



Source: Bank of Greece.
Note: Comprising the outstanding amounts of MFI loans to corporations, households and general government, MFI holdings of government securities and corporate bonds and the outstanding amounts of securitised loans and securitised corporate bonds. The rates of change are adjusted for exchange rate variations and write-offs carried out by banks during the reference period.

Chart II.23 Credit[1] to non-financial corporations and households by domestic MFIs (January 2008-January 2010)

(annual percentage changes; monthly flows[2])



Source: Bank of Greece.
1 Comprising the outstanding amounts of MFI loans to non-financial corporations and households, MFI holdings of corporate bonds and the outstanding amounts of securitised loans and securitised corporate bonds. The rates of change are adjusted for exchange rate variations and write-offs carried out by banks during the reference period.
2 The net flow of financing includes the change in the outstanding balance of financing (loans, corporate bonds, securitised loans and securitised corporate bonds). It also includes the valuation differences arising when loans denominated in foreign currency are valued in euro, as well as write-offs effected by banks during the reference period.

prises: 21.6%, households: 14.8%), reflecting significantly lower net monthly financing flows[92] to businesses and households in 2009 against 2008 (see Chart II.23).

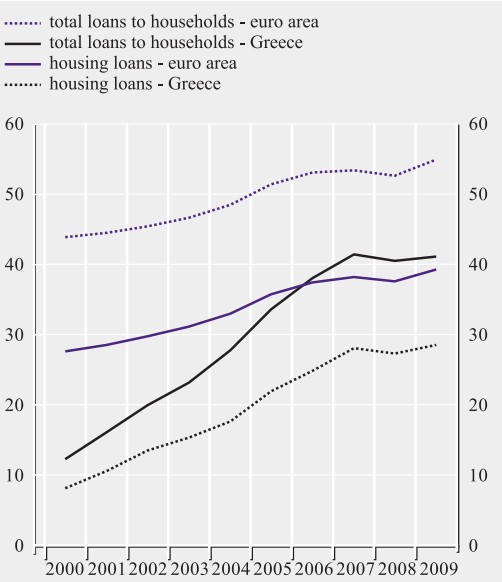
Along with the annual increase, which was recorded in the outstanding balance of financing to enterprises at end-2009, nominal GDP subsided (by 0.7%, according to NSSG provisional estimates). Against this backdrop, the outstanding balance of corporate financing as a percentage of GDP rose slightly and stood at 56.3% in December 2009 (December 2008: 55.4%). If only bank loans are taken into account (for comparison purposes), this percentage amounts to 40.1%, i.e. 12.1 percentage points below that of the euro area aggregate (52.2%). The corresponding percentages in December 2008 were 43.3% for Greece and 52.1% for the euro area. Similarly, the ratio of the outstanding balance of household financing to GDP rose to 50.4% in December 2009 (December 2008: 49.0%, see Chart II.24). If securitised loans are not taken into account, this percentage stands at 41.2%, against 55.1% for the euro area as a whole (December 2008: Greece: 40.5%, euro area: 52.7%).

Turning to enterprises, the annual rate of credit expansion declined considerably across

92 Net financing flows are calculated as the rate of change in the outstanding balance of financing for a specific period (of one month or more), plus loan write-offs and foreign exchange differences arising from the appreciation of the euro, less foreign exchange differences stemming from the depreciation of the euro during the same period.

Chart II.24 Bank loans[1] to households in Greece and the euro area (2000-2009)

(percentage of GDP[2])



Sources: Bank of Greece and ECB for outstanding loans, Eurostat and NSSG for GDP.
1 Excluding the outstanding amounts of securitised loans.
2 Estimates for the 2009 GDP (NSSG and Eurostat).

all sectors in the course of 2009 (from double-digit rates in December 2008 to low one-digit rates by the end of 2009, see Table II.20), while certain sectors recorded markedly negative net flows for some months. Among the most important sectors (on the basis of their share in total financing), slow or negative annual rates were registered in credit expansion to trade (4.2%), construction (2.7%), shipping (4.0%) and industry (-3.5%) in December 2009. This deceleration is evidenced (with a time lag) by the corresponding decreases in production and sales indicators for those sectors (e.g. industry, construction, trade). This reflects the impact of the economic downturn on demand for loans and financing. It has been observed that in the euro area as a whole, changes in corporate financing by MFIs follow the business cycle with a lag of three quarters.[93] The results of the Bank Lending Survey[94] (January 2010) partly corroborate these developments. With respect to supply, in the fourth quarter of 2009 banks adopted tighter terms of corporate financing (compared with the previous quarter) and increased, among other things, the interest rate margin. At the same time, demand for loans remained unchanged, as improved demand for the refinancing of outstanding loans continues, at present, to counter the effects from the downturn in economic activity.

It is estimated that the moderation in the rate of credit expansion to enterprises in 2009 was stronger for small and medium-sized enterprises (SME) in comparison to larger ones.[95] Government measures for 2010 aim at the smoother financing of SMEs through the Greek Credit Guarantee Fund of Small and Very Small Enterprises (TEMPME), which will operate under new terms. To the same direction, on the basis of the National Strategic Reference Framework, the financing of SMEs in

93 See Box 1 "Loans to the non-financial private sector over the business cycle in the euro area", ECB, *Monthly Bulletin*, October 2009, p. 18. Conversely, as regards financing to households, the article shows that the annual growth rate of real loans to households for the euro area as a whole precedes that of real GDP by one quarter. This empirical observation in the case of corporate financing can be explained by the fact that, from the side of loan demand, enterprises tend to turn first to internal financing, i.e. to meet their needs for working capital during an economic recovery as inflows that are added to their own funds improve, and only at a later stage they resort to external financing (by banks). In addition, from the supply side, during a recovery, banks may opt to lend households rather than enterprises, either because such loans are secured by real estate (especially in the case of mortgage loans) or because banks can more easily evaluate the financial situation of households than that of enterprises and they most probably prefer to lend enterprises when the economic recovery is already reflected on their balance sheets.

94 The Bank Lending Survey is conducted by the Bank of Greece on a quarterly basis, in the framework of a wider Eurosystem survey.

95 It is reasonable to assume that the larger an enterprise, the more likely it is for it to obtain new loans, as banks can more easily evaluate the financial situation of large enterprises, at a lower cost (for instance, see the speech by Lorenzo Bini Smaghi "The euro area macroeconomic situation: where do we stand, where are we going?", 18.1.2010). A recent European Commission survey in euro area countries confirms the limited response of banks to loan applications of small and medium enterprises also in Greece during the first half of 2009. See "Access to finance", Flash Eurobarometer 271, September 2009, on the website of the European Commission. In more detail, 38% of the sample's Greek SME stated that they had applied for a new bank loan in the first half of 2009, which is the highest percentage among EU countries (EU-27 average: 22%). However, according to the survey, only 27% of the sample's Greek SMEs which had applied for a loan finally received the requested amount, which accounts for the lowest percentage among EU countries (55% on average). As for the second half of 2009, recent data from the same survey have been so far made available only for the euro area aggregate and point to a deterioration of SME access to bank financing, compared with the first half of 2009, signalling their expectations for further difficulties in the first half of 2010 (see "Survey on the access to finance of small and medium-sized enterprises in the euro area: second half of 2009", pp. 13-15, ECB website).

Table II.20 Financing[1] to domestic enterprises and households from domestic MFIs

(non-seasonally adjusted data)

	Outstanding balances on 31.01.10 (million euro)	Annual percentage changes									
		2006	2007	2008		2009					2010
		Q4[2]	Q4[2]	Q4[2]	December[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	December[3]	January[3]
A. Enterprises[4]	**134,376**	**17.3**	**20.1**	**21.6**	**18.7**	**17.0**	**11.8**	**7.6**	**5.5**	**5.1**	**4.5**
1. Trade	33,408	9.9	17.9	22.2	19.5	19.0	14.7	9.0	5.0	4.2	3.2
2. Industry[5]	23,859	9.5	11.0	17.3	15.8	13.5	6.9	0.6	-2.8	-3.5	-2.9
3. Construction	11,532	28.9	28.5	37.3	35.2	27.9	15.2	7.0	2.2	2.7	3.5
4. Shipping	10,350	17.8	25.3	22.7	17.2	19.0	14.0	8.2	3.8	4.0	1.9
5. Tourism	7,428	11.0	21.0	24.3	19.7	16.9	11.0	7.3	6.4	7.8	8.2
6. Non-monetary financial institutions	6,035	35.1	14.7	-2.1	-8.7	-8.3	-7.2	-1.2	7.4	5.8	5.7
7. Transport and communications (excluding shipping)	5,823	51.9	39.6	35.6	26.8	18.1	10.2	18.7	19.5	25.5	25.8
8. Agriculture	4,076	11.0	10.7	20.4	20.3	15.6	8.8	5.4	3.7	3.7	6.2
9. Electricity - gas - water supply	4,103	3.0	40.2	36.4	29.8	25.2	30.8	14.0	14.8	14.7	14.5
10. Other sectors	27,763	28.8	27.4	23.6	23.4	22.1	16.7	14.0	12.5	10.4	8.0
B. Households	**119,556**	**26.9**	**23.6**	**14.8**	**12.8**	**11.1**	**7.8**	**5.0**	**3.3**	**3.1**	**2.9**
1. Housing loans	80,559	28.4	23.3	13.4	11.5	10.1	7.3	5.1	3.9	3.7	3.6
2. Consumer loans	36,044	23.7	22.6	18.4	16.0	13.5	9.1	5.3	2.4	2.0	1.6
– Credit cards	9,538	5.7	6.3	12.4	10.0	7.8	4.6	1.6	-0.4	-0.6	-1.3
– Other consumer loans[6]	26,507	35.4	30.9	20.9	18.4	15.8	10.9	6.7	3.5	3.1	2.7
3. Other loans	3,032	30.6	42.2	7.5	9.5	6.8	4.0	-1.0	-2.3	-1.1	-1.0
Total	**253,932**	**21.7**	**21.7**	**18.3**	**15.9**	**14.1**	**9.9**	**6.4**	**4.5**	**4.2**	**3.8**

Source: Bank of Greece.

1 Including MFI holdings of bank loans, corporate bonds and government securities, as well as securitised bank loans and corporate bonds. The rates of change take into account loan write-offs and foreign exchange valuation differences in respect of loans denominated in foreign (non-euro) currencies. It should be noted that the rates of change in financing to enterprises take into account loans and corporate bonds transferred by MFIs to subsidiaries abroad in 2009.

2 The quarterly average is derived from monthly averages (which are calculated as arithmetic means of two successive end-of-month figures) and is not the three-month average of end-of-month annual growth rates (see the Technical notes in the "Euro area statistics" section of the ECB *Monthly Bulletin*).

3 Based on end-of-month levels.

4 Sectors are listed in descending order of their shares in total financing, with the exception of "other sectors". Growth rates take into account loan write-offs.

5 Comprising manufacturing and mining/quarrying.

6 Comprising personal loans and loans against supporting documents.

certain sectors was announced in 2009.[96,97] Furthermore, the new legislation concerning the settlement of debt obligations of professionals and enterprises (Law 3816/2010) includes measures focusing on financially viable SMEs. Among other things, the above law provides for favourable debt settlement for enterprises with overdue liabilities, as well as enterprises with current liabilities (which are active in the sectors of trade and agriculture) on the basis of specific financial criteria, i.e. by deferring their initial capital payments for two years. In addition, the law amends the existing legal framework on the recording and processing of economic behaviour data by Tiresias S.A., providing for a one-year reduction of the data storage period, where appropriate.[98] However, it is estimated that this law may have an overall negative effect on bank lending to enterprises. In particular, apart from the negative effect on bank liquidity, the potential "moral hazard" (i.e. the creation of incentives for the non-servicing of debt) and the deletion of data from the database of Tiresias S.A. imply higher credit risk for these enterprises, as well as higher uncertainty and more difficulty in assessing credit risk. This uncertainty is expected to contribute to a surge in the level of estimated credit risk for all enterprises, which would lead to the incorporation of a risk premium in their lending rates and the need for a higher capital adequacy of banks. This could lead to lower lending. In addition, it is estimated that, as legal uncertainty may arise, loans subject to these provisions may be difficult to securitise and this could have an impact on bank liquidity.

As regards the annual rate of **credit expansion to households** (see Chart II.22), the decline which was observed throughout 2009 (December 2009: 3.1%, 2008 Q4: 14.8%) is partly due to a slowdown in the growth rates of both housing and consumer loans. A remarkably low annual rate of change was recorded in December 2009 for consumer loans (2.0%), while for housing loans this rate stood at 3.7% (2008 Q4: consumer loans: 18.4%, housing loans: 13.4%). The continued decline is attributable to the aforementioned factors of demand and supply. On the demand side, worsening expectations of households as regards employment and future incomes (in view of the expected income and taxation policy measures) weighted more after October 2009.[99] The results of the latest Bank Lending Survey (January 2010) indicate that banks adopted slightly stricter terms for consumer loans in the fourth quarter of 2009 (compared with the third), but kept them unchanged on housing loans.[100]

The deterioration of business expectations after a further decline in output in 2009, subdued activity which is noticeable in certain sectors (e.g. construction, real estate, public works), as well as the negative environment after the latest downgrades of Greek sovereign debt ratings by international credit rating agencies, are the main factors behind the continued cautiousness of enterprises, which is manifested with the suspension of their investment plans. On the other hand, the government has announced measures to support the liquidity and investment of SME and these measures are expected to come into force in the course of the year.[101] Finally, banks are

96 According to the National Strategic Reference Framework (2007-2013) the submission of applications for the "aid to small and very small enterprises in the sectors of trade, services, tourism and manufacturing" has been recently completed. The payment of state subsidies is expected later on within 2010, after the evaluation of applications.

97 According to the USGP (January 2010), the TEMPME budget for 2010 will rise and the criteria for the admission of enterprises will change, with a view to delivering government guarantees to "enterprises which have been strongly affected by the credit crunch". During the first two operating phases of TEMPME in the period between 30.12.2008 and 9.3.2010, 56,005 enterprises received loans totalling €5.2 billion.

98 More specifically, under article 4 of the said law, the storage period of economic behaviour data is reduced by one year to: (i) two years in the case of unpaid cheques (for which the paying bank has certified, within the prescribed time, the payment default), unpaid bills of exchange and promissory notes, as well as in the case of loan and credit termination; (ii) three years for payment orders, and (iii) four years for seizure and payable cheques under Legislative Decree 17.7/13.8.1923. Furthermore, cheques which are paid within thirty days after they were blocked are not shown in records and all recorded ones are deleted.

99 The IOBE consumer confidence indicator recorded a continuous deterioration in the November 2009-February 2010 period.

100 According to the Survey, demand for consumer loans weakened in the fourth quarter of 2009, partly on account of reduced household spending for consumer durables.

101 Better absorption of funds for co-financed programmes (as part of the NSRF) and the implementation of Public Private Partnerships call for changes, the results of which are not expected to be visible before 2011. The absorption, so far, of funds from the NSRF 2007-2013 programme remains at 3.6% (according to the USGP). Indicatively, according to businesses projections, as registered in the relevant IOBE indicator, expectations on the level of activity and employment in the construction of public works deteriorated further and reached a 5-year low in February 2009.

expected to adopt stricter terms in 2010 because of an estimated further increase in defaults,[102] which tend to be manifested with a time lag.[103]

The annual rate of credit expansion to the private sector slowed down further to 3.8% in January 2010 (enterprises: 4.5%, households: 2.9%). The net monthly flow of corporate financing remained in positive territory, but was significantly lower than December (€348 million, against €1,182 million), while that of household lending was negative (-€120 million, against €705 million in December). **It is estimated that the rate of credit expansion will continue to decelerate in the course of 2010 and reach exceptionally low levels by the end of the year, mainly due to weakened economic activity.** This projection is surrounded by high uncertainty, as the rate of credit expansion is expected to be affected by:

(i) the extent of the deceleration of GDP this year.[104] The rate of change in GDP affects demand for loans to enterprises and households but also loan supply, through the growth of deposits;

(ii) the liquidity of Greek banks, which is expected to drop in 2010.[105] The main restricting factors are: the evolution of deposits, the gradual phasing out of "enhanced credit support" measures from the Eurosystem[106] and financing difficulties from global markets[107] following the downgrades of Greek debt ratings by international rating agencies;

(iii) the increase in Greek government borrowing costs, which add to Greek banks' funding costs and eventually to the private sector's lending rates. The surge in bank lending rates is expected to have a restrictive effect on demand for loans;

(iv) finally, banks are expected to give priority to safeguarding the quality of their loan portfolio and to conduct a cautious credit policy.

5.4 BANK LENDING RATES, INTEREST RATE MARGIN AND INTEREST RATE DIFFERENTIALS BETWEEN GREECE AND THE EURO AREA

In the last months of 2009, the evolution of Greek bank lending rates varied, as the sharp decline recorded in January-August 2009 was significantly reduced or even came to a halt in some loan categories (see Table II.21 and Chart II.25). Bank lending rates in the euro area followed a similar path, albeit declining even more sharply in 2009 than the respective Greek rates, which resulted in a higher differential with the typically higher Greek interest rates in most loan categories (see Table II.22 and Chart II.26).

It should be reminded that the level of bank interest rates in Greece and the other euro area countries is set in connection with the key ECB rates, as well as the prevailing competition conditions between credit institutions in local markets. In the current circumstances, important factors with regard to loan pricing by Greek banks, which also explain the differential between lending rates in Greece and the euro area, include the recent downgrades of Greek sovereign debt by international rating agencies and the widening of the yield spread between Greek government bonds and the corresponding German bonds. These factors had a negative impact for Greek financial institutions as regards access and terms of funding from the foreign interbank market. The level of lending rates was also influenced by the increase in non-performing loans of credit institutions

102 Responding to a new question of the Bank Lending Survey in January 2009 concerning the evolution of financing criteria in the next twelve months, banks have stated that they are expecting the establishment of stricter terms on corporate loans, on account of a surge in their funding costs, by the end of 2010.

103 See the speech by Lorenzo Bini Smaghi "The euro area macroeconomic situation: where do we stand, where are we going?", 18.1.2010, ECB website.

104 See Section 3.1 of this chapter.

105 See Section 5.7 of this chapter.

106 See Section 2 of this chapter.

107 It is noted that in the latest Bank Lending Survey (January 2010), Greek banks reported that they are expecting to continue facing difficulties in their funding from these markets also in the first quarter of 2010. According to their statement, they already had difficulties in the fourth quarter of 2009 (particularly as regards loan securitisations).

Table II.21 Bank interest rates on new loans in the euro area and Greece

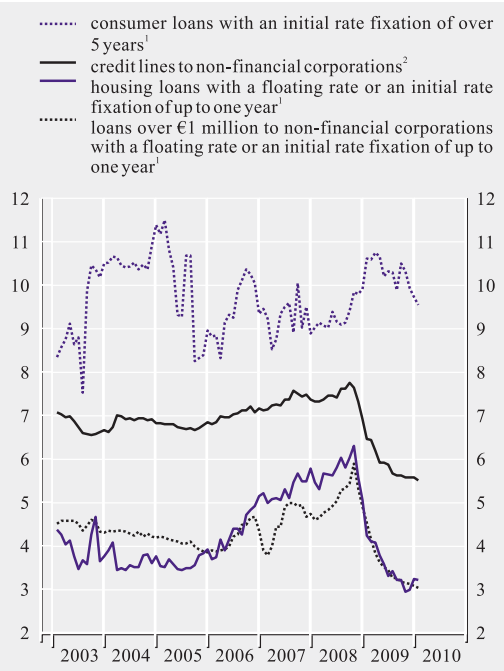
(percentages per annum)

	December 2008	December 2009	Change Dec. 2008/ Dec. 2009 (percentage points)	January 2010	Change Dec. 2008/ Jan. 2010 (percentage points)
A. Loans with a floating rate or an initial rate fixation of up to one year					
A.1. Loans up to €1 million to non-financial corporations					
Weighted average interest rate in the euro area	5.38	3.28	-2.10	3.23	-2.15
Maximum interest rate	7.26	6.00	-1.26	5.77	-1.49
Minimum interest rate	4.54	2.41	-2.13	2.23	-2.31
Interest rate in Greece	6.18	4.70	-1.48	4.52	-1.66
Interest rate differential between Greece and the euro area	0.80	1.42	0.62	1.29	0.49
A.2. Loans of more than €1 million to non-financial corporations					
Weighted average interest rate in the euro area	4.29	2.19	-2.10	2.03	-2.26
Maximum interest rate	5.93	5.47	-0.46	4.98	-0.95
Minimum interest rate	3.97	1.63	-2.34	1.55	-2.42
Interest rate in Greece	5.07	3.24	-1.83	3.23	-1.84
Interest rate differential between Greece and the euro area	0.78	1.05	0.27	1.20	0.42
A.3. Housing loans					
Weighted average interest rate in the euro area	5.09	2.71	-2.38	2.70	-2.39
Maximum interest rate	6.59	5.26	-1.33	5.09	-1.50
Minimum interest rate	3.81	1.92	-1.89	1.90	-1.91
Interest rate in Greece	4.92	3.08	-1.84	3.05	-1.87
Interest rate differential between Greece and the euro area	-0.17	0.37	0.54	0.35	0.52
A.4. Consumer loans					
Weighted average interest rate in the euro area	8.16	6.42	-1.74	6.81	-1.35
Maximum interest rate	13.02	9.85	-3.17	11.05	-1.97
Minimum interest rate	4.76	3.04	-1.72	3.04	-1.72
Interest rate in Greece	8.76	8.18	-0.58	8.69	-0.07
Interest rate differential between Greece and the euro area	0.60	1.76	1.16	1.88	1.28
B. Loans with an initial rate fixation of over one and up to 5 years[1]					
B.1. Housing loans					
Weighted average interest rate in the euro area	5.06	3.96	-1.10	3.93	-1.13
Maximum interest rate	7.30	5.57	-1.73	6.67	-0.63
Minimum interest rate	3.96	2.12	-1.84	0.00	-3.96
Interest rate in Greece	5.53	4.60	-0.93	4.60	-0.93
Interest rate differential between Greece and the euro area	0.47	0.64	0.17	0.67	0.20
B.1. Consumer loans					
Weighted average interest rate in the euro area	7.03	6.26	-0.77	6.43	-0.60
Maximum interest rate	12.62	15.47	2.85	14.53	1.91
Minimum interest rate	5.47	4.17	-1.30	4.50	-0.97
Interest rate in Greece	9.49	8.95	-0.54	8.53	-0.96
Interest rate differential between Greece and the euro area	2.46	2.69	0.23	2.10	-0.36

Sources: ECB and euro area national central banks.
1 Monthly average rates.

Chart II.25 Bank interest rates on new loans in Greece (January 2003-January 2010)

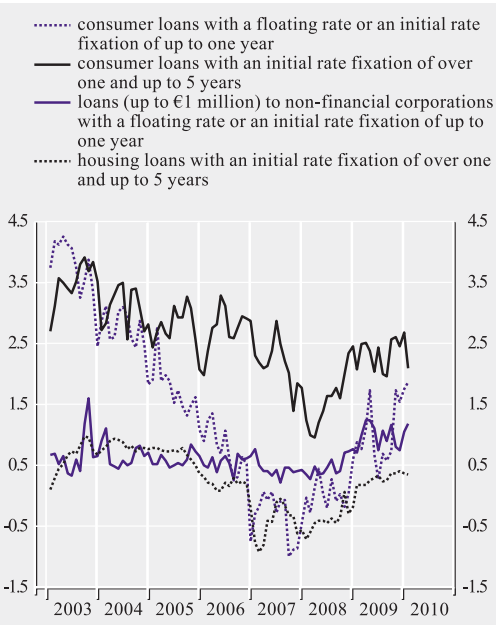
(percentages per annum)



Source: Bank of Greece.
1 Monthly average rate.
2 End-of-month rate.

Chart II.26 Bank interest rates on new loans: differentials between Greece and the euro area (January 2003-January 2010)

(percentage points)



Sources: Bank of Greece and ECB.

in Greece in 2009,[108] which is estimated to continue in 2010 and typically entails a rise in the risk premium incorporated in lending rates. Thus, if the borrowing costs and non-performing loans of Greek credit institutions continue to rise, Greek bank lending rates are likely to increase and this could be further heightened by the gradual withdrawal of the ECB enhanced credit support measures.

In more detail, with regard to new loans to households, the average interest rate on housing loans in Greece stood at 3.41% in December, i.e. 180 basis points less than at end-2008.[109] The interest rate on credit cards stood at 15.17% (December 2008: 15.72%), i.e. 623 percentage points above the average interest rate on fixed-amount and fixed-maturity consumer loans (8.94%), while in December the interest rate on open consumer loans (12.06%) was about halfway between these two interest rates. In January 2010, the interest rates on housing loans and new consumer loans with a fixed maturity increased slightly, to 3.44% and 8.96% respectively. With regard to loans to non-financial corporations, the interest rate on credit lines came to 5.60% (December 2008: 6.94%), while the interest rate on new fixed-amount and fixed-maturity loans with a floating or fixed rate for one year stood at 4.70% for loans up to €1 million and at 3.24% for loans over €1 million. In these two categories of corporate loans, which represent the most important loan categories, the decrease in interest rates exceeded 145 basis points in 2009 (see Table II.21). In January 2010, interest rates on new loans to businesses in general fell slightly.

108 For further details on non-performing loans, see Section 5.7 of this chapter.
109 In January-December 2008, this rate had increased by 82 basis points.

Table II.22 Bank interest rates on new loans in euro area countries[1]

(percentages per annum)

	New loans with a floating rate or an initial rate fixation of up to one year[2]								New loans with an initial rate fixation of over one and up to five years[2]	
	To non-financial corporations									
	Loans up to €1 million		Loans over €1 million		Housing loans		Consumer loans		Consumer loans	
	Dec. 2008	Jan. 2010	Dec. 2008	Jan. 2010	Dec. 2008	Jan. 2010	Dec. 2008	Jan. 2010	Dec. 2008	Jan. 2010
Austria	4.89	2.38	4.49	1.90	5.61	2.86	6.44	4.65	6.07	4.50
Belgium	4.77	2.45	3.97	1.56	4.87	2.90	6.60	6.40	8.03	6.47
Cyprus	-[3]	5.39	-[3]	4.62	-[3]	4.73	-[3]	5.56	-[3]	-[3]
Finland	4.61	2.23	3.97	1.90	4.07	1.90	4.91	3.04	5.93	4.70
France	5.08	2.62	4.30	1.75	5.52	3.36	8.43	7.21	7.23	6.25
Germany	5.25	3.19	4.35	2.45	5.38	3.20	4.76	4.36	5.47	5.30
Greece	**6.18**	**4.52**	**5.07**	**3.23**	**4.92**	**3.05**	**8.76**	**8.69**	**9.49**	**8.53**
Ireland	5.95	3.81	4.99	2.68	4.33	2.57	5.66	5.44	-[3]	-[3]
Italy	5.31	2.96	4.17	1.55	4.91	2.31	11.72	10.01	8.70	8.39
Luxembourg	4.54	2.44	3.97	2.48	4.22	1.91	-[3]	-[3]	6.20	5.20
Malta	5.82	5.75	4.68	3.92	-[3]	3.37	-[3]	6.11	-[3]	-[3]
Netherlands	4.82	3.32	4.01	1.70	5.32	3.85	9.33	10.44	-[3]	-[3]
Portugal	7.26	5.09	5.77	3.75	4.96	2.13	8.10	5.54	12.62	10.61
Slovakia	-[3]	3.60	-[3]	2.43	-[3]	5.09	-[3]	7.10	-[3]	14.53
Slovenia	6.39	5.77	5.93	4.98	6.28	3.39	6.89	4.92	7.96	7.37
Spain	5.51	3.69	4.30	1.92	5.63	2.42	10.94	11.05	9.51	8.23

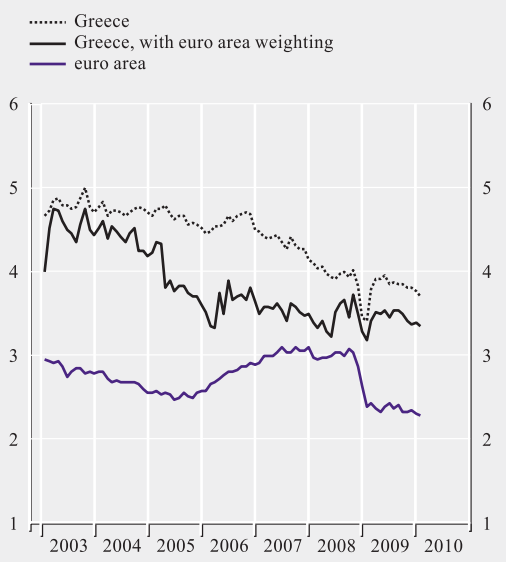
Sources: ECB and euro area national central banks.
1 Despite the efforts to harmonise statistical methodologies across the euro area, a considerable product heterogeneity remains in terms of instrument characteristics and volumes; this partly reflects differences in national conventions and practices, as well as in regulatory and fiscal arrangements.
2 Monthly average rate.
3 These countries do not publish data on the respective interest rates.

As mentioned above, given that lending rates in the euro area generally decreased more than Greek interest rates in 2009, the positive differential between Greek interest rates and the corresponding European rates widened further. The largest increase in the interest rate differential between Greece and the euro area (see Table II.21) was recorded in consumer loans with a floating rate or an initial rate fixation of up to one year. However, the largest differential (January 2010: 510 basis points) is still observed in loans to households without a fixed maturity, reflecting the relatively high importance of credit card borrowing in Greece, which is included in this category and involves higher credit risk and administrative cost.

The spread between the weighted average interest rate on new bank loans and the corresponding rate on new deposits (interest rate spread), rose by 32 basis points in Greece in the course of 2009, while it declined by 35 basis point in the euro area (see Table II.23 and Chart II.27).

Chart II.27 Average interest rate spread between new loans and new deposits in Greece and the euro area (January 2003-January 2010)

(percentages points)



Sources: Bank of Greece and ECB.

Table II.23 Interest rate margin in Greece and the euro area

(percentage points)

	Average interest rate on new loans in Greece[1] (percentages per annum)	Average interest rate on new deposits in Greece[1] (percentages per annum)	Interest rate spread in Greece	Interest rate spread in Greece with euro area weighting	Interest rate spread in the euro area
Dec. 1998	16.21	8.12	8.09	...	...
Dec. 1999	14.02	6.98	7.04	...	...
Dec. 2000	9.68	4.00	5.68	...	...
Dec. 2001	7.26	1.96	5.30	...	...
Dec. 2002	6.29	1.67	4.62	...	...
Dec. 2003	5.92	1.20	4.72	4.45	2.77
Dec. 2004	5.94	1.22	4.72	4.18	2.53
Dec. 2005	5.79	1.27	4.52	3.59	2.56
Dec. 2006	6.38	1.87	4.51	3.63	2.89
Dec. 2007	6.67	2.53	4.14	3.48	3.09
Dec. 2008	6.72	3.27	3.45	3.27	2.63
Dec. 2009	5.09	1.32	3.77	3.40	2.29
Jan. 2010	5.06	1.35	3.71	3.35	2.26

Sources: Bank of Greece and ECB.
1 The average interest rate depends on the level of interest rates of individual categories of deposits/loans as well as on the weight of each type of deposit/loan in the corresponding total. Therefore, changes in the average interest rate reflect changes in the actual interest rates and/or changes in the weights of the instrument categories concerned. In order to smooth out the impact of abrupt changes in shares, the calculation of the average interest rate is based on the average of the shares over the past twelve months.

Thus, in December the interest rate spread stood at 3.77% in Greece and at 2.29% in the euro area, while the difference between these two spreads (148 basis points) almost doubled against end-2008 (82 basis points). Moreover, in January 2010 the interest rate spread in Greece fell slightly to 3.71%, while its difference against the euro area was reduced to 145 basis points. It must be noted that in December 2008 the difference between the Greek and the euro area interest rate spread was the lowest of the past 6 years. The reasons of the observed divergence in interest rate spreads between the euro area countries have been discussed in detail in previous reports. These factors include the different composition of both deposits and loans. Had the composition of loans and deposits in Greece been the same as in the euro area, the interest rate spread in Greece would have been 3.40% in December (i.e. 37 basis points lower) and its difference against the corresponding euro area spread would had been reduced to 111 basis points (January 2010: 109 basis points).

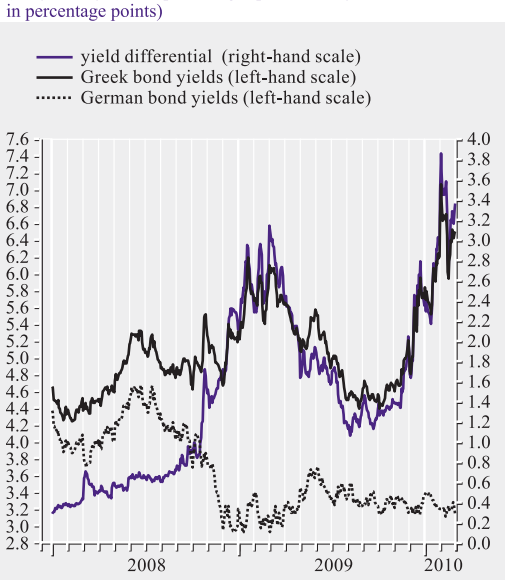
5.5 THE GOVERNMENT BOND MARKET

In 2009, developments in the secondary market for Greek government bonds were characterised by high yield volatility and a significant increase in yields from the beginning of the fourth quarter of the year, as well as by a small increase in transactions. The main characteristic of the primary market has been the significant increase in the funds raised.

In more detail, between end-December 2008 and end-December 2009, the yields of Greek government bonds with a short and medium maturity (up to 5 years) moved down, while those of longer maturities (7 years or more) moved up. In the first case, the evolution of yields reflects a relative normalisation in money markets, as these bonds are mainly influenced by liquidity conditions in money markets. The downward trend in longer maturities, which prevailed in March-September 2009, was sharply reversed in the last quarter of 2009, a development that continued into the first two months of 2010 (see Chart II.28).[110] The yields of these bonds were influenced by investors' concerns regarding not only the negative developments in fiscal aggregates, but also the structural weaknesses and macroeconomic imbalances of the Greek economy.[111] This adverse development for long-term government bond yields was also enhanced by the publication of negative reports on the Greek economy by some rating agencies, as well as by the ensuing downgrading of Greece's credit rating.[112]

Chart II.28 Yields on the 10-year Greek and German government bonds (January 2008-February 2010)

(daily data; yields in percentages per annum, yield differential in percentage points)



Source: Bank of Greece.

As a result of the above developments, the Greek government bond yield curve shifted

110 For more details on developments in the January-September 2009 period, see Bank of Greece, *Monetary Policy – Interim Report*, October 2009.

111 The yields of the respective euro area bonds remained relatively stable, while even in the case of bonds from the so-called "peripheral" economies (e.g. Portugal or Italy), the rise observed was less marked than that of Greek bonds. Developments in bond markets are also reflected in the spreads of credit default swaps (CDS): at the end of 2009, the relevant spread for Greece was the highest among euro area countries.

112 Fitch was the first to downgrade Greece's credit rating on 22 October and was followed by Standard and Poor's and Moody's on 16 and 22 December, respectively.

upwards at end-December, compared with end-December 2008, and became steeper (see Chart II.29), as the yield spread between the ten-year and the three-year bond widened and stood at 81 basis points. At end-February 2010, this curve shifted further upwards and became a little less steep.

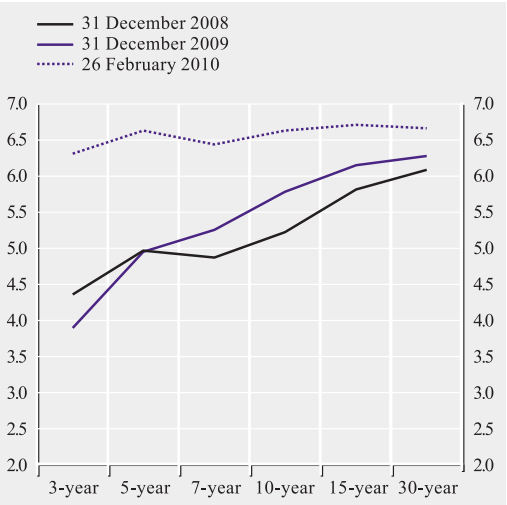
The yield spread between the ten-year Greek bond and the corresponding German bond, after dropping in the April-September 2009 period, widened significantly in the last three months of 2009, mainly as a result of the rise in the yield of the ten-year Greek government bond, a trend that continued in the first two months of 2010 (see Chart II.30). In particular, at end-February 2010 the yield of the ten-year Greek government bond was 6.64%, compared with 5.69% in December 2009 and 5.23% in December 2008. Fiscal imbalances, developments in a country's credit rating and liquidity conditions in the secondary market are cited in international literature as important determinants of government bond yield spreads.[113]

The average daily value of transactions in the Electronic Secondary Securities Market (HDAT) stood at €1,294 million in 2009, i.e. it rose by some 10% (see Chart II.30). Nevertheless, it remained significantly lower than in the pre-crisis period (1999-2006: €2,954 million). In the first two months of 2010, the average daily value of transactions was higher than in the same period in 2009. Lastly, the average bid-ask spread in bond prices rose to 61 basis points in December 2009, from 56 basis points in December 2008.

The main characteristic of activities in the primary market for government securities in 2009 was the significant increase in the funds raised. The value of securities issued was €78 billion, compared with €43 billion in 2008 (see Table II.24). This is related with a wider fiscal deficit and increased amortization payments.[114] In January-February 2010, the Greek government issued Treasury bills and bonds with a maturity of five years amounting €13.7 billion.[115]

Chart II.29 Greek government paper yield curves

(yields in percentages per annum)



Source: Bank of Greece.

In 2009, the interest rates of bond issues were higher than in the pre-crisis period, but lower than in 2008. Overall, the average cost of government borrowing fell slightly to 4.4% in 2009 (2008: 4.6%), although the interest rates on the issues of the last quarter moved up, a development than continued in the January-February 2010 period.

With regard to the characteristics of new issues in 2009, the average maturity of securities (6.9 years) was significantly lower compared with 2008 (about 11 years), while the bulk of new

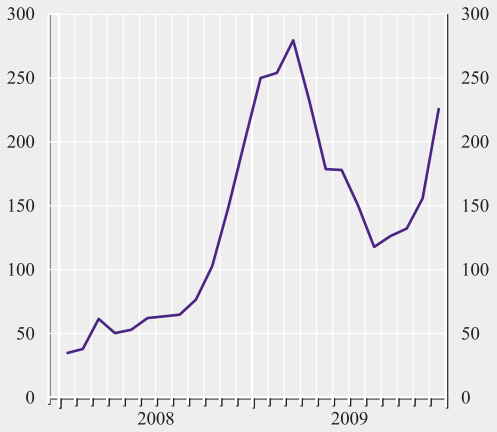
113 According to a recent EU study (*European Economy*, "Determinants of intra-euro area government bond spreads during the financial crisis", Economic Papers, 388, November 2009), government bond yield spreads in the euro area are related to the general risk level in the global economy and the fiscal position of Member States. Similar assessments are made in a paper prepared by the IMF (IMF, Working Paper 09/222 "Euro area sovereign risk during the crisis", October 2009). Moreover, the findings of Manganelli and Wolswijk ("What drives spreads in the euro area government bond market?", *Economic Policy*, 24 (58), April 2009, p. 191-240) establish an important relationship between Member States' bond yield spreads, on the one hand, and ECB interest rates and sovereign debt ratings, on the other. For a more detailed presentation of developments in Greek government bonds and the factors influencing their yield, see Bank of Greece, *Monetary Policy 2009 - Interim Report*, October 2009, and OECD, "What drives sovereign risk premiums? An analysis of recent evidence from the euro area", OECD Economics Department Working Paper no. 718, 2009.

114 Amortisation payments were about €35 billion.

115 This amount includes a variable interest-rate bond issued through private placement.

Chart II.30 10-year government bond yield spreads vis-à-vis Germany (January 2008 - December 2009)

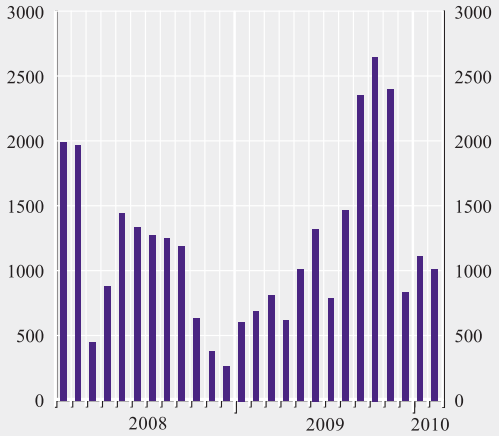
(average monthly bond yield spread)



Source: Bank of Greece.

Chart II.31 Average daily value of transactions in the Electronic Secondary Securities Market (HDAT) (January 2008-February 2010)

(million euro)



Source: Bank of Greece.

issues was in the first months of 2009, compared with a more even distribution in 2008. Finally, investors' interest was high, mainly owing to increased yields, as bids significantly exceeded demand in auctions for all maturities. As a result, the relevant coverage ratio was 5.2 (2008: 3.1).

Table II.24 Greek government paper issues

	2008			2009		
Type of security	Million euro	Percentage of total		Million euro	Percentage of total	
Treasury bills	*1,874*	*4.3*		*16,877*	*21.5*	
Bonds[1]	*41,515*	*95.7*	*100.0*	*61,483*	*78.5*	*100.0*
3-year	9,890		23.8	14,612		23.8
4-year	-		-	5,808		9.4
5-year	5,822		14.0	17,889		29.1
8-year*	5,600		13.5	-		-
10-year	8,439		20.3	16,235		26.4
15-year	3,457		8.3	6,939		-
23-year	3,966		9.6	-		-
30-year	3,741		9.0	-		-
50-year*	600		1.4	-		-
Total	**43,389**	**100.00**	**-**	**78,360**	**100.00**	**-**

Source: Ministry of Finance.
1 Reoopenings of past issues have been classified on the basis of their initial (rather than residual) maturity.
* Issued through private placement.

5.6 THE STOCK MARKET

The main developments in the Athens Exchange (Athex) in 2009 were the rise in share prices, which was an international concurrence, and the significant raising of funds, almost entirely by banks. Prices started falling in October 2009, a development that intensified at end-2009 and continued in January-February 2010.

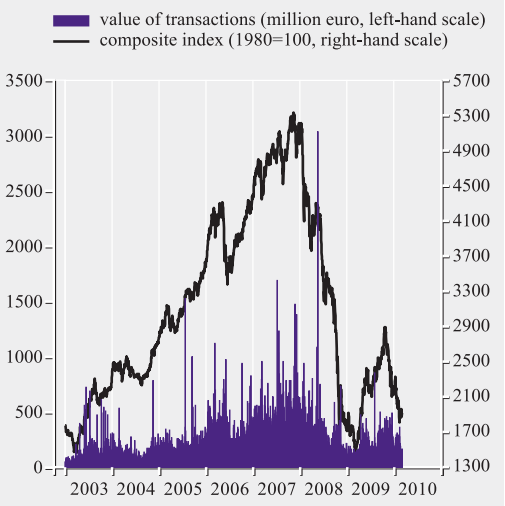
Between end-December 2008 and end-December 2009, the Athex composite share price index rose by 22.3% (see Chart II.32).[116] This was essentially driven by the impressive rise in share prices between early March and end-October 2009, while in the first two and the last three months of 2009, sharp downward trends were observed, which continued in January-February 2010.

In more detail, in January-October 2009, changes in Athex share prices reflected international developments. The downward trends early in the year were due to the risk aversion of investors internationally (that had started in 2008), as a result of the persisting high uncertainty regarding the impact of the crisis on global economy. The ensuing rise can be attributed to improved investor confidence, as there were growing indications that the decline in economic activity in the USA and Europe had been milder than expected, while corporate profitability showed a relative improvement.[117] In the last quarter of 2009 however, changes in the Athex share prices followed a different path compared with other developed markets, as investors expressed strong concerns over the deterioration of fiscal aggregates in the Greek economy. This development is also reflected in the net disinvestmens amounting to some €370 million made by foreign investors (mainly institutional investors) during that period.[118]

As a result of developments in the last quarter of the year, the performance of the Athex composite share price index lagged behind in 2009 compared with the Dow Jones Euro Stoxx index (23.4%) and the price indices of most

Chart II.32 Athens Exchange: composite share price index and value of transactions (January 2003-February 2010)

(daily data)



Source: Athens Exchange.

stock markets in the euro area[119] and in the USA (S&P 500: 23.5%). These trends continued during the first two months of 2010 (Athex composite share price index: -10.8%, Dow Jones Euro Stoxx: -4.8%, S&P 500: -0.6%).

The valuation of Athex shares, on the basis of the (after tax) P/E ratio (though being much higher at end-2009 (12.2) than at end-2008 (7.4)), remains at relatively low levels and lags behind the corresponding ratio for the Dow Jones Euro Stoxx broad index for the euro area.

The average daily value of transactions in the Athex in 2009 (€205 million) fell by 35.3% compared with 2008 (see Chart II.32), i.e. by about the same percentage as the average value of the Athex composite share price index,

116 It is noted, however, that the average value of the Athex composite share price index in 2009 was 35.6% lower than in 2008.
117 Net profits (after tax) of Athex-listed companies declined in January-September 2009 by about 26% against the same period in 2008. In the first half of 2009, the respective share was 39%.
118 However, despite these outflows, inflows of funds from foreign investors in 2009 amounted to about €1 billion; thus, their participation in total market capitalisation rose to 48.5% at end-December 2009 (December 2008: 47,8%).
119 The rise in the Athex composite share price index was the tenth largest among representative price indices in the euro area.

Table II.25 Fund-raising through the Athens Exchange

	Number of firms		Funds raised (million euro)[1]	
	2008	2009*	2008	2009*
Listed firms	13	18	622.7	4253.1
Newly listed firms	9	3	8.6	2.1
Total	**22**	**21**	**631.3**	**4255.2**
Financial sector−Banks	-	6	0.0	3,823.6
Non-financial sector	22	15	631.3	431.6

Sources: Athens Exchange and Bank of Greece.
* Provisional data.
1 Capital increases through public offerings and private placements. Subscriptions to the capital increase are entered on the last day of the public offering period.

a trend that continued in 2010. The total amount of funds raised through the stock market recorded an impressive increase (2009: €4,255 million, 2008: €631 million – see Table II.25), a development solely attributable to the funds raised by Greek banks.

In 2009, bank share prices moved up, despite the decline in bank profitability[120] and the sale of shares by investors in the last two months of 2009 due to their concerns over the potential impact on the banking sector of a delay in the correction of Greece's fiscal imbalances. At end-December 2009, bank share prices were 40.1% higher than at end-December 2008.[121] However, this performance was lower than that of euro area bank share prices (48.9%), although Greek banks' fundamentals remained satisfactory. Bank share prices were subject to pressure in the first two months of 2010.

5.7 DEVELOPMENTS IN THE BANKING SECTOR IN THE FIRST NINE MONTHS OF 2009[122]

The main developments in the banking sector in January-September 2009 were a worsening in the quality of the loan portfolio, a drop in profitability, sustained satisfactory liquidity ratios (chiefly as a result of the provision of liquidity by the ECB) and an improvement in banks' capital adequacy. The first indications about all key aggregates of banks at end-2009 are negative, as shown by the results published so far by a small number of banks for the fourth quarter of 2009.

In more detail, in January-September 2009, pre-tax profits of Athex-listed banks dropped considerably year-on-year, both at bank (-38.6%) and group level (-42.3%), to €1.1 billion and €2.1 billion, respectively (see Table II.26). The international financial crisis had a lagged effect on the Greek economy and brought to the fore pre-existing structural weaknesses and macroeconomic imbalances. As a result, credit expansion to the private sector (households and firms) slowed down considerably during 2009, directly affecting banks' interest and commission income (see Table II.26).[123] Moreover, the deterioration in the financial condition of households and firms and the concomitant increases in non-per-

120 As indicated by data covering the January-September 2009 period, net profits of Athex-listed banking groups declined by 42.3% against the same period in 2008. For more details on developments in the banking sector, see Section 5.7 of this chapter.
121 The average daily value of transactions in bank shares, which accounts for almost half of the total value of transactions in Athex, fell by about 27% in 2009 compared with 2008, which is significantly lower than the decline in the average level of bank share prices (44.6%).
122 By the date this Report was completed, only a small number of banks had published results for the fourth quarter of 2009. As a result, this analysis refers to data for the third quarter of 2009.
123 It should be noted that income from this business accounts for about four fifths of banks' and banking groups' total income.

Table II.26 Financial results of Greek commercial banks and banking groups

(amounts in million euro)

	Banks			Banking groups		
	Jan.-Sept. 2008	Jan.-Sept. 2009	Change (%)	Jan.-Sept. 2008	Jan.-Sept. 2009	Change (%)
Operating income	**7,021**	**7,884**	**12.3**	**11,078**	**11,677**	**5.4**
Net interest income	5,878	5,730	-2.5	8,302	8,321	0.2
– Interest income	17,197	14,511	-15.6	20,901	18,177	-13.0
– Interest expenses	11,319	8,780	-22.4	12,599	9,855	-21.8
Net non-interest income	1,143	2,153	88.4	2,776	3,356	20.9
– Net fee income	976	908	-7	1,931	1,561	-19.1
– Income from financial operations	-285	956	-	169	1,326	682.9
– Other income	452	289	-36.0	676	468	-30.8
Operating costs	**3,966**	**4,156**	**4.8**	**5,899**	**6,065**	**2.8**
Staff costs	2,358	2,477	5.1	3,358	3,444	2.6
Administrative costs	1,344	1,387	3.2	2,075	2,095	1.0
Depreciation	249	274	9.8	433	487	12.3
Other costs	15	18	18.1	32	39	22.9
Net income (operating income less costs)	**3,055**	**3,727**	**22.0**	**5,180**	**5,611**	**8.3**
Provisions for credit risk	1,252	2,620	109.3	1,525	3,512	130.3
Pre-tax profits	**1,803**	**1,108**	**-38.6**	**3,671**	**2,118**	**-42.3**
Taxes	424	343	-19.1	754	564	-25.2
After tax profits	**1,379**	**765**	**-44.5**	**2,916**	**1,554**	**-46.7**

Source: Financial statements of Greek commercial banks with shares listed on the Athens Exchange.

forming loans (NPLs) led to higher provisioning for credit risk. This decline in profitability in the January-September 2009 period was mitigated by profits from financial operations and valuation gains on securities, but these sources of income are highly volatile and such profits may not be repeated.

These developments inevitably affected the key profitability ratios, such as the net interest rate margin, return on assets (ROA) and return on equity (ROE).[124] At bank level, the net interest rate margin fell below 2% and ROA halved (see Table II.27). Banking groups' corresponding ratios also deteriorated considerably due to the adverse economic conditions prevailing in the countries where Greek banks are active. However, a small improvement was observed in the efficiency ratio (operating costs to operating income).

As already mentioned, the quality of Greek banks' portfolios worsened in the January-September 2009 period. The ratio of non-performing loans to total loans (NPL ratio)[125] rose to 7.2% in September 2009, from 5% in December 2008; the increase in the NPL ratio was broadly based on all categories of loans (see Table II.27). Another negative development was a decline in the coverage ratio (September 2009: 41.9%, December 2008: 48.9%), which calls for a considerable increase in the stock of provisions for credit risk, taking also into account the impact on banks' loan portfolio from the projected negative economic growth

124 The net interest rate margin is calculated as the ratio of net interest income to assets, while ROE and return on risk-weighted assets are calculated as the ratios of pre-tax profits to equity and to risk-weighted assets, respectively.

125 However, loan write-offs/write-downs came to €1 billion in January-September 2009 from €1.7 billion in 2008 as a whole.

Table II.27 Key vulnerability and shock-absorption capacity indicators of Greek commercial banks and banking groups

(percentages)

	Banks		Banking groups	
	December 2008	September 2009	December 2008	September 2009
Asset quality[1]				
Non-performing loans (NPLs) - total	5.0	7.2		
– Housing loans	5.3	6.9		
– Consumer loans	8.2	11.7		
– Business loans	4.3	6,4		
Accumulated provisions over NPLs	48.9	41.9		
Ratio of net NPLs to regulatory own funds	26.1	34.5		
Liquidity				
Loan-to-deposit ratio	108.4	104.7	115.1	113.4
Liquid asset ratio	19.0	24.7		
Asset/liability maturity mismatch ratio	-7.1	0.2		
Capital adequacy				
Capital adequacy ratio	10.7	13.2	9.4	11.7
Tier I ratio	8.7	11.7	7.9	10.6
	Jan.-Sept. 2008	Jan.-Sept. 2009	Jan.-Sept. 2008	Jan.-Sept. 2009
Profitability[2]				
Net interest margin	2.2	1.9	2.9	2.6
Cost-to-income ratio	56.5	52.7	55.8	51.9
Return on assets - ROA (after tax)	0.5	0.2	1.0	0.5
Return on equity - ROE (after tax)	8.9	4.7	14.6	7.5

Source: Bank of Greece and financial statements of commercial banks and banking groups.
1 NPL data on international activities are not comparable and therefore the NPL ratio on a consolidated basis is not reported.
2 Profitability data refer only to Athex-listed Greek commercial banks and their groups.

rate in Greece. This view is also supported by the fact that, during the same period, the ratio of net NPLs (i.e. NPLs less accumulated provisions for credit risk) to total supervisory capital increased (see Table II.27). According to the first indications for end-2009, the quality of banks' loan portfolio has deteriorated further.

During the period under review, an improvement was observed in liquidity and market risk, but this is mainly connected with technical factors. Specifically, although Greek banks continued to benefit from a strong deposit base and to maintain a satisfactory loan-to-deposit ratio (banks: 104.7%, banking groups: 113.4% – see Table II.27),[126] they should not lose sight of the fact that liquidity sources are particularly tight. In addition to deposits and enhanced liquidity drawn under Law 3723/2008, Greek banks also relied on ECB for obtaining liquidity. Given that the provision of unlimited low-cost liquidity by the ECB will be phased out, Greek banks should diversify their funding sources.

Turning to market risk, certain banks liquidated part of their bond portfolio in the third quarter of 2009 and capital market volatility declined, thus contributing to lowering their exposure to market risk (leading to lower capital requirement for market risk).

126 Supervisory liquidity ratios also improved (see Table II.27).

In January-September 2009, banks' supervisory own funds improved in terms of both quantity and quality. At end-September 2009, the capital adequacy ratio (CAR) and the Tier I ratio stood at 13.2% and 11.7% respectively for banks, and at 11.7% and 10.6% respectively for banking groups (see Table II.27). Underlying this were recapitalisation through the issuance of preference shares under Law 3723/2008, capital increases and the utilisation of retained earnings from non-payment of dividends. Moreover, the Greek banking groups' leverage ratio[127] remained low (15.1 at end-September 2009).

Regarding the contribution of Law 3723/2008 to Greek banks' liquidity and capital adequacy, by the end of 2009 banks had achieved recapitalisation of €3.8 billion through the issuance of preference shares, had drawn liquidity of €4.6 billion using Greek government securities as collateral and had obtained loans of €1 billion using State guarantees.[128]

For 2010, in formulating their business strategy, banks should seriously take into account the forthcoming changes in the international regulatory framework. Under the new regulatory and supervisory framework, banks will need more funds and liquidity, as the new framework will, among other things:

- make the leverage ratio a supplementary measure for determining capital requirements;
- improve the quality and transparency of Tier I capital, which will have to consist mainly of common shares and retained profit;
- require the formation of counter-cyclical capital buffers, in the form of additional capital or provisions for credit risk that would rise at times of stronger economic growth and fall at times of economic downturn; and
- introduce minimum short-term and long-term liquidity requirements. This means that credit institutions will have to not only maintain a minimum level of readily marketable assets, but also diversify their liquidity sources and keep a balanced structure of potential funding sources.

Therefore, at the current phase, as the key aggregates determining their resilience is deteriorating, banks should maintain substantial capital buffers (above the supervisory minimums), set aside the provisions required, use their profits prudently and flexibly manage alternative funding sources.

127 The leverage ratio is calculated as the ratio of total assets to equity.

128 Taking advantage of this measure, banks issued loans carrying a guarantee of the Greek State with a value of €3 billion. In the last quarter of 2009, loans of €2 billion matured without being refinanced.

ANNEX CHAPTER II
THE RESIDENTIAL PROPERTY MARKET: DEVELOPMENTS AND OUTLOOK

I RESIDENTIAL PROPERTY PRICES

The positive rates of change in apartment prices in Greece started decelerating in the beginning of 2007, a trend that continued up to end-2008. Thereafter, and throughout 2009, the rate of change turned negative for both "new" and "old" apartments.[1] In greater detail, on the basis of data collected by the banks, nominal prices for all types of apartments are estimated to have decreased by 3.9% in 2009 (Q1: -3.4%, Q2: -2.6%, Q3: -5.0% and Q4: -4.6%). The decrease was slightly larger for old apartments (4.9%) than for new ones (2.4%), which seems to reflect the relatively larger resilience of new-builds (see Table A).

The evolution of residential prices was quite similar across all geographical areas (Athens, Thessaloniki, other cities), exhibiting a considerable deceleration of the positive rates of change up to end-2008 and negative rates thereafter. For 2009 as a whole, apartment prices are estimated to have decreased by an

1 In the context of the initiative taken by the Bank of Greece to systematically monitor and analyse developments in the real estate market, new price indices were released recently, also covering the number and the volume of transactions. To compile these indices, the Bank of Greece uses the detailed data it collects from all credit institutions operating in Greece. In greater detail, on the basis of the Bank of Greece Governor's Act 2610/31 October 2008 on "Reporting by credit institutions of data on residential property financed or used as collateral for loans extended by credit institutions", the Real Estate Market Analysis Section of the Bank of Greece collects from banks data on residential property. Among others, these data include banks' estimates on the current market value of all residential property, as well as information on their quality features. A total of 440,000 estimates were reported up to end-January 2010 (70.3% apartments, 18.7 detached houses, 5.0% maisonettes, 4.8% plots). For more details (in Greek) see "Statistical data and real estate price indices: the new initiative of the Bank of Greece" in *The real estate market: evolution and prospects*, conference hosted by the Bank of Greece on 29 April 2009.

Table A Index of apartment prices by age

Period		Total			New (up to 5 years old)			Old (5 years old and above)		
			Percentage change over:			Percentage change over:			Percentage change over:	
		Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year
2006		94.4	...	...	93.3	...	...	95.1	...	...
2007		100.0	5.9	5.9	100.0	7.2	7.2	100.0	5.2	5.2
2008		101.7	1.7	1.7	102.3	2.3	2.3	101.3	1.3	1.3
2009*		97.7	-3.9	-3.9	99.8	-2.4	-2.4	96.4	-4.9	-4.9
2006	I	90.7	...	...	92.1	...	...	89.8	...	...
	II	93.3	2.9	...	92.3	0.2	...	93.9	4.6	...
	III	94.8	1.6	...	91.7	-0.6	...	96.7	2.9	...
	IV	98.8	4.2	...	97.0	5.7	...	99.9	3.3	...
2007	I	98.6	-0.2	8.7	98.0	1.1	6.4	98.9	-1.0	10.1
	II	99.6	1.1	6.8	100.1	2.2	8.5	99.3	0.4	5.7
	III	100.7	1.0	6.2	100.2	0.1	9.2	100.9	1.6	4.4
	IV	101.2	0.5	2.4	101.6	1.4	4.8	100.9	-0.1	1.0
2008	I	101.4	0.2	2.9	101.3	-0.3	3.4	101.5	0.6	2.6
	II	101.4	0.0	1.7	101.9	0.6	1.7	101.0	-0.4	1.7
	III	102.2	0.8	1.6	103.0	1.1	2.8	101.7	0.7	0.8
	IV	101.8	-0.4	0.6	103.0	0.0	1.3	101.0	-0.7	0.1
2009	I*	98.0	-3.7	-3.4	97.6	-5.2	-3.6	98.2	-2.8	-3.3
	II*	98.7	0.8	-2.6	101.5	4.0	-0.3	97.0	-1.2	-4.0
	III*	97.1	-1.6	-5.0	100.4	-1.1	-2.5	95.1	-2.0	-6.5
	IV*	97.1	-0.1	-4.6	99.8	-0.6	-3.1	95.3	0.3	-5.6

Source: Bank of Greece, data reported by credit institutions.
* Provisional data.

Table B Index of apartment prices by geographical area

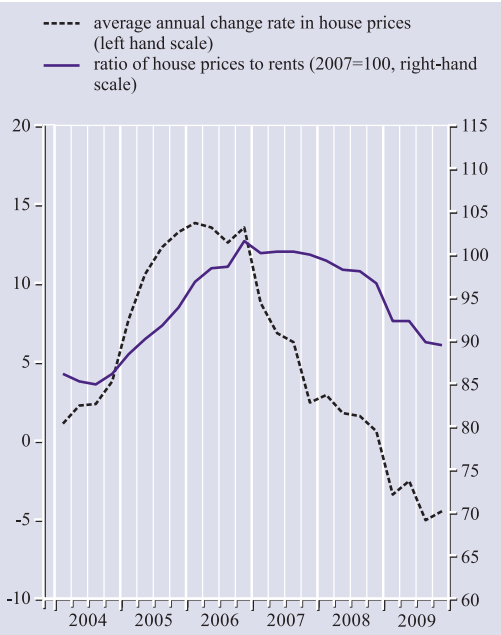
Period		Athens			Thessaloniki			Other cities			Other areas		
			Percentage change over:			Percentage change over:			Percentage change over:			Percentage change over:	
		Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year
2006		94.2	...	...	93.4	...	...	94.0	...	...	95.6	...	...
2007		100.0	6.2	6.2	100.0	7.0	7.0	100.0	6.3	6.3	100.0	4.6	4.6
2008		100.9	0.9	0.9	101.5	1.5	1.5	101.8	1.8	1.8	103.3	3.3	3.3
2009*		95.9	-5.0	-5.0	95.1	-6.2	-6.2	98.9	-2.9	-2.9	101.5	-1.7	-1.7
2006	I	91.2	...	...	86.7	...	...	89.5	...	...	92.4	...	...
	II	93.7	2.7	...	91.0	5.0	...	91.8	2.6	...	94.9	2.7	...
	III	94.1	0.5	...	95.4	4.8	...	95.3	3.8	...	95.4	0.5	...
	IV	97.6	3.7	...	100.7	5.5	...	99.5	4.4	...	99.7	4.5	...
2007	I	99.0	1.4	8.5	99.1	-1.6	14.3	97.9	-1.6	9.4	98.1	-1.6	6.1
	II	98.9	-0.1	5.6	99.7	0.6	9.5	100.2	2.4	9.2	100.4	2.4	5.8
	III	100.7	1.7	7.0	99.9	0.2	4.7	100.8	0.6	5.8	100.8	0.4	5.7
	IV	101.4	0.7	3.9	101.4	1.6	0.7	101.0	0.3	1.5	100.7	-0.1	1.0
2008	I	101.3	-0.1	2.3	101.6	0.2	2.5	102.2	1.1	4.4	100.8	0.1	2.8
	II	101.4	0.1	2.5	100.9	-0.7	1.2	100.9	-1.3	0.7	101.9	1.1	1.5
	III	100.3	-1.1	-0.3	100.7	-0.2	0.8	102.6	1.7	1.8	106.4	4.4	5.6
	IV	100.6	0.3	-0.8	102.7	2.1	1.3	101.5	-1.1	0.5	104.0	-2.3	3.3
2009	I*	96.7	-3.9	-4.5	95.2	-7.3	-6.3	99.0	-2.5	-3.2	100.7	-3.1	0.0
	II*	96.4	-0.3	-4.9	94.3	-0.9	-6.5	99.2	0.2	-1.7	104.9	4.2	2.9
	III*	94.9	-1.6	-5.4	95.7	1.5	-5.0	98.5	-0.7	-4.0	101.0	-3.7	-5.1
	IV*	95.5	0.6	-5.1	95.3	-0.3	-7.2	98.8	0.2	-2.7	99.4	-1.6	-4.4

Source: Bank of Greece, data reported by credit institutions.
* Provisional data.

annual average 5.0% in Athens, 6.2% in Thessaloniki, 2.9% in other large cities and 1.7% in other areas (see Table B).[2]

On the basis of available data, the Greek residential property market is characterised by a relative price resilience.[3] At the same time, it is estimated that the Greek market does not exhibit any significant signs of overvaluation, given that the price-to-rent ratio has been decelerating over the past three years (see Chart).[4] This was the result of the steady deceleration of the rates of change in residential property prices after 2006, as well as of the relative stability of the rate of change in rents (average annual percentage change: 4.5% in 2007, 3.9% in 2008 and 3.6% in 2009 – see Table C). The price-to-rent ratio is expected to keep decelerating (at a moderate pace) also in the next quarters, leading to a further small drop of prices.

House price-to-rent ratio



Source: Bank of Greece, data collected by credit institutions.

2 SUPPLY, DEMAND AND NUMBER OF TRANSACTIONS

In the past two years the Greek real estate market has been characterised by oversupply and some cautiousness from the side of demand. Households are cautious because of the high uncertainty surrounding employment and future incomes, which is aggravated by the general economic outlook and the fiscal problems of the country. Furthermore, households expect that residential prices will drop in the future, which makes them postpone home purchase decisions. On the other hand, the current financial crisis has made banks cautious and selective in granting new housing loans, a development which has also contributed in lowering demand for residential property.[5]

On the supply side, the surplus that has been created in the past years seems to be gradually absorbed, despite the relative cautiousness from the side of demand. The deceleration of private construction activity in 2007 and 2008 was much faster than the respective decrease in the number of real estate transactions. The number of new building permits dropped by 5.3% in 2007 and 15.6% in 2008, while the number of real estate transactions

2 In the past decade, the Bank of Greece has been publishing the residential property price index for "other urban areas". The index includes a limited number of cities, it is available for the period since Q4 1993 and is compiled on the basis of data collected by Bank of Greece branches (mostly from real estate agencies). On the basis of this index, residential prices decreased in the first nine months of 2009 at an average annual rate of 1.7%, against 2.6% in 2008 and 3.8% in 2007.

3 This is probably related to the special features of the residential property market: the high share of owner-occupied housing (currently over 80%), low mobility and low frequency of resale, very low number of transactions in relation to available stock, high cost of transactions, the considerable impact of tax measures as well as the relatively large number of construction companies. Furthermore, the real estate market is quite heterogeneous (from residential property to professional premises) and this creates additional problems in estimating the rate of change in their prices.

4 This ratio is usually examined together with other indicators (e.g. interest rates, yields on alternative investment, economic conjuncture) in order to estimate a possible overvaluation of the current value of real estate.

5 Lower demand is also shown in the steady deceleration of the rate of increase in housing loans, especially after the recent financial crisis. In greater detail, despite the decrease in interest rates on housing loans since November 2008, the annual rate of increase in the outstanding balance of bank loans to households for house purchase dropped to 3.7% at end-2009, from 11.5% at end-2008 and 21.9% at end-2007.

Table C Summary table of key short-term indicators for the real estate market

Indicators	Average annual percentage change						
	2004	2005	2006	2007	2008	2009	2010
1. Indices of prices of dwellings (BoG) and rents (NSSG)							
1.1 New index of apartments prices by age and geographical area (New series)							
a. All apartments (Greece)	-	-	-	5.9	1.7	-3.9	...
a1. New (up to 5 years old)	-	-	-	7.2	2.3	-2.4	...
a2. Old (over 5 years old)	-	-	-	5.2	1.3	-4.9	...
b1. Athens	-	-	-	6.2	0.9	-5.0	...
b2. Thessaloniki	-	-	-	7.0	1.5	-6.2	...
b3. Other cities	-	-	-	6.3	1.8	-2.9	...
b4. Other areas	-	-	-	4.6	3.3	-1.7	...
1.2 Indices of prices of dwellings (historical series)							
a. Urban areas	2.3	10.9	12.4	5.1	1.7	-3.1 (Q3)	...
a1. Athens	0.3	8.6	11.7	6.2	0.9	-5.0	...
b1. Other urban areas[1]	4.7	13.4	13.0	3.8	2.6	-0.7 (Q3)	...
1.3 Price index of rents	5.3	4.2	4.4	4.5	3.9	3.6	3.0 (Feb./Feb.)
1.4 Price-to-rent ratio (2007=100)[2]	85.5	90.9	98.7	100.0	97.9	90.8	...
2. Indices of residential property transactions with MFI intermediation (BoG)							
2.1 Number of transactions	-	-	-	36.8	-21.7	-39.6	...
2.2 Volume of transactions (in square metres)	-	-	-	36.6	-23.5	-41.2	...
2.3 Value of transactions	-	-	-	41.1	-20.0	-42.1	...
3. Construction costs indices of (new) residential buildings (NSSG)							
3.1 Price index of total cost	3.2	3.4	4.3	4.6	5.1	-0.3	
3.2 Price index of work categories or producer's	2.4	2.6	2.9	2.8	4.2	-0.2	...
3.3 Price index of labour cost	2.3	3.1	2.6	2.4	3.3	0.3	...
3.4 Price index of construction material	3.9	3.6	5.6	6.3	6.4	-0.7	1.5 (Jan./Jan.)
4. Private building activity (NSSG)							
4.1 Greece, total							
a. Number of building permits	-1.4	17.6	-14.4	-5.3	-15.6	-14.3	...
b. Surface of buildings (in square metres)	-2.3	41.8	-24.4	-7.5	-18.1	-25.4	...
c. Volume of buildings (in cubic metres)	-3.4	35.2	-19.5	-5.0	-17.1	-27.6	...
4.2 Athens							
a. Number of building permits	-6.2	29.4	-14.9	-4.7	-23.2	-17.2	...
b. Surface of buildings (in square metres)	-8.5	54.2	-24.6	-14.3	-24.5	-22.3	...
c. Volume of buildings (in cubic metres)	-10.6	49.8	-20.2	-13.3	-24.1	-21.3	...

Sources: BoG: Bank of Greece, NSSG: National Statistical Service of Greece, IOBE: Foundation for Economic and Industrial Research, TCG: Technical Chamber of Greece.
1 Data collected by the branches of the Bank of Greece, mainly from real estate agencies.
2 Absolute prices.

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Table C Summary table of key short-term indicators for the real estate market *(continued)*

Indicators	Average annual percentage change						
	2004	2005	2006	2007	2008	2009	2010
5. Construction activity							
5.1 Cement production (volume, NSSG)	-2.3	2.4	3.1	-9.2	-3.1	-21.4	
5.2 Public investment programme disbursements (in euros, BG)	11.7	-21.0	8.9	7.6	9.3	-2.8	-99.8 (Jan./Jan.)
5.3 Production indices in construction (NSSG)							
a. General index	-15.8	-38.8	3.9	15.1	2.8	-11.5 (9mon.)	...
b. Construction of buildings	-16.5	-15.3	-9.2	6.9	0.0	-21.2 (9mon.)	...
c. Civil engineering projects	-15.5	-49.9	18.1	21.8	4.8	-5.0 (9mon.)	...
5.4 Civil engineer's fees (TCG)							
a. Total fees	-	-	-5.3	23.5	6.2	-16.2	1.9 (Jan.-Feb.)
b. Building permit fees	-	-	-8.4	19.0	11.0	-14.5	-1.1 (Jan.-Feb.)
c. Consultancy fees	-	-	1.5	32.5	-2.4	-19.6	8.3 (Jan.-Feb.)
6. Expectations (IOBE)							
6.1 Index of business expectations in construction (private activity)	-29.1	-22.7	44.6	1.5	3.0	-31.4	-29.0 (Feb./Feb.)
a. Total private construction	-16.4	-11.7	12.8	1.9	-8.4	-43.2	44.4 (Feb./Feb.)
b. Dwellings	-3.2	-9.0	27.6	-14.0	-28.4	-32.4	-67.7 (Feb./Feb.)
c. Other buildings	-20.2	-12.5	2.9	13.4	0.9	-46.8	105.5 (Feb./Feb.)
6.2 Months of assured production production in construction[2]							
a. Total construction	12.6	13.9	15.7	16.8	17.3	15.9	12.0 (Feb.)
b. Dwellings	12.0	11.3	14.7	15.4	11.7	11.0	7.8 (Feb.)
c. Other buildings	10.0	8.7	9.3	10.1	9.8	8.4	6.6 (Feb.)
d. Public works	13.4	15.9	18.4	19.5	21.1	19.8	14.9 (Feb.)
6.3 Activity in relation to previous quarter[3]							
a. Total construction	8.0	-27.3	11.8	10.2	10.0	-16.0	-42.0 (Feb.)
b. Dwellings	6.0	-2.0	24.0	-11.0	-22.0	-31.0	-74.0 (Feb.)
6.4 Planned future activity[3]							
a. Total construction	-25.0	-58.0	-45.0	-33.0	-29.0	-43.0	-63.0 (Feb.)
b. Dwellings	-17.0	-41.0	-22.0	-22.0	-39.0	-52.0	-93.0 (Feb.)
7. Investment in construction (NSSG) and capital inflows (BoG)							
7.1 Investment in construction[4]							
a. Total construction	-2.9	-6.2	14.3	-5.3	-19.1	-11.3	...
b. Dwellings	-0.9	-0.7	29.6	-8.6	-29.1	-21.7	...
7.2 Net capital inflows from abroad for property purchasing in Greece	73.0	48.0	55.4	66.5	-58.2	-24.4	-47.5 (Jan./Jan.)
8. Outstanding balances of loans from domestic MFIs (BoG)[5]							
a. Outstanding balances of loans to households	30.4	31.0	25.7	22.4	12.8	3.1	2.9 (Jan.)
b. Outstanding balances of housing loans to households	27.6	33.0	26.3	21.9	11.5	3.7	3.6 (Jan.)
9. Interest rates of housing loans (BoG)[2]							
a. Interest rates of new housing loans[6]	4.8	4.3	4.7	4.9	5.3	4.1	4.9 (Jan.)
b. Interest rates on the outstanding amounts of housing loans with initial maturity over 5 years	5.1	4.8	4.9	5.1	5.1	4.3	3.9 (Jan.)

Sources: BoG: Bank of Greece, NSSG: National Statistical Service of Greece, IOBE: Foundation for Economic and Industrial Research, TCG: Technical Chamber of Greece.
2 Absolute prices.
3 Difference between weighted percentages of positive and negative replies.
4 Constant prices.
5 Percenatge change over previous year, end of period. Loans and securitised loans are included.
6 Including charges other than interest (handling fees, mortgage registration fees, etc.).

decreased by 3.0% in 2007 and 5.8% in 2008.[6] On the basis of permits issued, the volume of building activity decelerated by 5.0% in 2007, 17.1% in 2008 and 27.6% in 2009 (see Table C). It is worth noting that one of the main characteristics of the real estate market is the significant time lag by which supply responds to the evolution of demand (mainly for objective reasons: lack of building plots, time required to issue a building permit and complete the construction, financing issues etc.).

It is estimated that the gradual absorption of excess stock in the real estate market was maintained also in 2009. For areas that have already been included in the Hellenic National Cadastre, the number of transactions registered with "Ktimatologio SA" decreased by 16.0% in 2009 (Q1: 20.6%, Q2: 27.4%, Q3: 9.5% and Q4: 6.9%). Furthermore, data collected by the Association of Notaries Public of Athens, Piraeus, the Aegean and the Dodecanese show a clear decline (about 40%) of total real estate transactions. This decline was relatively larger for new residential property of over 100 sq.m. (usually in expensive areas), than for older and smaller apartments, a large number of which is currently purchased by economic migrants.[7]

The number of transactions in residential property carried out with the intermediation of the banking system dropped by 39.6% in 2009, against a 21.7% decrease in 2008 (data collected by credit institutions – see Table D). The volume index decelerated slightly more (41.2% in 2009, on the basis of total square metres) and the same applies to the total value index (42.1%). The fact that the volume and the value indices dropped slightly faster than the number of transactions reflects a shift of households towards smaller and lower-value apartments. Furthermore, the considerably larger decrease in the number of transactions in residential property effected through the intermediation of the banking system (amid the financial crisis) in relation to the total number of real estate transactions (on the basis of information provided by Ktimatologio SA) is in line with the findings of a survey carried out among real estate agencies, which point to an increase in the share of transactions in cash and of the weight of cash in the total financing of the real estate market.

3 EXPECTATIONS AND OUTLOOK

According to the survey carried out by the Real Estate Market Analysis Section of the Bank of Greece, the conditions in the housing market showed a small improvement in the first three quarters of 2009.[8] However, the findings of the survey for the fourth quarter of 2009 show a slight worsening of expectations, as registered by the respondents (experts with real estate agencies). More than 25% of respondents replied that the conditions in the housing market will worsen somehow in the first quarter of 2010 and that the number of total transactions and prices will drop slightly. This somehow dimmer outlook seems to be related with uncertainty regarding the changes in real estate taxation (e.g. objective values, tax brackets) as well as the overall economic situation of the country (fiscal difficulties, structural changes, etc.).[9]

With the gradual normalisation of financial markets, the risk of an abrupt correction of

6 In greater detail, on the basis of data collected by the NSSG from notary public offices all over the country, the number of transactions in real estate dropped from 172,900 in 2006, to 167,700 in 2007 and 158,000 in 2008.

7 According to the same source, the purchase of holiday homes has dropped significantly in 2009 (by about 50% against the previous year). The same applies to the purchase of agricultural real estate (of less than 20,000 sq.m.). Purchases of agricultural real estate of over 20,000 sq.m. have been relatively subdued on the islands and the coastal parts of the country, but quite vivid in mountainous areas.

8 As regards prices, the share of respondents considering them "reasonable" dropped to 22% in Q4 2009 (Q3: 46%, Q2: 37% and Q1: 23%), while the share of those considering them high or very high remained almost unchanged (Q1: 77%, Q2: 63%, Q3: 54% and Q4: 56%).

9 The considerably lower expectations are also registered in the business expectations index in construction (including residential and other private and/or public construction), which showed an average annual decrease of 31.4% in 2009, against an increase of 3% in 2008 and 1.5% in 2007. In particular, according to IOBE's survey, the expectations of construction firms (active in residential property) decreased by 32.4% in 2009 (against 28.4% in 2008 and 14.0% in 2007), while the months of assured production came to 11.0 on average in 2009, from 11.7 in 2008 and 15.4 in 2007.

Table D Indicators of residential transactions

Period		Transactions			Volume of transactions (square metres)			Value of transactions		
			Percentage change over:			Percentage change over:			Percentage change over:	
		Number	Previous period	Previous year	Index (2007=100)	Previous period	Previous year	Index (2007=100)	Previous period	Previous year
2006		108,253	...	...	73.2	...	...	70.9	...	...
2007		148,125	36.8	36.8	100.0	36.6	36.6	100.0	41.1	41.1
2008		116,034	-21.7	-21.7	76.5	-23.5	-23.5	80.0	-20.0	-20.0
2009*		70,133	-39.6	-39.6	45.0	-41.2	-41.2	46.3	-42.1	-42.1
2006	I	22,500	...	...	62.5	...	...	55.8	...	...
	II	25,034	11.3	...	69.1	10.5	...	64.0	14.7	...
	III	27,251	8.9	...	72.7	5.2	...	71.4	11.6	...
	IV	33,467	22.8	...	88.5	21.8	...	92.3	29.2	...
2007	I	39,745	18.8	76.6	108.1	22.1	72.9	108.0	17.0	93.5
	II	38,824	-2.3	55.1	105.6	-2.3	52.8	105.8	-2.0	65.3
	III	32,660	-15.9	19.8	87.9	-16.7	20.9	86.2	-18.5	20.7
	IV	36,896	13.0	10.2	98.5	12.0	11.2	100.0	15.9	8.3
2008	I	32,008	-13.2	-19.5	85.9	-12.8	-20.5	87.8	-12.2	-18.6
	II	34,918	9.1	-10.1	91.2	6.2	-13.6	95.5	8.7	-9.8
	III	28,095	-19.5	-14.0	73.8	-19.1	-16.1	77.7	-18.6	-9.9
	IV	21,013	-25.2	-43.0	55.2	-25.1	-43.9	59.1	-23.9	-40.9
2009	I*	16,261	-22.6	-49.2	42.5	-23.0	-50.5	43.8	-25.9	-50.2
	II*	17,759	9.2	-49.1	46.2	8.5	-49.4	49.1	12.2	-48.6
	III*	15,618	-12.1	-44.4	39.8	-13.7	-46.0	40.8	-17.0	-47.5
	IV*	20,495	31.2	-2.5	51.5	29.2	-6.8	51.6	26.6	-12.7

Source: Bank of Greece, data reported by credit institutions.
* Provisional data.

prices in the Greek real estate market is removed, although the downward price pressures will most probably continue in the coming months. The intensity of these pressures will primarily depend on the general economic and financial conditions in Greece. The recovery of the real estate market in the next quarters is directly linked to households' expectations about employment and future incomes, the financing by the banking system and the general economic recovery. Clear signs of an effective handling of the fiscal and structural problems of the Greek economy will help warm up the real estate market. Lastly, the finalisation of pending issues relating to the taxation of real estate (objective values, tax brackets, taxation of large real estate, etc.) is also expected to have similar results, as these issues affect both supply and demand for residential property.[10]

10 The decrease in total residential construction cost in 2009 (for the first time in many years) may support investment initiatives taken by construction firms in the following months, as the replacement cost for real estate is restrained. The total construction cost for new residential property, as published by NSSG, decreased by 0.3% on an annual basis in 2009, against a 5.1% increase in 2008. The decrease in the building material price index (weight 56.7%) was even more pronounced, at 0.7%, against a 0.3% increase in the labour cost index (weight: 43.3%).

SPECIAL FEATURE I
FISCAL ADJUSTMENT ISSUES

I.A THE SIZE OF THE PUBLIC SECTOR

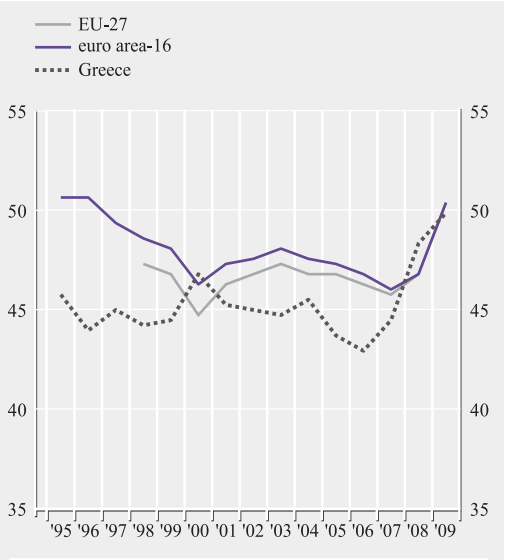
The financial crisis has brought to the fore the permanent structural weaknesses of the Greek economy, against the background of fiscal derailment. The structure of public revenue and expenditure (see 1.B below) greatly affects the evolution and sustainability of fiscal deficits and public debt.

Fiscal adjustment is of crucial importance and is related with the size of the public sector, i.e. the evolution of expenditure and revenue[1] of the general government over time. The aim of fiscal adjustment is not just to contain expenditure and increase revenue, but also to deal with structural problems and ineffective functions of the public sector, in order to enable a rational utilisation of public resources. In this effort, it is critical to effectively collect and manage revenues and contributions, so as to eliminate or, at least, drastically contain tax and contribution evasion, deal with corruption and red tape, upgrade the quality of public goods and services and facilitate entrepreneurship, i.e. factors that make a positive contribution to economic growth.

A review of the evolution of general government tax revenue and expenditure as a percentage of GDP shows that they have moved upwards over time, meaning that the public sector has grown. In Greece, public expenditure made up 20% of GDP[2] in the 1960s. In 1995 it came to about 46% of GDP and, according to provisional data, it is estimated to have reached 50% of GDP in 2009 (see Chart I.1), close to the euro area average (50.6% of GDP). This rise is primarily attributable to the evolution of transfer payments (mostly pensions) and the wage bill, as well as to interest payments (see Chart I.2).[3] While interest payments declined from 11.2% of GDP in 1995 to 4.4% of GDP in 2007 (euro area: 5.4% and 3.0% respectively), the recent financial crisis contributed to their increase to 4.6% in 2008 and 5.0% in 2009, while they have remained unchanged in the euro area (3.0% of GDP in 2007-2009).

Chart I.1 Evolution of general government expenditure

(percentage of GDP)



Source: Eurostat, AMECO database.

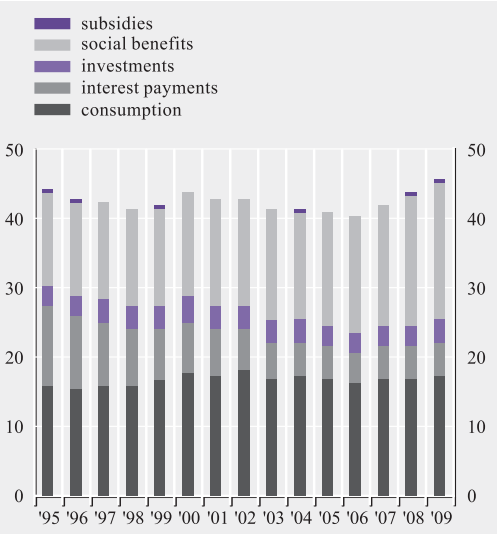
As shown by a recent IOBE study (see footnote 2), the increase in tax revenue over time has been substantial, both in Greece and in the other countries of EU-15 (euro area excluding Slovenia) and OECD. It should be noted that the rise in total tax burden from the 1960s can be mainly attributed to the increase in direct taxes and social security contributions (also see Chart I.3). Nevertheless, general government total revenue amounted to 39.3% of GDP in 2009, compared with 44.3% of GDP for the euro area.

These developments point to an increase in the size of the public sector in Greece, resulting from the rise in expenditure as a percentage of GDP over time, which generates the need to constantly increase tax revenue. Certain studies have empirically confirmed (in the long and the short term) **the one-way causal relationship**

1 Public expenditure and tax revenue as a percentage of GDP are used as indicators to determine the size of the public sector.
2 Rapanos, V. (2009), "Size and range of activities in the public sector" (in Greek), IOBE, November.
3 Interest payments started decreasing after Greece joined the euro area.

Chart 1.2 Breakdown of public expenditure in Greece

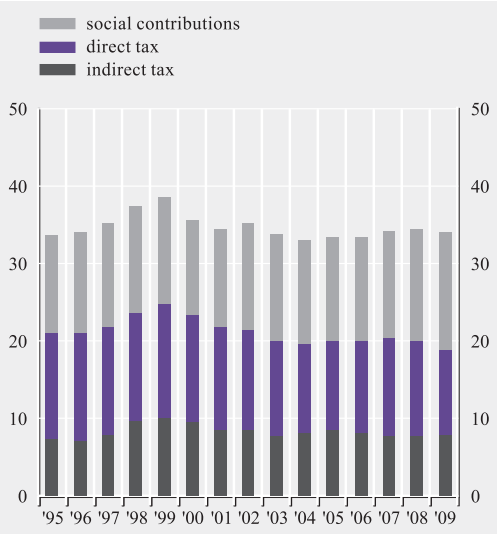
(percentage of GDP)



Source: Eurostat, AMECO database.

Chart 1.3 Breakdown of general government revenue

(percentage of GDP)



Source: Ministry of Finance.

from public expenditure to public revenue in Greece.[4]

The correlation between public expenditure and tax revenue (especially the one-way relationship from public expenditure to tax revenue) can be linked to distortions, the inefficient operation of the tax-collection mechanism and the ineffective use of tax revenue. For instance, an increase in tax revenue to cover public expenses may lead to an excessive tax burden, which, in turn, could negatively affect economic activity. A measure involving the increase in tax burden on employment may act as a counterincentive if taxpayers consider that, by reducing their tax burden, they could improve their well-being.[5] In addition, an increase in the tax burden in other sectors of the economy, such as enterprises, may act as a counterincentive for investment and contribute to shifting funds to countries with lower taxation. A higher tax burden is also associated with tax evasion and black economy,[6] which worsen the country's fiscal position. This is why the effective operation of the tax collection and audit mechanisms is of great importance. By way of example, the size of the black economy in Greece is estimated to have stood at levels higher than 28% of GDP in 2003.[7]

In 1971-2006, Greece recorded the third highest increase in general government revenue (18.6% of GDP), after Portugal (21.6% of GDP) and Spain (19.1% of GDP), and the second highest increase in expenditure (21.5% of GDP), after Portugal (27.5% of GDP). The

4 Provopoulos, G. and Zambaras, A., (1991), "Testing for causality between government spending and taxation", *Public Choice;* Hondroyiannis, G. and Papapetrou, E. (1996), "An examination of the causal relationship between government spending and revenue: A co-integration analysis", *Public Choice*, and Hondroyiannis, G. (1999) "The causality between government spending and government revenue in Greece" *Economic Bulletin* 13, Bank of Greece.

5 The final result also depends on the price elasticity of demand for consumer goods.

6 By way of example, the level of tax evasion in Greece reached 60% of the ordinary budget revenue or 14.6% of GDP in 1997 (Tatsos, N., *Black market and tax evasion in Greece* [in Greek], Athens 2001). Moreover, the loss of VAT revenue due to tax system distortions and tax evasion has increased from 20% in 2001 to 30% in 2006; European Commission (2009), "Fight against tax fraud: Commission publishes a study on the VAT gap in the EU".

7 Schneider, F. (2007), "Shadow economies and corruption all over the world: new estimates for 145 countries", *The Open Access Journal*, Dell'Anno, R. et al. (2007), "The shadow economy in three Mediterranean countries: France, Spain and Greece – A MIMIC approach", *Empirical Economics*, vol. 33, p. 51-84, and Schneider, F. (2006), "Shadow economies and corruption all over the world: what do we really know?", CES-IFO Working Paper No 1806.

rise in expenditure over time, especially after 2006, mainly stems from the increase in transfer payments, which is accompanied by a rise (at a slower rate) in expenditure for public sector wages. Public investment expenditure was somewhat higher than the European average, which can be explained by the convergence process of the Greek economy. As a percentage of GDP, public investment was close to 3.5% in the run up to the Olympic Games. However, after 2005, the public investment-to-GDP ratio has stood at around 2.8-2.9% of GDP, both because the need for investment was no more the same as in the period before the Olympic Games and because the excessive deficit had to be tackled. By contrast, interest payments followed a downward path, with the exception of 2008 and 2009, when they recorded a slight rise (see 1.B below).

The large size of the public sector does not necessarily run contrary to the effective use of expenditure and revenue. This is shown by the economic reality in North European countries and confirmed by the efficiency ratio compiled by the World Bank. According to this ratio, countries with a sizeable public sector (e.g. the Scandinavian countries) also have an efficient central government. Of course, these countries have a properly organised institutional and administrative framework ensuring the efficient use of revenue and expenditure, provide better education and social protection services and boost entrepreneurship and innovation. Moreover, it seems that in these countries the public sector does not interfere with the operation of the open market.

Among EU-15, Greece is one of the most interventionist economies in product markets, while it also makes the most extensive use of administrative measures in the economy. Among OECD countries, Greece comes last in business activity (on the basis of the World Bank index), while it ranks among the last of EU-15 countries on the basis of the index on barriers to entrepreneurship (the first positions are held by countries with the least barriers).

The efficient management of public resources is of crucial importance for fiscal adjustment. Studies[8] have shown that the same quantity and quality of public goods and services could be ensured in Greece with about 30% less expenditure.

The containment and restructuring of public expenditure towards this goal would decisively contribute to fiscal adjustment and economic growth. According to a study,[9] public investment in EU-15 (especially investment relating to education, research and development) makes a positive contribution to economic growth, unlike consumer expenditure, transfer payments and social transfers. Evidence has shown that there is no long-term relationship between public expenditure and growth rate in Greece.[10] It is worth noting that Greece spends more (19.7% of GDP) for public administration than all OECD countries, while it is estimated that the total administrative burden on enterprises (due to legal and administrative regulations) amounted to €13.8 billion in 2007.[11] In addition, only half of the 47 public enterprises and organisations are profitable; their profits are fully offset by the losses of the other half (most of which being public enterprises offering transport services).

The conclusion drawn from the above is that, in order to be successful, fiscal adjustment must be associated with reforms in the public sector that will not only aim at containing public expenditure, but at the same time ensure the quality of public finances, reduce red tape, increase competitiveness and improve the services provided. The Bank of Greece has repeatedly stressed the need for a proper institutional framework, linked to fiscal rules, mechanisms

8 Afonso, A., Schuknecht, L. and Tanzi, V. (2005), "Public sector efficiency – an international comparison", *Public Choice*, vol. 123, p. 321-347.

9 Afonso and Alegre (2008), "Economic growth and budgetary components: a panel assessment for the EU", ECB Working Paper No 848.

10 Hondroyiannis, G. and Papapetrou, E. (1995) "An examination of Wagner's law for Greece: a cointegration analysis", *Public Finance*, vol. 50, p. 67-79.

11 Kox, H. (2005), "Intra-EU differences in regulation-caused administrative burden for companies", Memorandum No 136, CPB Netherlands Bureau for Economic Policy Analysis.

controlling public expenditure and their efficiency, as well as tools for the preparation and evaluation of the state budget by establishing goals and priorities (see I.D below).

I.B THE STRUCTURE OF PUBLIC EXPENDITURE AND REVENUE AND THEIR RELATIONSHIP TO GDP – COMPARISON WITH OTHER EU COUNTRIES

An examination of the structure of general government expenditure and revenue and a comparison to corresponding developments in the European Union (EU-27) and the euro area (EU-16) can be very helpful in understanding the country's fiscal problem and drafting proposals to effectively tackle it. For instance, the excessive increase in certain categories of expenditure and the consistently low performance of some categories of taxes, both over time and in comparison with EU averages, may reveal the structural weaknesses that must be dealt with to restore fiscal order.

An analysis of this kind could help formulate the appropriate policy mix for fiscal consolidation. Academic studies have shown that the composition of fiscal adjustment is decisive as regards both its successful outcome and its effects on economic growth. Certain studies (e.g. Alesina and Perotti, 1995, 1997, Alesina and Ardagna, 1998)[12] have shown that successful fiscal adjustment efforts are based on significantly containing primary expenditure out of the ordinary budget (mainly personnel outlays and transfer payments). In such cases, it is even possible to increase the rate of economic growth (see Ardagna, 2004, Alesina and Perotti, 1995, Alesina and Ardagna, 2009).[13,14]

Moreover, fiscal consolidation in countries like Greece must have a dual objective, i.e. to contain both the size of external deficit (which reflects lower savings vis-à-vis investment) and the high deficits of the public sector, which have fed into external imbalances.[15] The structure of fiscal adjustment must take account of and seek to tackle the country's competitiveness problem, which feeds into high external deficits. Therefore, measures should include inter alia containing primary expenditure and increasing the efficiency of expenditure (for healthcare, education, technology etc.), as well as decreasing unit labour costs (e.g. a decrease in labour and capital taxation, which is offset by an increase in VAT, would reduce unit labour costs).[16] This would boost competitiveness and productivity in the long run, stop external deficits from growing and support economic growth.

Revenue

General government **total revenue** on a national accounts basis stood at 40.6% of GDP in 2008, i.e. much lower than the euro area average of 44.6% of GDP (EU-27: 44.8%). As shown in Chart I.4, the deviation was similar for the entire 1998-2008 period, while the maximum deviation from European averages was 6 percentage points in 2004-2005. This is mainly attributed to the evolution of **tax revenue** (direct and indirect taxes), which has been steadily decreasing in the past few years as a percentage of GDP. Specifically, it fell to

12 Alesina and Perotti (1995), "Fiscal expansions and adjustments in OECD Countries", *Economic Policy*, vol. 21, p. 207-247; Alesina and Perotti (1997), "The Welfare State and Competitiveness", *American Economic Review*, vol. 87 (5), p. 921-939; Alesina and Ardagna (1998). "Tales of fiscal adjustments", *Economic Policy*, vol. 13, p. 489-545.

13 Ardagna (2004), "Fiscal stabilizations: When do they work and why?", *European Economic Review*, vol. 48(5), p.p. 1047-74; Alesina and Ardagna (2009), "Large changes in fiscal policy: Taxes versus spending", NBER Working paper No.15438.

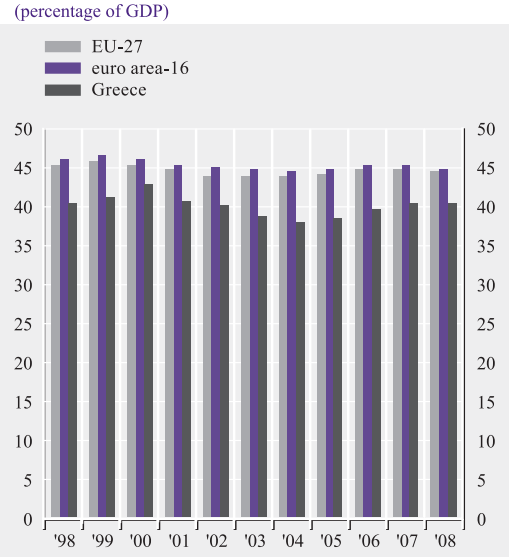
14 Account must also be taken of the European Commission analyses and the European Union recommendations, as expressed in previous ECOFIN Opinions, as regards the need to reduce primary expenditure. See European Commission (2009), "Greece: Macro-fiscal assessment – An analysis of the January 2009 stability and growth programme – Council opinion of 10 March 2009 on the updated stability programme of Greece 2008-2011", *Official Journal* C 64, 19 March 2009, p 7-12.

15 Brissimis et al. (2009), "Current account determinants and sustainability in periods of structural change", unpublished, Bank of Greece; Brissimis et al. (2009), "The Determinants of Current Account Imbalances in the Euro Area: A Panel Estimation Approach", unpublished, Bank of Greece; Moschovis and Capo Servera (2009), "External imbalance of the Greek economy: the role of fiscal and structural policies", European Commission, DG Economic and Fiscal Affairs, *Country Focus*, vol. 6 (6).

16 Calmfors (2003), "Fiscal policy to stabilize the domestic economy in the EMU: What can we learn from monetary policy?", CES-IFO Economic Studies 49(3), p. 3-19; Lane and Perotti (2003), "The importance of composition of fiscal policy: evidence from different exchange rate regimes", *Journal of Public Economics*, vol. 97, p. 2253-79.

Chart I.4 Total revenue

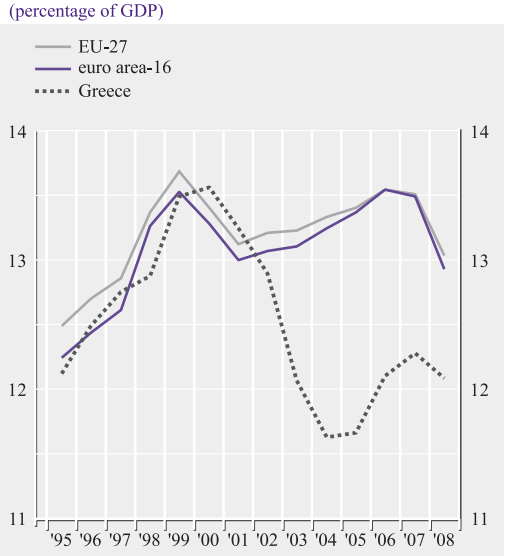
(percentage of GDP)



Source: Eurostat, AMECO database.

Chart I.5 Indirect tax

(percentage of GDP)



Source: Eurostat, AMECO database.

19.8% of GDP in 2008, from 22.3% in 1999, while the deviation against European averages rose significantly after 2003 and now stands at about 5 percentage points.

Indirect taxes stood at 12.1% of GDP in 2008, when the corresponding euro area average was 12.9% (EU-27 average: 13.0%). The deviation of indirect tax revenue against European averages was small until 2002 and peaked (1.5 percentage points) in 2004-2006 (see Chart I.5). The slight recovery of indirect tax revenue in 2006 is related to the VAT increase in April 2005, when the high rate rose from 18% to 19% and the low rate from 8% to 9%. However, despite the increase in VAT and other indirect taxes (e.g. special consumption taxes on fuel, beverages, tobacco etc.), indirect taxes continue to yield much lower revenue as a percentage of GDP compared with European averages, which can also be attributed to extensive tax evasion.

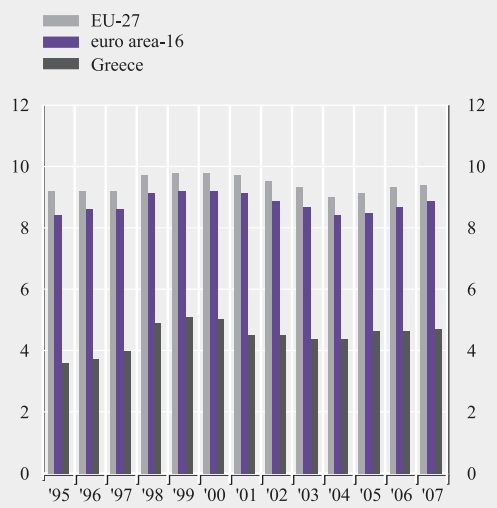
Direct taxes as a percentage of GDP stand far below the corresponding EU taxes. The gap between the two has been expanding since 2005. Specifically, direct tax revenue in Greece was 7.7% of GDP in 2008, compared with 12.2% of GDP in the euro area and 13.1% of GDP in EU-27. This shows that indirect taxes yield more than direct taxes in Greece. Their ratio was 1.56 in 2008 and has been increasing since 2005 (1.37) due to the downward path of direct taxes. By contrast, the ratio has been stable in the euro area and EU-27, at 1.1 and 1.0 on average in 1995-2008. This proves the low yields of direct taxation in Greece.

Low direct tax revenue is related to the fact that **personal income tax** yields much less than in the EU (see Chart I.6). In 2007 revenue from this category came to 4.7% of GDP, while the euro area and the EU-27 averages were 8.9% and 9.4% of GDP, respectively. The unchanged picture of personal income tax revenue (as a percentage of GDP) since 2005 (despite the very high rates of economic growth) can be mainly attributed to extensive tax evasion and tax avoidance, despite the slight decrease in tax rates.[17] This is due to the fact that, in the euro area, tax revenue as a percentage of GDP has been on an upward path since 2004, despite the

17 In Greece, the highest tax rate for natural persons decreased from 45% in 2000 to 40% in 2008.

Chart I.6 Personal income tax

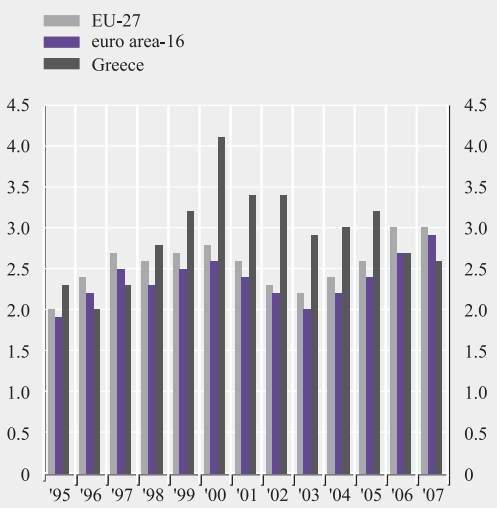
(percentage of GDP)



Source: European Commission, *Taxation trends in the European Union (2009).*

Chart I.7 Corporate income tax

(percentage of GDP)



Source: European Commission, *Taxation trends in the European Union (2009).*

corresponding decrease in the higher tax rates and the lower growth rates (compared with Greece). Thus, the low yield (as a percentage of GDP) of personal income tax in Greece must be attributed to extensive tax evasion and tax avoidance, especially of the self-employed.[18]

A negative contribution was also made by revenue from corporate **income tax**, which has been falling in the past few years as a percentage of GDP. In 2007 revenue from this category was 2.6% of GDP in Greece, compared with 2.9% in the euro area and 3.0% in EU-27 (see Chart I.7). This was partly due to the drastic decline in tax rates from the very high levels of 1999-2005. It should be noted that the highest rate on corporate tax decreased from 40% in 2000 to 25% in 2008.[19]

Real (actual) **social security contributions** as a percentage of GDP fall very short of the European averages, although their differential has been narrowing in the past fifteen years (due to high growth rates and increased employment), with the exception of the 2004-2006 period (see Chart I.8). In 2008 they stood at 12.3% of GDP, compared with 14.2% of GDP in the euro area and 12.8% of GDP in EU-27,[20] reflecting extensive contribution evasion, especially of the self-employed.

Employment tax accounted for 41.8% of tax revenue in 2007, much less than in the euro area (50.6%) and EU-27 (48.7%). Taxes of this category correspond to 13.4% of GDP, compared with 20.5% in the euro area and 19.4% in EU-27. However, the share of employment tax in total tax revenue has risen by 5.9 percentage points since 2000 in Greece, while it has decreased in the euro area and EU-27 by 1.5 and 1.4 percentage points, respectively. The higher tax burden on employment is also reflected by the increase in the average implicit tax rate by 1 percentage point since 2000, which was 35.5%

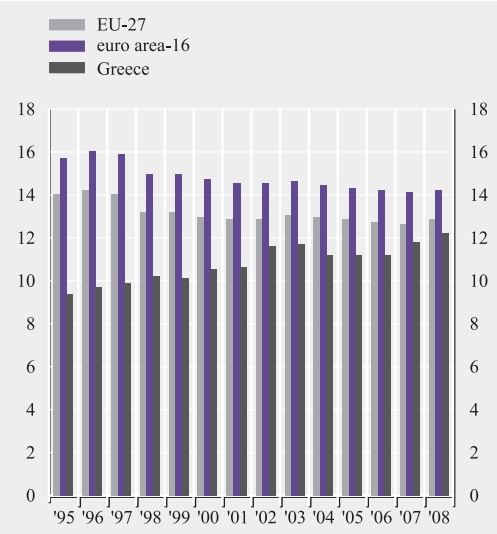
18 In the euro area and EU-27, the highest rate for personal income tax decreased from 48.4% and 44.7% in 2000 to 42.1% and 37.8% in 2008, respectively. See European Commission (2009), *Taxation trends in the European Union.*

19 Similar trends prevailed both in the euro area and EU-27. In both cases, the highest rate on corporate tax declined from 34.9% and 31.9% in 2000 to 26.0% and 23.6% in 2008, respectively. It should be noted that, although Greece followed European trends regarding the reduction of tax rates, in several instances it continues to apply higher tax rates than Eastern European countries, Cyprus and Ireland. The latter reduced its highest rate on corporate tax from 24% in 2000 to 12.5% in 2008.

20 The pattern is similar for total social security contributions.

Chart I.8 Real social security contributions

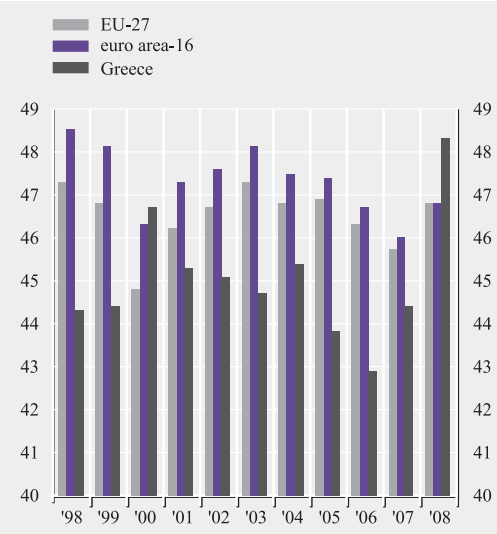
(percentage of GDP)



Source: Eurostat, AMECO database.

Chart I.9 Total expenditure

(percentage of GDP)



Source: Eurostat, AMECO database.

in 2007, despite a decrease in the higher rates on income tax from 45% in 2000 to 40% in 2007.[21]

The fact that tax revenue in Greece is must lower than European averages implies the need to expand the tax base, especially as regards direct and indirect taxes. To combat tax and contribution evasion, it is necessary to take immediate action to streamline the tax collection mechanism, increase audits and boost tax awareness by appropriate incentive systems.[22]

It should be noted that several studies (Gupta et al., 2003, Ardagna, 2004, Tsibouris et al., 2006)[23] have shown that increasing revenue from initially low levels (such as in Greece compared with the euro area) may lead to a successful fiscal consolidation. However, it is necessary to achieve a fair allocation of the cost required among the socioeconomic groups (Alesina and Drazen, 1991[24]).

Expenditure

Total expenditure in 2008 stood well above the EU average (for the first time since 2000), reaching 48.3% of GDP, when the corresponding euro area and EU averages were 46.8% of GDP (see Chart I.9). Its downward course from 2004 to 2006 in the context of fiscal adjustment to correct the excessive deficit was reversed in 2007, leading to the fiscal derailment of 2008 (as revenue increased by only 0.2% of GDP and the general government deficit rose to 7.7%). The rise in expenditure is mainly attributed to higher capital transfers (e.g. taking up hospital debts amounting to €2.5 billion), staff costs, social security and protection spending and interest payments.

The evolution of the main expenditure categories and their potential contribution to the fis-

21 By contrast, in the euro area and EU-27, the tax burden on employment decreased by 0.3 and 1.5 percentage points to 34.3 and 34.4 respectively in 2007. See European Commission (2009), *Taxation trends in the European Union*.

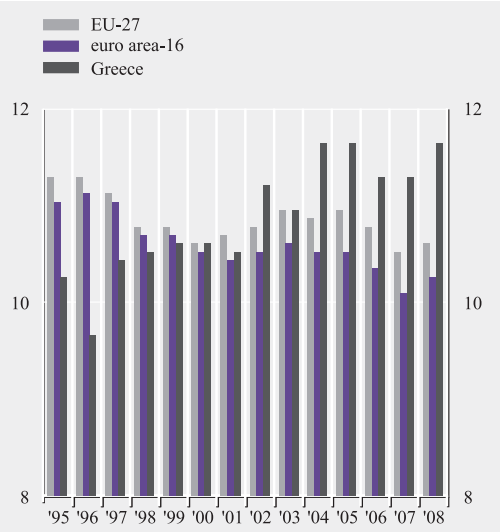
22 Similar proposals were also made in recent IMF publications, which recommend increases in the tax rates in line with the fiscal and financial situation. See IMF (2010), "Exiting from Crisis Intervention Policies" and "Strategies for fiscal consolidation in the post-crisis world" (published on 23 February 2010).

23 Gupta, Baldacci, Clements, Tiongson (2003), "What sustains fiscal consolidations in emerging market countries?", IMF, Working Paper 03/224; Ardagna (2004), "Fiscal stabilizations: When do they work and why?", *European Economic Review*, vol. 48(5), p. 1047-74; Tsibouris, Horton, Flanagan, Maliszewski (2006), "Experience with large fiscal adjustments", IMF Occasional Paper, No 246.

24 Alesina and Drazen (1991), "Why are stabilizations delayed?", *American Economic Review*, 81(5), p. 1170-88.

Chart I.10 Staff costs

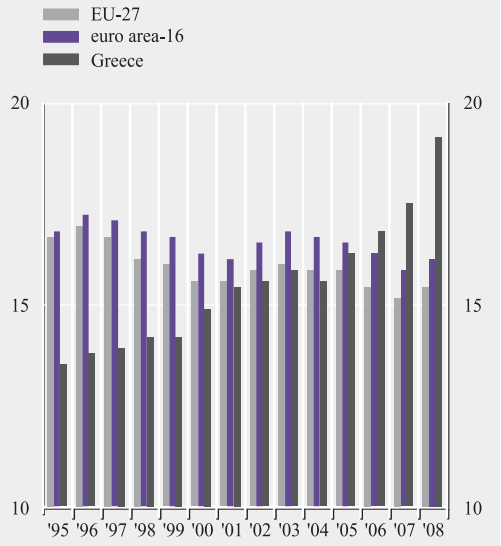
(percentage of GDP)



Source: Eurostat, AMECO database.

Chart I.11 Social security spending

(percentage of GDP)



Source: Eurostat, AMECO database.

cal consolidation process are discussed below. However, at this point it is worth mentioning that the international literature has proposed interesting interpretations for the upward trend of public expenditure in Greece. According to Hondroyiannis and Papapetrou (2001), the creation of large deficits in Greece reduces in the short term the costs paid by taxpayers for services rendered by the State, thereby increasing demand for public services, which in turn increases public expenditure and perpetuates deficits (Buchanan-Wagner hypothesis). Moreover, Lockwood et al. (2001) have shown that the electoral cycle is decisive for the increase in public expenditure in Greece.[25]

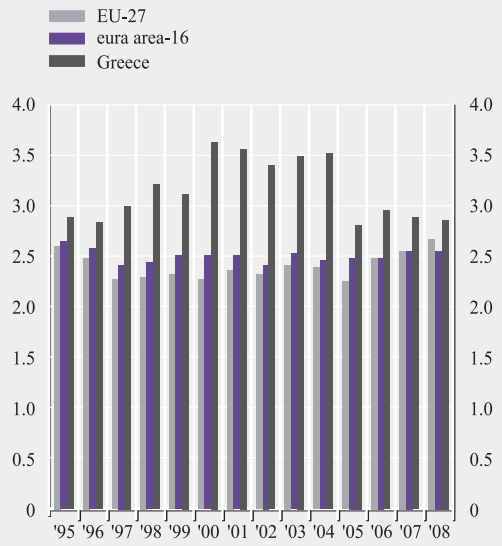
Staff costs as a per cent of GDP have been higher in Greece than in the euro area since 2000 (since 2002 for EU-27) and the difference between the two has been increasing. In 2008 they were 11.5% of GDP, compared with 10.1% and 10.5% in the euro area and EU-27, respectively (see Chart I.10). **Social security and protection spending** has been on a steady upward course in the past 15 years; as a result, it has been exceeding European averages since 2006 and stood at 19.1% of GDP in 2008 (see Chart I.11). It should be noted that, excluding the decrease in staff costs by 0.3% of GDP in 2006, these two expenditure categories did not contribute to the fiscal consolidation efforts in 2004-2006.

Expenditure for **public investment** (gross fixed capital formation) is slightly higher than European averages, which can be explained by the convergence process. The ratio of public investment to GDP approached 3.5% in the run-up to the Olympic Games and, as a result, it was up to 1 percentage point higher than the European averages. However, the ratio of public investment to GDP has remained unchanged since 2005, at 2.8-2.9%, both because there was no longer such a need for investment and because the excessive deficit had to be tackled (see Chart I.12).

25 See Hondroyiannis and Papapetrou (2001), "An investigation of the public deficits and government spending relationship: Evidence for Greece", *Public Choice*, vol. 107, p. 169-182, and Lockwood, Philippopoulos, Tzavalis (2001), "Fiscal policy and politics: theory and evidence from Greece 1960-1997", *Economic Modelling*, vol. 18, p. 253-268; Prodromidis, K. (1996), "Stylised facts of political cycles in Greece" (in Greek), Economic Policy Studies, Athens University of Economics and Business, Athens Laboratory of Economic Policy Studies, No 2, p. 23-40.

Chart I.12 Public investment

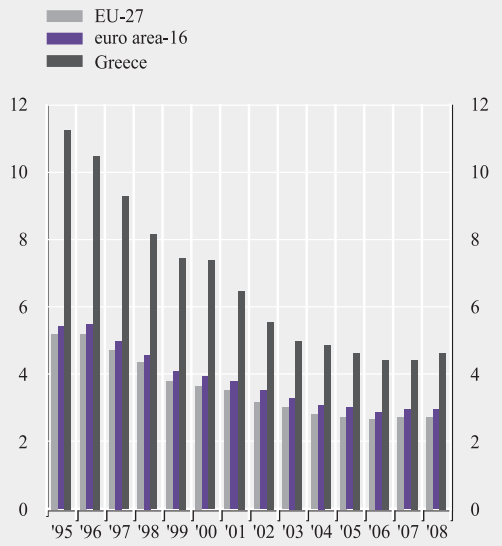
(percentage of GDP)



Source: Eurostat, AMECO database.

Chart I.13 Interest payments

(percentage of GDP)



Source: Eurostat, AMECO database.

Interest payments have declined considerably in the past 15 years (see Chart I.13), still ranking among the highest across euro area countries as a per cent of GDP. Nevertheless, the downward trend of interest payments to GDP was contained lately and was reversed in 2008, when they came to 4.6% of GDP, compared to 3% and 2.7% of GDP in the euro area and EU-27, respectively.

These findings imply that:

(1) The recent fiscal derailment and the dramatic increase in debt and Greek 10-year bond yield spreads (vis-à-vis the corresponding German bonds), to the extent they increase total borrowing and loan servicing costs, will further worsen the fiscal situation and deprive other sectors (public investment, education, healthcare etc.) of public resources.

(2) The drastic and sustainable reduction of the deficit and the public debt must stem, apart from the wider tax base and the elimination of tax and contribution evasion, from primary expenditure, specifically staff costs, operating expenses and social security and protection spending.[26,27] Failure to effectively control the evolution of these items would render any effort of fiscal consolidation ineffective and unsustainable.

The quality of public finances

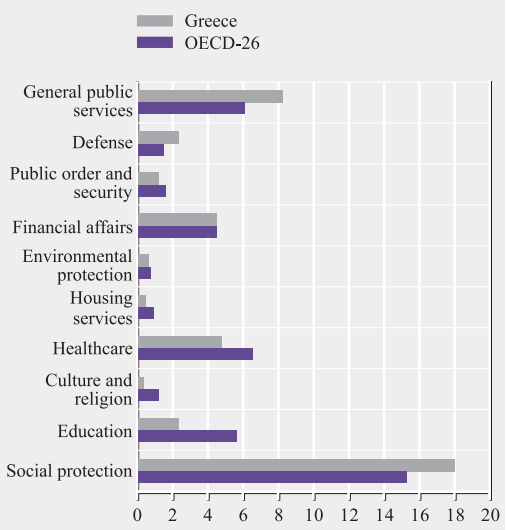
Fiscal derailment, the competitiveness deficit of the Greek economy and the fiscal burden due to population ageing dictate the implementation of a medium-term stabilisation programme that would effectively promote fiscal consolidation and reforms that would support economic growth. In this context, it is fundamental **to improve the quality of public finances**. The effective and efficient utilisation of scarce public resources and the improvement in the structure and efficiency of the tax system would boost the long-term potential growth rate, ensuring that

26 See Alesina and Perotti (1995), "Fiscal expansions and adjustments in OECD Countries" *Economic Policy*, vol. 21, p. 207-247; Alesina and Perotti (1997), "The Welfare State and Competitiveness", *American Economic Review*, vol. 87 (5), p. 921-939; Alesina and Ardagna (1998), "Tales of fiscal adjustments", *Economic Policy*, vol. 13, p. 489-545.

27 Intermediate consumption stood at 5% of GDP in 2008, namely about the same as the euro area (5.1% of GDP), while its 1995-2008 average was 5.4% of GDP in Greece and 4.9% of GDP in the euro area.

Chart I.14 General government expenditure in Greece and OECD countries (2006)

(percentage of GDP)



Source: *Government at a Glance 2009*, OECD.

fiscal adjustment will contribute to the long-term sustainability of public finances.

According to a European Commission study, increased expenditure for education, research and development, public infrastructure, healthcare, public order and security, as well as for environmental protection, boosts growth.[28] However, as underlined by the European Commission, the relationship between public expenditure (for education, research, infrastructure etc.) and growth is not self-evident, as it is associated with the ability to achieve the desired results (e.g. better educational level, higher private expenditure for research), while it also depends on the overall regulatory framework (e.g. a rigid labour market may contain the contribution of specialised work to growth).[29]

According to an OECD study, Greece provides the bulk of its expenditure to social protection, general public services and defence (see Chart I.14).[30] By contrast, expenditure for education and healthcare accounted for only 2.3% and 4.7% of GDP in 2006, respectively (the former has decreased by 0.3% of GDP and the latter has increased by 0.9% of GDP since 1995), while OECD countries spend on average 5.6% and 6.5% of GDP, respectively.[31]

Provisional data of a European Commission survey show that the effectiveness and efficiency of public expenditure in Greece are below the EU-27 average.[32] Specifically, Greece ranks 21st in "education" (Finland being the first), 24th in research and development (Finland being the first), 19th in public infrastructure (Luxembourg being the first), 18th in public administration (Denmark being the first), 27th in "composition of growth-enhancing public spending (public investment to public consumption)" (Portugal being the first). Greece ranks above the EU-27 average in "healthcare" (12th, with Sweden being the first) and "public order" (12th with Malta being the first).

It is therefore imperative to contain and restructure public expenditure in favour of more efficient actions that enhance economic growth through the development of the human capital, the diffusion of new technologies and the development of infrastructure.[33,34]

28 See European Commission (2008), "Public Finances in EMU 2008", *European Economy* No. 3/2008.

29 According to European Commission studies, growth may be boosted by reducing the tax burden on labour (direct taxes and social security contributions) and increasing consumption taxes (to achieve a neutral effect on revenue). However, the final result depends on transparency, stability and the simple structure of the tax system, in order to contain tax evasion. Certainly, a tax system does not only service the goal of economic growth, but also the goals of reallocation of wealth, social justice and the correction of distortions and negative external economies (e.g. environmental pollution). European Commission (2008, 2007, 2004, 2003), "Public Finances in EMU 2008", (2007, 2004, 2003), *European Economy* No. 3/2008, 3/2007, 3/2004, 3/2003.

30 See OECD (2009), *Government at a Glance 2009*.

31 It should be noted that, in the context of the European Economic Reconstruction Plan for tackling the current financial crisis, 2/3 of EU Member States increased public expenditure for research and development or granted tax reliefs in order to boost productivity and growth. By contrast, Greece did not take such action because of fiscal constraints. See Conte, Schweiser, Dierx, Ilzkovitz (2009), "An analysis of the efficiency of public spending and national policies in the area of R&D", European Economy, Occasional Papers No. 54.

32 See European Commission (2009), "Public Finances in EMU 2009", (Part II, Chapter 3).

33 According to a survey by Angelopoulos and Phillipopoulos (2007), the increase in staff costs puts a strain on growth in Greece. According to the study, a 9.7% increase in staff costs brought about a 1.72% decrease in the growth rate during 1972-1998. Public investment assists growth, while transfer payments have the opposite effect. Moreover, improving the quality of services rendered by the State eliminates the negative effect of the oversized Greek public sector on growth. See Angelopoulos and Phillipopoulos (2007), "The growth effects of fiscal policy in Greece 1960-2000", *Public Choice*, vol. 131, p. 157-175.

34 According to a study, Greece could have provided the same quality and quantity of public goods with about 70% of public spending. See Afonso, Schuknecht, Tanzi (2005), ibid.

I.C THE EVOLUTION OF TOTAL AND PER CAPITA STAFF COSTS IN CENTRAL GOVERNMENT DURING 2001-2009, COMPARISON WITH THE EVOLUTION OF OTHER AGGREGATES AND POTENTIAL LEVELS IN 2010

Reviewed aggregates and data sources

The evolution of the central government wage bill has drawn particular attention in the past few years. The relevant data are examined below for the period after 2001, when Greece joined the euro area, on the basis of the ex post estimates of the budget execution published annually in the Introductory Reports on the State Budget (IRSB). First, it would be useful to note that:

• IRSB data on the central government wage bill cover almost 85%[35] of the "general government" sector, namely staff costs for central administration employees, teachers, judges, law enforcement staff, public hospital staff and the administrative staff of regional and prefectural authorities. Armed Forces staff is not included in the number of employees, although their wages are included in expenditure. The personnel of local authorities is not included either, although certain wage subsidies to local authorities are included. Data refer to civil servants under both tenured and non-tenured status (open-ended or fixed-term employment contracts). The main methodological problems relate to (i) the non-coverage of certain parts of the general government sector, (ii) the fact that wage costs cover certain categories (e.g. military officers) that are not included in the published data on employment. This is why it is not possible to make correct calculations of the level of compensation per employee. It may, however, be considered that calculations on growth rates are broadly correct, assuming that the true number of employees (including military officers) increases at the same rate as the published number.

• In certain cases, adjustments/corrections need to be made to the published figures on expenditure and employment in order to ensure comparability over time. For instance, employment figures for 2007 comprised for the first time a category of auxiliary staff, the wages of whom had already been included in 2006 expenditure. Moreover, 2009 figures on wage outlays included the entire amount paid by the abolished Special Accounts that are now fully incorporated into the Budget (also see Chapter II.3.3). Therefore, the relevant amount should not be taken into account for comparison over time, given that substantial sums were paid in previous years for wage outlays by the Special Accounts, but were not reported in the Budget.

• There is a difference between public servants' average gross earnings and the "compensation per employee". In the latter case, the numerator also includes outlays for central government pensions, according to an accounting "convention" that reflects the fact that, in the Budget, wage and pension outlays are reported together. For instance, according to the IRSB-2010, total wage and pension outlays came to €25.5 billion in 2009 (of which €19.0 billion for wages, or €18.3 billion if no account is taken of payments made through the abolished and incorporated Special Accounts, and €6.5 billion for pensions – therefore, the share of each category was 75% and 25% respectively). It should be noted that sometimes the rates of change in the two categories of outlays differ markedly because of differences between the wage policy and the pension policy, and because the increase in the number of pensioners entails a more rapid rise in the "compensation per employee", since the denominator includes only the number of employees in active service.

Developments in 2001-2009

In accordance with the above, the following developments were recorded for the various aggregates:

35 Wage and pension outlays according to the IRSBs: 2000 = €12.4 billion, 2009 = €24.8 to €25.5 billion. National accounts data/estimates on "compensation per employee" in general government: 2000 = €14.3 billion, 2009 = €30.4 billion.

Cumulative change in 2001-2009 (2009/2000):

Central government wage and pension outlays = +100% (from 12.4 billion to 24.8 billion)[36]
Number of government employees = +17%
Compensation per employee = +71%
Outlays only for central government wages (from 9.5 billion to 18.3 billion – excluding pensions) = +93%
Average gross earning of civil servants = +65%
COMPARISON: Earnings of employees (total outlays for wages and employer contributions) in **total economy** (Bank of Greece estimates) = 93.3%[37]
COMPARISON: Employees in **total economy** (Bank of Greece estimates on the basis of data from the NSSG Labour Force Survey) = +17.5%[38]
COMPARISON: Compensation per employee (average wage outlays including employer contributions and civil servants' pensions) in **total economy** (Bank of Greece estimates) = +64.5%[39]
COMPARISON: Average gross earnings in **total economy** (Bank of Greece estimates) = +63.6%
COMPARISON: Nominal GDP = +74.3%[40]
COMPARISON: Nominal per capita GDP (GDP/population) = +69%[41]
COMPARISON: Nominal GDP per employee = +59.4%[42]

The average rates of change for 2001-2009 are:

Compensation per employee (including pensions) = 6.1%
Civil servants' average gross earnings = 5.7%
Average gross earnings in **total economy** (Bank of Greece estimates) = 5.6%
Earnings per employee (average compensation including employer contributions and civil servants' pensions) in **total economy** (Bank of Greece estimates) = 5.7% (NSSG: 5.6%)
Nominal per capita GDP = 6.4%
Nominal GDP per employee = 5.3%
CPI inflation = 3.2%
Real average gross earnings of civil servants = 2.4%
Real average gross earnings in total economy = 2.3%.

These figures show that in 2001-2009 average earnings and employment in central government did not increase faster than in total economy.

It should however be noted that: (i) these uniform average annual growth rates are recorded ex post and imply that wage increases in central government have significantly affected wage increases in the business sector

36 See IRSB-2002, p. 31 (final data for 2000); IRSB-2010, p. 60 (2009 data). According to NSSG national accounts data for 2000 and provisional estimates of the Ministry of Finance for 2009, comprised in the Updated Stability and Growth Programme (USGP), "compensation per general government employee" increased by a cumulative 113% in the same period.
37 Corresponding NSSG national accounts estimates (March 2010): +89.8%.
38 Corresponding NSSG national accounts estimates (March 2010): +15.9%.
39 Corresponding NSSG national accounts estimates (March 2010): +63.8%.
40 NSSG data for 2000, provisional NSSG estimates for 2009 (March 2010).
41 See footnote 40.
42 See footnote 40.

and —indirectly— inflation, (ii) in central government, employment conditions are overall better (tenure etc.), while productivity is lower (according to certain estimates), (iii) significant differences in the growth rates were recorded only in certain years, but such differences are eliminated when the overall period is reviewed, (d) *total central government wage and pension outlays* on the basis of IRSB data have indeed increased faster, due to the faster growth of pension outlays, and (v) *national accounts estimates* for the "compensation of general government employees" show a faster rise than IRSB data. It should also be noted that both central government wage outlays and wage and employer contribution outlays for total economy increased cumulatively by 93% in 2001-2009, while the nominal GDP increased by 74%. This reflects, to a large extent, (i) the increasing participation of employees in total employment (given that they increased by 17.5%, while total employment grew by 9.3%), and (ii) the growing size of the public sector (see 1.A above).

The 2007-2009 period

A review of wage developments in **central government** in the past three years (2007, 2008 and 2009) is of particular interest.

Year	Regular earnings*	Average gross earnings **	Compensation per employee***
2007	3.5%	3.8%	5.0%
2008	3.1%	7.15%	9.3%
2009	1.9%****	6.9%	7.4%

(*) Average annual increase in regular salaries of civil servants, pursuant to a law voted annually by the Greek Parliament.
(**) Including (i) seniority and family allowances and (ii) increases due to special adjustments in certain civil servant categories.
(***) Also including the effect of the rise in public pension outlays.
(****) Including carry-over effect of 1.4% from 2008, as well as the effect of extraordinary one-off allowances (instead of pay rises) corresponding to an increase of 0.5%.

The following points must be made:

- In **2007**, in addition to the general increases in civil servants' regular earnings, there have been additional arrangements/payments to military officers and law enforcement agencies, teachers and hospital staff.

- In **2008**, again in addition to general increases, (a) retroactive payments were made to judges and (b) new wage benefits were paid to military officers and law enforcement staff, teachers and hospital staff.

- In **2009** special wage arrangements were put in place for judges and NHS doctors, which took effect before increases froze and a lump-sum payment was made to civil servants.

The foregoing points support the following conclusions:

- In the 2007-2009 period, the average annual increase in regular earnings (not including the effect of seniority) was equal to average annual inflation (2.8%). However, this is recorded *ex post* and it may be argued that the annual average increase in regular earnings by more than 2% contributed to inflation standing also above 2%, as it affected both collective bargaining and labour costs in the business sector and demand.

- Assuming that the average impact of "automatic" increases due to changes in seniority/previous employment and family status was 1.7% (as indirectly stemming from the examples in the 2010 income policy tables published by the Ministry of Finance on 9 February 2010), the annual income of a typical civil servant increased at an average annual rate of 4.5% in 2007-2009. In the same period, the average annual increase in nominal per capita GDP was 3.8%. However, average gross earnings increased much more, namely at an average annual rate of 5.9%, because they comprise the effect of special arrangements/payments to certain categories of civil servants (judges, military and law enforcement officers, teachers, medical and hospital staff etc.). The corresponding average annual increase in average gross earnings in total economy was 5.5%. Finally, "compensation per employee" increased at an average annual rate of 7.2%, because it now

includes the effect of the growth of government pension outlays (in total economy, this rate for "compensation per employee" was 5.9%).

• These simple numerical calculations show that there is indeed much room for containing the government wage bill, beginning with (i) rationalising wage scales and the multitude of benefits, (ii) gradually decreasing the number of employees, (c) granting limited increases in the future and, (d) freezing basic salaries for this year and cutting benefits, as decided by the government.

The income policy for 2010

According to certain conservative assumptions, the income policy for the central government, announced on 9 February and 3 March, entails that *nominal* average gross earnings of civil servants will decrease by about 6.9% in 2010, whereas real average gross earnings will decline by about 9.5% (provided that inflation stands close to 3%) and the nominal annual gross income of central government pensioners will decrease by 1.4%. In addition, information from IRSB-2010 and USGP imply that the number of civil servants may decrease by 2.8% and the number of central government pensioners may increase by 3.5%. The foregoing show that "compensation per employee" (including pension outlays) will decline by 3.9% in nominal terms or by 6.5% in effective terms in 2010.

More specifically:

According to the Ministry of Finance (*Hellenic Stability and Growth Programme Newsletter*, 17 February 2010, p. 3), the initially decided 10% cut in benefits was equivalent to a 4% average decrease in wages in nominal terms. Moreover, the Minister of Finance had stated (during a press conference on 9 February 2010) that the monthly gross earnings of civil servants would decrease by 1%-5.5% in nominal terms.

On the basis of the above, it may be assumed that the average nominal decrease in regular monthly earnings would be 3.25% (the simple numerical average of 1% and 5.5%). However, because it was decided on 3 March to cut benefits by 12%, the average nominal decrease in the regular monthly earnings now comes to 3.9%. This decrease will be partly offset by "automatic" increases due to changes in seniority/previous employment and family status which, as was said before, amount to 1.7% (calculated according to the Ministry of Finance examples). Therefore, at first sight, the net decrease is 2.2% and concerns 12 out of the 14 salaries paid annually. As announced on 3 March, the other two salaries (Christmas and Easter bonuses and leave allowance) would be cut by 30% (in addition to the general 2.2% decrease), bringing their final decrease to 31.5%. Consequently, the sum of 14 salaries is estimated to decrease by 6.4%. However, the one-off payment given in 2009 in lieu of wage increases was tantamount to a 0.5% increase in annual income. Since no such one-off payment is included in the annual income for 2010, the nominal decrease of the gross (pre-tax) annual income of a civil servant would be 6.9% (93.6/100.5=93.1) or 9.5% in effective terms.

The foregoing relate to the average gross earnings of civil servants. To calculate the "compensation per employee", both the wage and the pension costs must be taken into account. Specifically:

Wage costs:

• Average gross earnings: -6.9%.

• Estimated change in the number of employees: -2.8%. The following are taken into consideration: (a) the number of employees was 511,900 in June 2009 according to the IRSB-2010, (b) the probable number of retirement/resignations is 14,000 on the basis of 2008 and 2009 data, (c) according to the USGP (p. 75) only 1,000 employees will be hired in law enforcement, 3,000 in healthcare and 3,000 teachers, while 7-8,000 less substitute teachers will be hired. Therefore, the number of employees will come to 497,400 in 2010.

• Consequently, the wage bill (75% of total wage and pension costs) would decrease by 9.5% [(-6.9%)+(-2.8%)].

Pension costs

• No increases will be granted to pensions. However, as is the case for employees, account must be taken of the one-off payment made in 2009 in lieu of increases, which is estimated to have contributed to a 1.4% increase in the annual income of pensioners in 2009, while such a payment is not included in the annual income for 2010. Therefore, this income will decrease by 1.4% in 2010 (100.0/101.4). In addition, it is assumed that the number of pensioners will rise in 2010 by 14,000 (as in 2008 and 2009), i.e. by 3.5% compared with 2009 (June 2009: 403,000 central government pensioners pursuant to the IRSB-2010).

• Consequently, the pension bill (25% of total wage and pension costs) would increase by 2.05% [(-1.4%)+3.5%].

• According to the above, **central government spending for wages and pensions will decrease by 6.6% in 2010**, since:

(0.75 x -9.5%)+(0.25 x 2.05%)= -6.6%

The Budget provided for a 2.8% increase. The difference is equivalent to savings of €2.4 billion, i.e. 1% of GDP.

Since the number of employees will decrease by 2.8%, the "compensation per employee" will decline by 3.9% in nominal terms and about 6.5% in effective terms.

I.D COMPILATION OF THE BUDGET, NUMERICAL FISCAL RULES AND INDEPENDENT BODIES FOR THE SURVEILLANCE AND EVALUATION OF PUBLIC FINANCES

The introductory report on the update of the Stability and Growth Pact (SGP), adopted by the European Council in March 2005, mentioned that "....national budgetary rules should be complementary to the Member States' commitments under the Stability and Growth Pact". Also, the text supported the view that national institutions should play a more prominent role in budgetary surveillance and evaluation and in the fiscal policy implemented.[43] This advice was not coincidental, as it was based on the conclusions of a long-standing global effort, both at research and policy level, to control fiscal deficits.[44]

In this context, at end-2005 the European Commission (and independent experts) launched a new research effort to determine the factors that decisively affect the fiscal balance and help achieve a sustainable strong budgetary position. These efforts led to a new comprehensive approach, according to which fiscal performance is decisively determined by the domestic fiscal framework.[45] **Fiscal framework is the set of institutions, rules, practices and independent bodies governing and affecting the preparation, compilation and execution of the budget, as well as the supervision and evaluation of the fiscal result.**

Specifically, the fiscal framework consists of the following three sets of factors, which com-

43 The text read: "...national institutions could play a more prominent role in budgetary surveillance to strengthen national ownership, enhance enforcement through national public opinion and complement the economic and policy analysis at EU level". See European Commission, "Public Finances in EMU 2009", *European Economy* 5, 2009, p. 87.

44 Since the 1970s there have been global efforts to control public expenditure through the budget procedure. Initially in the United States it was attempted to transpose the Zero Based Budgeting method from the business sector to the state budget. In Greece, the pilot implementation of this method to state hospitals and the Hellenic Post in 1977-1979 gave spectacular results, but the project was abandoned inexplicably in 1980. In the 1980s there have been many efforts in various countries (e.g. the United Kingdom); as a result, the OECD decided to address this issue (see, *inter alia*, OECD, *The Control and Management of Government Expenditure*, 1987). Many studies followed in 1990s, mainly by the IMF: (a) A. Premchand, *Public Expenditure Management*, IMF, 1993; (b) *Unproductive Public Expenditures*, IMF Fiscal Affairs Department, 1995; (c) C.J. McDermott and R.F. Wescott, "An Empirical Analysis of Fiscal Adjustments", *IMF Staff Papers*, No. 4, vol. 43, December 1996; (d) G. Kopits and S. Symansky, "Fiscal Policy Rules", IMF, Occasional Paper 162, 1998.

45 European Commission, "Public Finances in EMU 2009," *ibid.* p. 87. See also European Commission, "Public Finances in EMU 2006", pp. 122-168; the European Commission also organised two meetings in Brussels (22 September and 24 November 2006) and presentations in various countries (in Athens the presentation was held on 13 November 2006).

plement each other and decisively affect the fiscal balance:

(a) Institutions, procedural rules and practices governing the preparation, compilation and execution of the budget;

(b) Standing numerical fiscal rules, which usually set limits to the amount[46] or the rate of change of a significant fiscal variable, e.g. the deficit, public expenditure, debt etc;

(c) Finally, the operation of independent bodies,[47] such as the various "independent fiscal authorities", "fiscal councils", research centres etc., which analyse and evaluate the fiscal policy implemented and the fiscal performance, make macroeconomic forecasts, possibly affect the compilation of the budget and make public statements and recommendations on the fiscal policy to be pursued.

The **first set** comprises the rules and procedures for the compilation and execution of the budget, ensuring the principle of budget unity, transparency and reliability. In addition to central government data (state budget – SB), the budget should include sufficient data and information on the other components of general government (i.e. insurance organisations, local authorities and other legal entities in public law), in order to give an overall picture of fiscal management. Moreover, the various budget aggregates should be clearly determined and their year-on-year comparability should be ensured, while the body, agency or person responsible for any deviations in the execution of the budget must be clearly identified (accountability).

Special importance is given to preparing multi-year budgets, or at least a medium-term fiscal framework (usually of three or four years), which would include annual budgets. In general, there must be institutions and practices extending the budget horizon beyond one year, since *the annual budget is seen as a poor basis for sound fiscal management.*[48]

The European Commission uses five criteria to calculate a quality index, which is used to assess the degree of compilation and implementation of medium-term budgets by Member States.[49] On the basis of this index, Greece ranks among the three last,[50] given that it is one of the five countries that do not compile multi-annual budgets or multi-annual budgetary plans.[51]

In the first set of factors, special importance is placed on the establishment and use of an evaluation system for public expenditure at the budget preparation stage (e.g. zero-based budgeting or programme-based budgeting), the timely preparation and submission of the budget to the Parliament, as well as the compilation and publication of reports during the execution of the budget. At the same time, detailed annual accounts must be prepared, enabling the surveillance of the changes in general government assets.[52]

In general, as regards the composite index of budget procedure,[53] which comprises the multi-annual budget as well as the degree of centralisation, transparency, accountability, effectiveness etc., Greece ranks last among the 27 Member States.[54]

The **second set** of factors, i.e. the numerical fiscal rules, is the core of the necessary institu-

46 In absolute terms or as a percentage of GDP.
47 The government, the central bank, parliament or legal entities controlled by the government are not considered as independent bodies. See European Commission, "Public Finances in EMU 2009", *ibid*, p. 93.
48 See European Commission, "Public Finances in EMU 2009", *ibid*, p. 95.
49 This index comprises the following criteria: (a) existence of a domestic medium-term budgetary framework (or budget), (b) connectedness between the multi-annual budgetary targets and the preparation of the annual budget, (c) involvement of the national parliament in the preparation of medium-term budgetary plans, (d) existence of coordination mechanisms between general government layers prior to setting the medium-term budgetary targets, and (e) monitoring and enforcement mechanisms of multi-annual budgetary targets.
50 *Ibid* p. 98, Chart II.4.7.
51 *Ibid.* p. 95
52 It should be noted that almost all euro area countries have occasionally influenced their annual deficit by converting asset items into current budget revenue.
53 This index is also compiled by the European Commission.
54 See Vasilis Th. Rapanos, *Preparation and Execution of the State Budget: European Experience and Greek Reality* (in Greek), IOBE, November 2007, Athens, p.19-40.

tional framework of each country for controlling public finances. Fiscal rules are a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance (e.g. budget deficit, public debt, level of expenditure and other fiscal aggregates) or a major component thereof (e.g. primary expenditure). These rules usually set numerical limits to the level of the main fiscal variables, their amount in relation to GDP or their annual rate of increase.

According to a European Commission survey, numerical rules in place in the Member States (EU-27) went up from 16 to 1990 to 61 in 2005 and 67 in 2008.[55] Moreover, a very significant development is that the rules now apply to the *central or general government*, while in the early 1990s they mainly applied to local authorities.[56]

The latest development is the application of numerical rules to social security as well. The rules used presently mainly concern deficit, expenditure (mostly of central government) or public debt, while the use of revenue rules remains scarce.[57] It should be noted that national rules complement and reinforce the corresponding rules of the Maastricht Treaty and the Stability and Growth Pact.

Data analysis showed that both the introduction of numerical fiscal rules and the widening of their scope to a growing part of general government have led to a reduction of the cyclically adjusted deficit (or to an increase of the surplus). In addition, the adoption of numerical fiscal rules to primary expenditure resulted in the decline in its ratio to GDP. It should be noted that the effectiveness of the rules is enhanced when they are legislatively enacted,[58] when they are promoted by the press and when strong enforcement mechanisms are provided for.

Specifically, the European Commission has constructed an index measuring the strength of fiscal rules in each Member State on the basis of five criteria.[59] The Commission's analysis has shown that an increase in the value of the index (i.e. stronger fiscal rules) lead to better fiscal performance.[60] It should be noted that Greece is one of just three EU countries that do not apply national fiscal rules.[61]

Turning to the **third set** of factors, the most important contribution of the European Commission survey is probably that it recognises the significance of independent institutions that analyse, evaluate and make recommendations on the fiscal policy implemented in each country. These institutions are usually called "independent fiscal authorities" or "fiscal councils". The more reliable these institutions, the more increased their contribution to determining the fiscal balance. These independent institutions usually survey, analyse and evaluate current economic developments in a country, prepare macroeconomic forecasts and public recommendations on the fiscal (or overall economic) policy. The survey data show that 27 independent institutions operate in 17 of the 27 EU Member States. The most recent ones were established after 2005 in Sweden and Portugal, with the clear aim to provide an "independent evaluation of fiscal policy".[62]

The survey shows that the presence of these independent institutions exerts an overall pos-

55 See European Commission, "Public Finances in EMU 2009", *ibid.* p. 87.
56 Ibid, p. 88 and p. 98. The trend according to which fiscal rules cover a growing part of general government is considered as "remarkable" by the European Commission (p. 98).
57 Only six numerical rules on revenue are in place and four of them concern the allocation of revenue collected in addition to the budget provisions; *ibid.* p.88-89 and Table II.4.1.
58 Rules included in the Constitution or legal provisions are more effective than those based on political agreements.
59 The criteria are: (a) the statutory base of the rule, (b) the body in charge of monitoring the imposition of the rule, (c) the body in charge of application of the rule, (d) the existence of automatic correction mechanisms in case of deviation and (e) monitoring of the rule by the media. See European Commission, "Public Finances in EMU 2009", *ibid.* p. 91, Box II.4.3.
60 *Ibid.* p. 89 and p. 93.
61 In the past ten years the Bank of Greece has repeatedly underlined the need to adopt such rules in Greece. See (a) *Annual Report 1999*, p.31, (b) *Annual Report 2001*, p.50, (c) *Annual Report 2003*, p. 69-71, for a detailed and thorough presentation of the numerical fiscal rules and certain necessary conditions for controlling expenditure and public deficits, (d) Annual Report 2004, p. 65, (e) *Annual Report 2006*, p. 213-216, (f) *Monetary Policy – Interim Report 2008*, p. 24, and (g) *Monetary Policy 2008-2009*, February 2009, p. 29-31.
62 European Commission, "Public Finances in EMU 2009", *ibid.* p. 93.

itive effect on fiscal management and contributes to achieving transparency, fiscal discipline and fiscal policy reliability. The size of the effect depends on the reliability and prestige of the institution, properties that enable it to affect public dialogue on fiscal issues and directly participate in the preparation of the budget. It is clear, however, that the establishment of new "independent institutions" in a country requires more time than e.g. the adoption of fiscal rules. Time is also needed for such an institution to acquire prestige and reliability.

Finally, it should be noted that, although each of the three sets of factors that determine the fiscal balance is important and affects the fiscal balance, effectiveness increases when they are all present and operate simultaneously. This is because these three sets of factors affect, support and complement each other.

SPECIAL FEATURE 2
DATA ON AND POLICIES FOR THE COMPETITIVENESS OF THE GREEK ECONOMY AND FUTURE SOURCES OF GROWTH

2.A POTENTIAL ECONOMIC GROWTH IN GREECE: ESTIMATES AND DETERMINANTS[1]

Potential output or full-employment output is central to the formulation and conduct of monetary, fiscal and structural policy. Although the concept of potential output is not really clear, causing difficulty in its estimation, it remains a useful tool for the interpretation of inflation (through the output gap), the implementation of full- employment policies and the analysis of fiscal deficit sustainability.

An ordinary method to estimate potential output is based on the neoclassical production function. Potential output is determined by the available factors of production (capital and labour) and total productivity, i.e. available technology and efficiency with which these factors are combined in the production process. Quantifying the contribution of various factors to the shaping of the potential output is decisive, since it allows the formulation of economic policy suggestions, and a more precise interpretation of cyclical fluctuations. Moreover, the distinction in time horizons (short, medium and long term) allows for a better understanding and study of potential output, because of the different assumptions made and the limitations imposed on each one of them. In the long term, potential output is determined by the trend of total productivity and the inflation rate. In the short and the medium term, determinants[2] such as the degree of productive capacity utilisation and the age of capital affect total productivity, possibly resulting in a deviation of potential output from its long-term trend.

According to the literature (see footnote 1), the average growth rate of the Greek economy's potential GDP in the short, the medium and the long term has been estimated at 3.7%, 3.6% and 2.2% respectively for the period 1995-2008. It is pointed out that the estimate of the average potential growth rate of GDP both in the short and the long term approaches the growth rate of real GDP, while in the long term the potential rate is clearly lower.

Total productivity contributed the most to potential output growth since the mid-1990s, while the contribution of labour (measured by the average annual work hours) and capital was smaller (see Chart 2.1), according to the aforementioned papers (see footnote 1). This is in line with the theoretical belief that, in the long term, total productivity is the driving force of potential output growth.

The factors that have contributed to total productivity growth since the mid-1990s are mainly associated with the measures and the policies adopted during the preparation for Greece's entry in the euro area (such as the deregulation of the financial market) and the preparation for the Olympic Games (increased public investment in infrastructures) and with the transfers from the EU Structural Funds (see also 2.D below). Other factors that contributed to total productivity growth are associated with worker skills: the percentage of employed persons who have completed university studies has increased over time.[3]

Although these factors have affected total productivity and consequently potential output growth positively since the mid-1990s, they are not expected to contribute to the same degree in this direction any further. For this reason it is necessary to adopt measures that will provide a prospect of dynamic development and will increase the production potential of the Greek economy.

Reforms that will aim at eliminating or limiting rigidities in product and labour markets

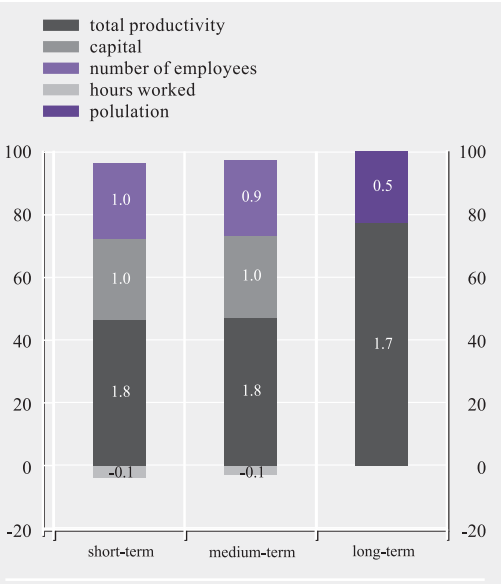
1 This special feature was based on the following papers: Albani M., N. Zonzilos and Z. Bragoudakis (2009), "Estimates of the potential output of the Greek economy with the method of production function" [in Greek], and Zonzilos, N. and G. Pavlou, "The potential growth rate of the Greek economy – Medium-term and long-term estimates – and the role of structural reforms" [in Greek]. These papers were elaborated in the context of Bank of Greece's publication on the balance of payments.

2 Cahn C. and A. Saint-Guilhem (2007), "Potential output growth in several industrialised countries: A comparison", ECB Working Paper Series No 828, August.

3 This percentage has been calculated at 27.2% for 2008 from 18.6% in 1995 (according to Eurostat data) for persons 25-64 years old.

Chart 2.1 Contributions to potential GDP growth rate (1995 - 2008)

(percentages)



Source: Albani M., Zonzilos N. and Bragoudakis Z. (2009).

(opening of markets, opening of closed-shop professions etc.) will boost productivity. This will enhance current production and competitiveness, which will lead to the substitution of imports and the increase in exports and in potential output. Furthermore, measures that are relevant to the labour market will positively affect employment too (the "labour" factor). Measures will also have to be taken in respect to research and technology, the penetration of information systems into the economy (mainly the public sector) and also in respect to education, so as to improve not only the quantity but also the quality of training.[4] Greece had the opportunity to improve total productivity by investing transfer from the European Structural Funds in the appropriate activities (National Strategic Reference Framework - NSRF).

Reducing the fiscal deficit will contribute to increasing the national savings and consequently to the accumulation of capital with the aim of creating wealth (the "capital" factor). Measures of this type aim at increasing potential output.

Simulations run in the paper "The potential growth rate of the Greek economy — Medium-term and long-term estimates — and the role of structural reforms" (see footnote 1) show that reforms aimed at increasing total productivity have a lasting effect on potential GDP. These conclusions are in line with the theory of endogenous development, according to which factors such as research and development, innovation and institutions contribute to long-term economic growth.

2.B PRICE AND COST COMPETITIVENESS AND INDICATIONS ON STRUCTURAL (NON-PRICE) COMPETITIVENESS[5]

The international competitiveness of the Greek economy in terms of prices and labour cost has been following a downward course for more that twenty years, as reflected in the continuous appreciation of all the available real effective exchange rate (REER) indices compiled by the Bank of Greece, the ECB,[6] the European Commission, the OECD, the IMF and the BIS. In spite of their differentiations regarding the sample of trade partners or the deflators used, all REER indices have been recording a continuous loss of competitiveness after 1987-88. The sole exception was the period 1998-2000, when competitiveness temporarily improved as a result of the effort to meet the Maastricht inflation criterion, which was a prerequisite for Greece's entry into the euro area, and the depreciation of the drachma in March 1998 so that it could join the Exchange Rate Mechanism II (ERM II).

In the period following Greece's entry into the euro area (2001-2009), the size of the cumu-

4 See Stournaras G. and M. Albani (2008), *The Greek economy after the crisis: in search of a new economic model*, IOBE.

5 Based on a survey conducted by A. Manassaki, Ch. Catiforis and I.M. Vasardani in the context of Bank of Greece's publication on the balance of payments.

6 Since February 2007 the ECB has been publishing the Harmonised Competitiveness Indicators (HCIs) on its website, i.e. methodologically harmonised indicators of the real effective exchange rate for each Member State of the euro area. Three HCIs are published for each country, distinguished according to the deflator used: the HCPI, unit labour cost in total economy and the GDP deflator.

lative deterioration in competitiveness, calculated on the basis of the appreciation of the broader REER indices compiled by the Bank of Greece stood at 19.7% (based on CPI) and at 27.7% (based on the indices of unit labour cost in total economy – ULCT) (estimates for 2009).[7] The adverse impact of developments in foreign exchange rates is marked, given that the nominal effective exchange rate was appreciated by 13.7%in the said period.[8]

Against the other countries of the euro area, with which Greece conducts 57% of its total external trade, the cumulative appreciation of the REER is smaller, since it is affected only by developments in relative prices. Specifically, in the period 2001-2009, the REER against the other countries of the euro area was appreciated by 9.4% (based on HICP) and by 17.1% (based on unit labour cost indices in total economy).

If we compare the Greek REER indices with their counterparts in the other euro area countries, we find out that competitiveness in terms of prices and unit labour costs has deteriorated across euro area Member States in the period 2001-2008. To begin with, the almost continuous appreciation of the euro in the period 2002-2008 (cumulatively by 36%) impacted severely on all Member States. However, there were significant divergences among economies regarding the degree of loss of their international competitiveness, which ranged from 5% (Austria) to 35% (Ireland). Greece along with Slovakia, Ireland and Spain, are among the economies with the highest losses (see Table 2.1).

There are four factors that may have contributed to the divergent development of competitiveness in various countries of the euro area: (a) the inflation differential, (b) the degree of trade openness to non-euro area countries, (c) the geographical breakdown of each Member State's total international trade and (d) the corresponding breakdown by product and industry.

In the case of Greece, what contributed the most to the loss of competitiveness is the higher, in comparison with its major trading partners, growth rate of inflation and unit labour cost (CPI and ULCT). Specifically, in the 2001-2008 period, the annual average HICP inflation was 3.5% in Greece from 2.3% in the euro area and 2.9% on average in its 28 major trading partners, vis-à-vis which the broader REER indices of the Bank of Greece are compiled.

Only part of the Greek inflation differential relative to these countries is attributable to the initial conditions (low price and income levels) and to the dynamic rise and convergence of the general level of prices and the per capita income in the last decade (the Greek per capita GDP in purchasing power standards −PPS− increased in 2009 to 88.3% of the EU-15 average from 71.7% in 1999).[9] The main causes for higher inflation in Greece are: (a) the faster increase in unit labour cost, (b) the maintenance or even the increase in profit margins in many industries and (c) the permanent lag of total domestic production against demand.

The fact, however, that in international trade the exportable product is not just one and homogenous, but highly differentiated in its technological, qualitative and other features, explains why global competitiveness composite indices, which are compiled by international

7 Percentage change of the indices for 2009 (annual average) against the respective indices for 2000. The broader REER indices compiled by the Bank of Greece, which were revised in 2006, are weighted against imports and exports in manufacturing (categories 5-8 of the Standardised International Trade Classification-SITC) and take into account competition from third markets (double weighting of exports) as well. The indices include 28 trade partners, that account for 94% of Greece's total external trade in manufacturing. Specifically, the trade partners include the Member States of the EU-15 plus the U.S., Japan, Bulgaria, India, Korea, Cyprus, Hungary, Poland, Romania, Russia, Turkey and the Czech Republic.

8 Relevant conclusions on Greece's cumulative loss in competitiveness are also drawn from the available estimates on the equilibrium exchange rate. According to recent estimates of international organisations, the real effective exchange rate is overvalued in relation to its "equilibrium level", by 13%- 34%. See European Commission, *Quarterly Report on the Euro Area*, March 2009, IMF, *Greece - Staff Report for the 2009 Article IV Consultation*, August 2009, and IMF, Greece: Selected Issues, August 2009.

9 European Commission, *Statistical Annex of European Economy-Autumn 2009.*

Table 2.1 Harmonised Competitiveness Indicators[1] (HCIs), inflation, extra-euro area trade openness and current account balance (2000-2008)

	HCIs based on CPIs, cumulative change 2001-2008	Annual average HICP inflation 2001-2008	Extra-euro area trade share in total trade	Current account balance (percentage of GDP)	
				2000	2008
Slovakia	68.6	4.9	40.2	-3.5	-6.6
Ireland	34.7	3.2	67.5	0.0	-4.5
Spain	20.6	3.3	37.3	-4.0	-9.5
Greece	19.6	3.5	42.8	-7.7	-14.4
Netherlands	17.9	2.4	51.8	1.9	7.5
Cyprus	16.9	2.7	48.5	-5.3	-18.3
Luxembourg	16.7	3.0	32.6	13.2	5.5
Malta	16.3	2.5	55.3	-12.6	-6.3
Italy	14.7	2.5	47.7	-0.5	-3.4
Belgium	14.0	2.3	45.7	4.0	-2.5
Portugal	13.9	3.0	30.8	-10.2	-12.1
France	12.0	2.1	46.5	1.2	-1.9
Slovenia	10.7	5.0	35.4	-2.7	-5.5
Germany	9.7	1.9	56.8	-1.7	6.6
Finland	7.8	1.7	59.7	8.1	2.0
Austria	5.0	2.1	37.9	-0.7	3.5
Euro area - 16	**29.4**	**2.3**		**-0.5**	**-1.0**

Source: Bank of Greece calculations based on ECB HCIs and Eurostat data.
1 The HCIs compiled and published by the ECB are calculated on the basis of weighted averages of the bilateral exchange rates of each euro area country vis-à-vis the currencies of its trading partners. A rise (fall) in the HCIs reflects an improvement (deterioration) in international competitiveness. Trade shares are weighted on the basis of imports and exports. Exports take into account third-market competition as well (double-weighting)".

organisations and give indications on the development of a number of economic, structural and quantitative factors, besides relative prices and costs (non-price competitiveness), are of importance. These indices sum up the effort put into capturing the development of the "overall" international competitiveness of economies. Notwithstanding the reservations concerning the methodology and the shifting classification of various countries which are included in these indices, the latter provide useful indications on the evolution of competitiveness. An examination of the evolution over time of three of the most well-known indices of international competitiveness in the 1995-2009 period[10] shows that: (a) Greece's "overall" international competitiveness is generally very low and (b) it involves two phases. In the first phase, from 1995 until 2006-2007, there was a continuous but slight improvement, while in the years that followed and up until today overall competitiveness in Greece has been following a downward path.

The need for considerable and permanent improvement of the goods and services balance, through a reversal of the declining trend of international competitiveness, becomes more imperative than in the past, given: (a) the continuous deterioration of the income deficit (owing to the increase in interest payments on account of the growing external debt and the rise in lending rates) and (b) the diminishing contribution of current transfers (owing to the increase in net income transfers abroad and the gradual reduc-

10 The indices published by the Institute for Management Development, the World Economic Forum and the World Bank.

tion of transfers from the EU) to the current account balance.

Apart from price and cost competitiveness, the Greek economy must improve its structural (non-price) competitiveness as well. Low structural competitiveness is associated with the inability of domestic supply to meet the composition and growth of domestic and external demand. This inability implies a persistently high growth rate of imports in consumer, intermediate and capital goods and, consequently, an excessive trade deficit of goods and services.

The most important determinants of Greek non-price competitiveness which must be underlined are, *inter alia*: the consolidation of public finances; the rationalisation and objectification of the tax system; a more effective public administration (by reducing red tape and tackling corruption); the encouragement of research, development and entrepreneurship; the promotion of innovation and export orientation of businesses; and the improved "vertical" and "horizontal" differentiation of the output (i.e. its quality and variety, respectively). Furthermore, the enhancement of non-price competitiveness will also be underpinned by greater flexibility concerning the distribution of the factors of production among industries and businesses, as well as by the amount and quality of foreign direct investment – particularly the kind that can become a vehicle for the import of know-how, innovation and quality.

2.C STRUCTURAL REFORMS IN PRODUCT AND LABOUR MARKETS AND IN INSTITUTIONS: A SOURCE OF DEVELOPMENT

A STRATEGY FOR SUSTAINABLE DEVELOPMENT: OBJECTIVES, CONDITIONS AND MEANS

Characteristics of the period of convergence (1996-2008)

During 1996-2008, the average annual growth rate of the Greek economy was 3.7%, while in the euro area it was only 2.3%. Owing to this divergence, and given that the growth of inflation did not differ considerably between Greece and the euro area, the Greek per capita income (in PPS) in 2008 was 86% of the euro area's (from 72.9% in 1996).

Growth in the period 1996-2008 was combined with the improvement of total productivity (which reflects determinants that are not portrayed in the quantity of the factors of production, such as the efficiency of the production process, technology, the improvement of labour skills, etc). At the same time, the capital-to-labour ratio increased, same as the employment rate.[11]

Growth in this period, nonetheless, came mainly from a few sectors, thanks to credit expansion and fiscal policy. At the same time, for a prolonged period after the early 2000s, the output gap, i.e. the difference between actual and potential output as a percentage of the latter, was positive, suggesting that demand constantly exceeded supply, a situation that is not sustainable.[12] The fiscal deficit and the current account deficit reveal the imbalances that were created.

Of the four sectors that mostly contributed to growth in this period (shipping, trade, construction and the financial sector),[13] two (trade and construction) are protected against international competition and are of relatively low technology intensity. The relatively high demand for the output of the trade and the construction sectors also fuelled the very high percentage of private expenditure for consumption and residential

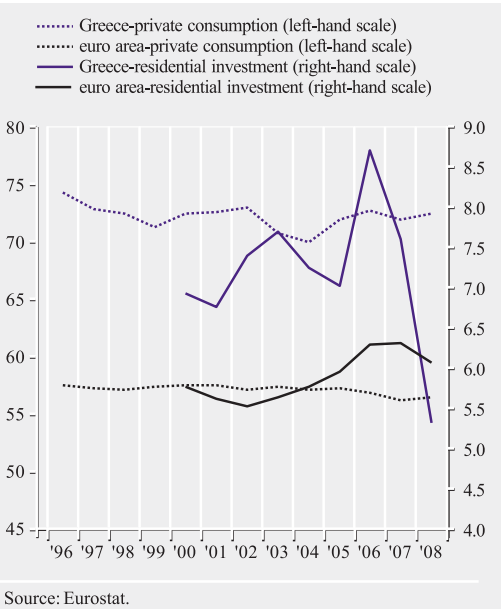
11 See Savva-Balfoussias, S. (2004), "Productivity growth in the Greek business sector" in Lianos, T. (ed.) *Essays in Economic Analysis – Festschrift for the 45th foundation anniversary of KEPE*, Papazisis Publishers. See also footnote 1.

12 See Tavlas, G and P. Petroulas (2009), "Growth regressions, the role of institutions and Greece", (translated in Greek) in Bank of Greece's publication on the balance of payments.

13 See, inter alia, Nikolitsa, D (2005), "Per capita income, productivity and labour market participation: recent developments in Greece", *Economic Bulletin* No 25, Bank of Greece, and Gibson, H. (2009), "Sectoral growth in the Greek economy, 1995-2003", mimeo, Bank of Greece, May.

Chart 2.2 Private consumption and residential investment

(percentage of GDP)



Source: Eurostat.

investment in total output (see Chart 2.2)[14] – a development which was also supported by credit expansion.[15] Industries exposed to international competition, such as manufacturing and tourism, did not record similar growth rates, possibly because they could not cope with competition (owing to their lower productivity that was not offset by lower prices).[16]

The structure of supply in the Greek economy

Despite its significant increase during 1996-2008, labour productivity in the Greek economy is still considerably lower than the euro area average. This shortfall is attributable both to the composition of activity (concentration on industries with low capital and technology intensity, such as the agricultural sector, construction or trade) and the lower labour productivity in all industries.[17] Agriculture, construction, trade and public administration engage a considerable percentage (about half) of all employed persons: 11.5%, 8.2%, 18.2% and 8.3% respectively). These sectors are protected against international competition or are of low capital and/or technology intensity or both. At the same time, lower penetration of new technologies in total economy combined with other structural weaknesses (e.g. weaknesses of the educational system; limited on-the-job training; rigidities in goods, services and labour markets; the energy intensity of economy etc.) and the relatively small size of the average Greek enterprise can explain the shortfall of productivity in the Greek economy against the euro area average.[18]

Besides low productivity, the Greek economy also lags behind the euro area as far as the participation of population (15-64 years old) in the labour market is concerned. Notwithstanding the noticeable improvement of participation and employment rates from the end of the 1990s onwards, the rate of participation in the labour force in 2009 is in the area of 68% (euro area: 71.5%) and the employment rate of 62% (euro area: 65%).

Development strategy: objectives, conditions and means

In order to achieve high and sustainable growth it is necessary to transfer resources to more outward-oriented sectors, high-value-added and technology-intensive activities, as well as to increase the productivity of the

14 During 1996-2008, private consumption corresponded to 72% of GDP and the sum total of private and public consumption to 89%; the corresponding percentages in the euro area were 57% and 77% respectively.

15 The ratio of outstanding consumer loans to GDP increased from about 4% in 2000 to 15% in 2008.

16 Indicatively, according to the classification of sectors depending on whether they produce or use Information and Communication Technologies (ICT), which has been proposed by Inklaar, R. M. Timmer and B. van Ark (2003), the manufacturing sectors with the highest development in Greece between 1996 and 2008 (e.g. food and beverage) are industries that neither produce nor use ICT.

17 Fotopoulos G., and B. Droucopoulos (2008) "Structure, transformations and productivity of the Greek economy: a sectoral approach", in: Giannitsis, T (2008), *The Greek economy: crucial questions of economic policy*, argue that the sectoral structure of the Greek economy is not primarily responsible for the shortfall of labour productivity in the Greek economy and conclude that a series of other features (e.g. the degree of penetration of technology, the strength of competition, the level of innovation) are more important in explaining the shortfall of productivity in the Greek economy.

18 See Sideris, D. (2009), "The role of product and labour market regulations and education in explaining productivity developments in Greece" [in Greek] mimeo, Bank of Greece, on the conditions under which education has beneficial effects.

economy in general.[19] The obvious general objective is sustainable convergence to the level of prosperity (measured on the basis of the average per capita income and a series of other prosperity indices, concerning, e.g., clean environment) in a group of developed countries (the 15 oldest members of the EU or the euro area), given the constraints known at present. These constraints are: the imperative and immediate need to correct fiscal imbalances, the projected demographic developments (population ageing) and climate change. In the short run, the problem is how to create the conditions that will lead to the optimum allocation and the more efficient use of the available resources under the current fiscal constraints, as well as how to enhance the outward orientation of the economy. On a longer horizon, the problem involves the increase in available resources (labour and capital) and the improvement of their quality so as to ensure sustainable development. An indicative example of successful adjustment of the economy after a deep crisis is Finland, with its "transformation" into an economy supported by highly technology-intensive industries.[20]

There is ample room for change in the production model, provided that reforms will be formulated comprehensively (in order to avoid contradictory policies and make good use of the synergies), that they will be vested with political will for their continuation, they will be materialised at a fast pace and they will be continuously evaluated in terms of effectiveness.[21]

The conditions that will allow a more effective utilisation of the available resources include the creation of a stable and transparent institutional framework and the elimination of rigidities in goods, services and labour markets, as well as a better match between sources and uses of financing. The improvement of the quality of human capital and infrastructures will contribute in the same direction.

In more detail, economic policy is called upon to create the conditions for the development of business activity, particularly in high-value-added and outward-oriented sectors. The efficient utilisation of the factors of production (increasing the employment rate, exploiting the unexploited energy sources), the increase in the capital/labour ratio (penetration of new technologies, improvement of infrastructures) and the more effective organisation of the production process are the conditions for the development of business activity.

Institutions in a society are not exogenously defined usually, but as a reaction to developments (e.g. the unemployment benefit became necessary after the rise in unemployment etc.). Consequently, institutions must change when conditions change (e.g. classification or reclassification of certain professions as heavy-duty and unhealthy when working conditions change, prolongation of working life when life expectancy increases etc.).

Of course, it is to be expected that reactions to changes will be strong, as certain institutions have been so much embedded in the walk of life that their necessity is not examined.[22] Among the institutional changes that a modern society requires is the reform of the political system. The elimination of clientelism and the implementation of meritocracy will enhance transparency and restore confidence in a business environment characterised by consistency and continuity.

Institutional changes are also required in the goods and services markets, ensuring their smooth and flexible operation. Economic activity will also expand by putting in place clearly formulated rules that will apply to the operation

19 The need of macroeconomic policy makers to monitor the composition of output as well is underlined in recent analyses (see e.g. Blanchard, O, G. Dell' Ariccia and P. Mauro, "Rethinking Macroeconomic Policy", IMF Staff Position Note SPN/10/03, February 2010).

20 See Honkaphja, S., E. A. Koskela, W. Leibfritz and R. Uusitalo (2009), *Economic prosperity recaptured: the Finnish path from crisis to rapid growth*, Cambridge, Mass: MIT Press.

21 See Pagoulatos, G. (2008), "Public administration, political system, economy: the structural constraints" and Papoulias, D. B. (2008), "Public policies: obstacles tot heir delivery" in Giannitsis T. (op.cit.).

22 Ibid.

of markets generally and will aim at protecting consumers, instead of protecting businesses and professionals against sound competition. One of the conditions for flexibility in a market is sound competition.[23] While, in absolute terms, the regulatory framework governing the operation of goods and services markets in Greece is improved in 2008 compared with 1998, a comparative evaluation with other countries is less favourable, according to the OECD (see OECD Product Market Regulation Database).

The importance of the institutional environment in the growth process has been extensively examined in economic literature (both theoretical and empirical). According to a recent study, red tape,[24] the quality of legislation and corruption affect economic growth. The study supports that, if in the period 1997-2006 Greece stood up to the average quality of laws in the EU-15, the country's per capita income would be higher by 15.3%.[25]

Most societies remain skeptic to the question whether flexible work relations are necessary. In the Greek society, the typical argument against the suggestions of international organisations that have studied the pertinent provisions and concluded that there are obstacles to the smooth and flexible operation of the market, is that these limitations do not apply in practice, because there is a high percentage of self-employed persons and because the provisions on employees are more often than not circumvented. However, the following questions still need to be answered:

(a) Whether the operation of the labour market —with such a high percentage of self-employed persons— is in the end the outcome of institutions that apply in labour, goods and services markets and associated e.g. with high social security contributions and with the increased possibilities for tax-evasion allowed by self-employment;

(b) Whether such institutions discourage the establishment of large enterprises and lead to the existence of many small enterprises;

(c) If the determination of wages was more flexible, would that allow for the loss of fewer jobs in the event of an economic crisis;

(d) How can business activity (and consequently jobs) be transferred from declining sectors to new and dynamic ones (e.g. by facilitating the establishment of new enterprises, updating the training programmes, etc.).

The prerequisites for sustainable development also include the improvement of infrastructures, an increase in the size of average Greek businesses and an enhancement of the results of the educational process.

The means for the achievement of these objectives should be sought mainly in the development of new financial instruments,[26] incentivisation through the investment law, the cost-benefit analysis of investment schemes, target-setting and evaluation. However, these will not bear fruit if the prerequisites for a healthy business environment are not met.

Particularly interesting and useful structural policy proposals are included in the ***OECD annual report Economic Policy Reforms —Going for Growth 2010***, published on 10 March, as well as in the special edition ***Greece at a glance— Policies for a sustainable recovery***, which was presented in Athens on 15 March and summarises the findings of many OECD papers and the proposals that the OECD has set forth from time to time.

2.D EU TRANSFERS[27]

Since Greece's entry into the EU in 1981 and up until 2009 sizeable community funds have

23 Lack of competition is evident by the high level of inflation even amid the crisis.
24 Constraints to business activity owing to red tape associated with the setting-up of enterprises and the complexity in the cessation of the operation of enterprises have been stressed in numerous studies. See indicatively SEV-IOBE pilot survey, 16 June 2005.
25 See footnote 12.
26 The Stability and Growth Programme and the Ministry of Finance make mention of some new financial instruments (e.g. through the European Investment Bank etc.)
27 Based on a survey conducted by A. Manassaki and E. Koltsida in the context of Bank of Greece's publication on the balance of payments.

been transferred to Greece. Total net transfers from the EU (receipts minus contributions to the Community Budget – CB) in the 1990s averaged €3.7 billion and corresponded to €4.2% of GDP. During 2000-2009 they increased to €4.3 billion and corresponded to 2.3% of GDP. In their largest part, community funds transferred to Greece during 1981-2009 relate to subsidies and grants in the framework of the Common Agricultural Policy (CAP), but the percentage of these in total community funds gradually declined in favour of receipts for structural actions. Specifically, in the period 2001-2009, i.e. since Greece's entry into the euro area, about 45% of total receipts from the EU were subsidies and grants (€2.4 billion annually) under the CAP. The remaining receipts relate to structural actions in the context of the Community Support Frameworks (CSFs).

Only the current transfers balance, which apart from the current EU transfers also includes emigrants' remittances, and the services balance (travel services and shipping) are in surplus, partly making up for the trade deficit and the income deficit. The large widening of the current account deficit over time displays the importance of community transfers, given the structural problem of the trade balance. Total net EU transfers (current and capital) narrow the current account deficit and the capital transfers deficit, reducing the capital requirements of the economy which are met with foreign investment or external borrowing.

Community transfers, apart from their positive effect on the balance of payments, have also a more general effect. They affect other balances too, by increasing the import of capital goods and of consumer goods, the latter being the result of the support that transfers lend to the income of certain population groups. Finally, they impact on the balance indirectly, as they affect productivity, competitiveness and the growth process in general. This impact is associated with the degree of absorption and the efficient management of Community funds. The channels through which the balance of payments and the economy in general are affected are different for each type of transfers.

Large-scale subsidies and direct grants under the CAP contribute to the increase in GDP. Although they narrow the current account deficit on a cash basis, they widen it at the same time through the increases in income and the concomitant increases in imports and potentially in inflationary pressures. The more general impact of these transfers on the agricultural sector and the total economy vary due to the successive CAP reforms. Given that the intermediate CAP revision (2003), which has been gradually applied to Greece since 2006, includes many extensive changes, CAP now has a different impact than in previous periods.[28] Consequently, at the present phase it is not possible to draw a global conclusion, if the composition of the Greek agricultural sector and the individual features of each product market are not taken into account.

A general evaluation of the Community Support Frameworks (CSFs), combined with the results of empirical studies at the Greek and the Community level, has shown that Community structural funds contributed to GDP growth and supported employment. Through the promotion of public and private investment, they laid the foundations of an integrated framework for growth. The investment programmes that are being materialised through the CSFs contribute to the development of infrastructures, the improvement of technology and the enhancement of workforce. During the implementation of the CSFs, imports grew more that exports, as a result of the increase in investment demand and in consumption, which is attributed to the rise in

28 A key element of the "intermediate revision" of the CAP is the gradual replacement of the system of subsidising agricultural product prices with direct grants to producers and the detachment of direct grants from production. At the same time, part of the Community funds was transferred to "Rural Development" which now constitutes the second pillar of the CAP. In 2007 the European Commission proposed the so-called "health check" of the CAP with the aim of further modernising it without adding burden to the CB for 2007-2013. The health check will constitute the basis for the future financing of the CB and generally the orientation of CAP after 2013.

income. In the long run, however, this trend is reversed. The increase in investment and in potential economic growth affects the balance of payments favourably. Moreover, any inflationary pressures, arising during the implementation of the said programmes, are gradually dampened.

The 1st CSF mainly supported economic activity in the provinces, while the 2nd CSF emphasised mainly on large infrastructure projects. As regards the 3rd CSF (2000-2009), the impact on GDP and employment is mainly attributable to short-term effects from the demand side. Effects from the supply side, which will appear in the future, will contribute to the maintenance of higher growth rates over longer horizons. At present, there are effects from the supply side as well, which come from the previous CSFs. During the implementation of the National Strategic Reference Framework (NSRF), the long-term effects of the 3rd CSF will become visible too.[29]

In the fiscal period 2007-2013, Greece has secured community financing of €24.3 billion for the implementation of the NSRF (4th CSF), including funds for agricultural development. Furthermore, grants and subsidies under the CAP remain high. If contributions to the Community Budget are taken into account, net transfers are estimated at €3.5 billion on average annually.

In the 2007-2013 period, certain factors facilitate the absorption of Community funds. These are the following: (a) the higher Community co-financing rate in respect to the total cost of projects and programmes related to the 3rd CSF, which saves equivalent national funds, and (b) the extension for one more year of the possibility to recourse to Community funds.[30] At the same time the European Commission has approved of favourable arrangements for addressing the financial crisis (e.g. additional advance payments).

At the same time, the absorption and more efficient utilisation of the available Community funds is facilitated by the revision of the NSRF business schemes and the simplification of management processes, as provided for by the Stability and Growth Programme. Specifically, in the first quarter of 2010 two key reforms will be adopted. The first relates to the considerable simplification of procedures for the creation, organisation, monitoring and evaluation of projects, which will be achieved with the revision of Law 3614/2007 governing NSRF management. Many procedures will be transferred to regional governments. The second key reform refers, inter alia, to the reorientation of NSRF business schemes towards "green" activities, the restructuring of production, innovation and workforce investment. A special programme for civilisation, tourism and health is also envisaged.

The European Investment Bank will contribute to the financing of the NSRF, same as the improved application of the law on public-private partnerships (PPP) (Law 3389/2005), which relates to the development, construction, operation and financing of projects in various sectors. As regards funds under the Public Investment Programme, co-financed projects will be given priority. Moreover, the materialisation of NSRF is expected to contribute generally to the implementation of the investment law, which is to be revised and approved in 2010.[31]

The effective use of NSRF funds may lead to the enhancement of productivity and compet-

29 See, e.g. Beutel, J (2002), "The economic impact of objective 1 interventions for the period 2000-2006", European Commission, Bradley et al. (2004), *A study of the Macroeconomic Impact of the Reform of the EU Cohesion Policy*, The Economic and Social Research Institute. Varga, J. and Veld, J. (2009), "A Model-based Analysis of the Impact of Cohesion Policy Expenditure 2000-2006", European Commission, Economic and Financial Affairs, European Economy, Economic Papers, No 387. European Commision, *Fourth Report on Economic and Social Cohesion*, May 2007. European Commission (1995), Fifth *Annual Report on the Implementation of the Reform of the Structural Funds*, COM (30) final, 20 March 1995. Ministry of Finance, Regional Development Plan 1994-1999, Dec. 1993 (2000), 3rd CSF 2000-2006, (2006), NSRF 2007-2013.

30 The well-known rule (N+2) becomes (N+3), only for the years 2007-2010, however.

31 See The Updated Greek Stability and Growth Programme, Jan. 2010, p. 47, and the announcement of the Ministry for Development of 17 February 2010.

itiveness of the Greek economy, essentially helping address the more permanent structural causes of the current account deficit and facilitating, at the same time, the process of real economic convergence.

Community funds take on critical importance at present as, on account of the serious fiscal difficulties, the national funds available for Greece's growth policy are limited. About 65% of the Public Investment Programme is co-financed with Community funds and Community participation amounts to about 60% (on average in the 2000-2010 period), thereby saving on national funds.

Let it be noted that the NSRF is the last transfer of such high structural Community funds to Greece and that after 2010 new measures will apply relative to the CAP. Consequently, the period 2007-2013 is essentially a transitional stage, considering that after 2013 the funds - although still substantial - will be considerably reduced. This is why the best possible use of these funds and preparation for the post-2013 period are imperative.

2.E THE CONTRIBUTION OF TOURISM AND MERCHANT SHIPPING TO GROWTH[32]

In the five-year period 2005-2009, the services surplus financed about 43% of the trade deficit and amounted to 6.9% of GDP. This surplus is made up by travel and sea transport receipts in almost equal amounts, although the share of transport receipts increased considerably during 2007-2008, due to the high freight rates and the low growth of travel services. The financial and economic crisis, however, contributed to shrinking the services surplus by 27% in 2009 against 2008; the surplus is expected, however, to improve slightly in 2010.

TOURISM

Tourism is a significant economic sector in Greece and contributes substantially to growth. In the five-year period 2005-2009, travel receipts —in spite of the occasional strong fluctuations— generally remained stable and accounted on average for 3.9% of GDP (see Table 2.2). At the same time, a large number of other activities, mainly at a local level, were supported by tourism and, as a result, the tourism industry contributed both directly and indirectly to job creation and income production.[33]

In 2009 net travel receipts accounted for 62.9% of total net receipts from services, amounted to 3.3% of GDP and covered about 25.7% of the trade deficit (see Table 2.2). Inflows from travel services dropped by 10.9%, the largest decline in the last five years, and arrivals were reduced by 6.4%. The significant impact of the financial crisis on tourism is reflected on the average duration of stay, average spending per journey and average expenditure per overnight stay, all of which dropped during January-September 2009 (see Table 2.3).

The bulk of travel receipts comes mainly from EU-27 residents. However, their share has been decreasing since 2007. About 2/3 of the receipts from EU-27 relate to euro area residents, whose participation in travel receipts from all over the world was 48.3% in 2009. The two most important markets are those of Germany and the United Kingdom with a participation in total travel receipts of about 17.5% and 15.8% respectively. In 2009 their shares stabilised at the already reduced levels of 2008, as these two countries were strongly affected by the financial crisis.

It is a fact that the international economic crisis affected travels adversely on a worldwide scale. International tourism demand was markedly reduced, particularly in the first nine months of 2009, while, according to the World

32 Based on a survey conducted by Aik. Klouri and St. Panagiotou in the context of Bank of Greece's publication on the balance of payments.

33 A Survey of Tourism Satellite Accounts of the World Travel and Tourism Council for 2008. According to this survey, total direct and indirect contribution of the tourism sector to GDP amounts to 17.2% in Greece. Also, its direct participation in job creation is estimated at 10.8% and its direct contribution to it at 20.9%.

Table 2.2 Key macroeconomic aggregates of tourism and shipping

(million euro)

	January-December					Five-year average
	2005	2006	2007	2008	2009	2005-2009
Trade balance	**-27,558.9**	**-35,286.3**	**-41,499.2**	**-44,048.8**	**-30,760.3**	**-35,830.7**
Services balance	**15,391.1**	**15,337.1**	**16,591.7**	**17,135.6**	**12,567.2**	**15,404.6**
Travel receipts	10,729.5	11,356.7	11,319.2	11,635.9	10,369.1	11,082.1
Annual rate of change (%)	3.7	5.8	-0.3	2.8	-10.9	0.0
Travel payments	2,445.7	2,382.8	2,485.7	2,679.1	2,466.4	2,491.9
Annual rate of change (%)	5.9	-2.6	4.3	7.8	-7.9	1.3
Net travel receipts	8,283.8	8,973.9	8,833.5	8,956.8	7,902.7	8,590.1
Annual rate of change (%)	3.1	8.3	-1.6	1.4	-11.8	-0.3
Net travel receipts as:						
– % of GDP	4.2	4.3	3.9	3.7	3.3	3.9
– % of the trade balance	30.1	25.4	21.3	20.3	25.7	24.0
– % of the services balance	53.8	58.5	53.2	52.3	62.9	55.8
Receipts from sea transport	12,953.0	13,280.2	15,678.5	17,623.6	12,261.7	14,359.4
Annual rate of change (%)	4.4	2.5	18.1	12.4	-30.4	-0.2
Payments for sea transport	4,646.9	5,024.5	5,426.8	6,484.6	4,789.7	5,274.5
Annual rate of change (%)	3.6	8.1	8.0	19.5	-26.1	1.3
Net receipts from sea transport	8,306.1	8,255.7	10,251.7	11,139.0	7,472.0	9,084.9
Annual rate of change (%)	4.9	-0.6	24.2	8.7	-32.9	-1.2
Net receipts from sea transport as:						
– % of GDP	4.3	3.9	4.5	4.7	3.1	4.1
– % of the trade balance	30.1	23.4	24.7	25.3	24.3	25.4
– % of the services balance	54.0	53.8	61.8	65.0	59.5	59.0

Sources: Bank of Greece and NSSG.

Table 2.3 Evolution of spending per journey, per night and average duration of stay of tourists in Greece

	January-September				
	2005	2006	2007	2008	2009
Spending per journey (in euro)	769.6	768.6	726.5	756.4	724.8
Spending per night (in euro)	69.7	69.7	69.8	76.2	73.7
Average duration of stay (nights)	11.1	11.0	10.4	9.9	8.8

Source: Bank of Greece, Border Survey.

Tourism Organisation, it was expected to record a decline of 4% for 2009 as a whole. European destinations were affected the most and it is estimated that tourists visiting Europe dropped by 6%, about as much as tourists visiting Greece. As the Greek tourism product is characterized by high income elasticity of demand, adverse economic developments in the tourists' countries of origin affect total receipts adversely. The drop in arrivals combined with the reduced average duration of stay and the reduced average spending per night impacted on income from tourism, and consequently on the balance of services, significantly.

Tourism was also affected by the socio-economic composition of the majority of tourists (mainly of average or low income) and the high seasonality of the Greek tourism product (which invests in the combination of "sun and sea"). In recent years, Greece is faced with increasing competition from new emerging destinations that are considerably cheaper. At the same time, the lack of tourism infrastructure and specialised workforce is a key problem of Greece's tourism industry. The legal framework governing tourism and the shortages in land transport infrastructure are issues that must be dealt with for the development of tourism to continue.[34]

Prospects for 2010

The year 2010 is expected to see tourism stabilise. The World Tourism Organisation estimates that, at a global level, travels will recover and record an increase of 3%-4%. Also that inbound tourism to Europe will recover at a moderate pace, recording an increase of 1%-3%. Greece is expected to follow in the steps of Europe, with international arrivals stabilising at 2009 levels, as many of its visitors' countries of origin are overcoming the economic crisis. However, stabilisation or a small increase in arrivals, together with a declining average duration of and declining average spending, are not expected to substantially improve income from tourism and consequently the services balance.

Policy proposals

The economic policy for tourism must aim at providing higher quality, differentiated services (numerous special interest choices), as well as at painting a better picture of the tourism product. Attention must be paid to the enhancement of price competitiveness and quality. The fact that there is ample room for penetration in new markets, e.g. new EU Member States and a lot of emerging countries, should also be taken into account.

MERCHANT SHIPPING

In the five-year period 2005-2009, sea transport services recorded a surplus, which contributed decisively to containing the current account deficit, since it covered more than 25% of the trade deficit and accounted for 4.1% of Greece's GDP (see Table 2.2). Gross receipts from sea transport services were high compared with the other countries of EU-27. Specifically, in EU-27 as a whole, these receipts were no higher than 1% of GDP, whereas in Greece they exceeded 6%.[35] At the same time, merchant shipping provides employment —directly and indirectly— to about 200,000 employees.[36] Although during 2005-2008 net receipts from sea transport services increased at an average annual rate of 10%, the global financial crisis —which has been hitting ocean-going shipping since the fourth quarter of 2008— contributed in 2009 to the drop in net receipts by 33%.

The structure of the Greek-owned fleet

Shipping companies' high level of profitability throughout the world in recent years and ample liquidity in international money and cap-

34 World Economic Forum (2009), *The Travel & Tourism Competitiveness Report.*

35 In 2008, Denmark recorded the highest receipts in EU-27 (€25.6 billion), followed by Germany (€23.3 billion) and Greece (€17.6 billion). As a percentage of GDP, however, Danish receipts came to 11.0%, German to 0.9% (owing to the size of the German economy) and Greek to 6.9%

36 European Commission – DG Fisheries and Maritime Affairs (2006), *An exhaustive analysis of employment trends in all sectors related to sea or using sea resources: Country Report-Greece.*

ital markets before the financial crisis were conducive to increased orders of new ships, a strategy also adopted by Greek shipping companies. The process of the Greek-owned fleet renewal contributed to its qualitative enhancement, as reflected in its reduced average age. More specifically, the difference in the weighted average age[37] between the Greek-owned fleet and the world fleet amounted in 2005 to about 2 years, while in 2009 it shrank to just 3 months. The Greek-flag fleet is considerably younger than both the world fleet and the Greek-owned fleet and averages 5.2 years of age.

In 2009, the share of the Greek-owned fleet in the world fleet continued on its downward path —which had started in 2005— and came to 15.3% (in terms of load-bearing capacity – dwt).[38] This is due, on the one hand, to the smaller number of orders for the construction of new ships in comparison with the size of the Greek-owned fleet during 2003-2006 and, on the other hand, to the sale of older ships. However, it is estimated that increased orders for ships ever since will increase the share of the Greek-owned fleet as from 2011.

Freight market

In 2009 ship freights for the transportation of dry (bulk) cargo recorded an average annual reduction of about 60% compared to 2008. However, the high demand for raw materials (mainly iron ore and coal) from China and India contributed to the recovery of freights, in spite of the fact that the capacity of the world dry (bulk) cargo fleet increased by about 10%. Specifically, in the fourth quarter of 2009 freights rose by 118% against the first quarter of the year.

Reduced freights for crude oil tankers in the first three quarters of 2009 are the result of, on the one hand, the drop in global oil consumption (by 1.5%) and, on the other, the increased capacity of the world oil tanker fleet by about 10%. From the end of the third quarter of 2009 onwards freights started to pick up, a fact attributable both to the use of part of the fleet for the storage of crude oil and to the heavy winter in the western hemisphere (see Chart 2.3).

Prospects for 2010

Freight rates for dry (bulk) cargo vessels are estimated to rise in 2010, despite expectations on an increased capacity of the world dry cargo fleet by more than 10% in 2010 compared with 2009. This estimate is based, on the one hand, on the increased demand for dry cargo sea transport services by about 5% —the largest increase is expected in the demand for the transfer of iron ore— and, on the other hand, on the already observed delay (due to congestion) to the loading and unloading of ships at the ports of Australia and China, which limits the supply of available ships.

The expected increase in the capacity of the world tanker fleet by about 10% in conjunction with the small rise in global oil consumption (by about 1.9%[39]) are estimated to put pressure on tanker freight rates. However, if shipping companies speed up the withdrawal of single-hull tankers, the increase in the fleet capacity could be limited to 2-3%, which would help avoid a reduction in freight rates.

Policy proposals

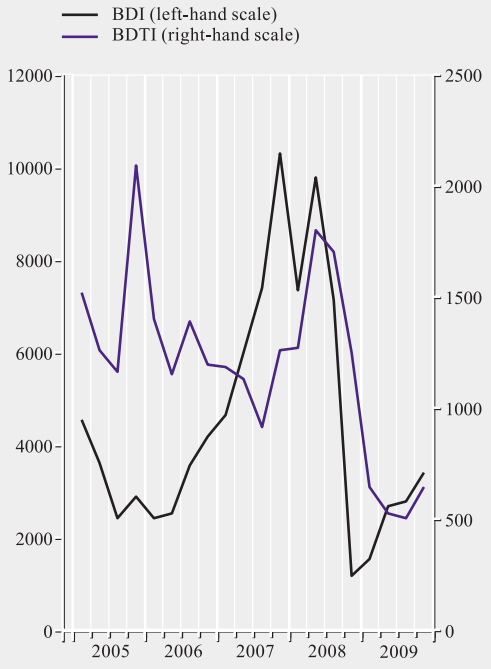
The level of sea transport receipts depends, on the one hand, on the volume of business of the Greek maritime cluster, and on the other hand, on the level of freight rates. Greek shipowners engage mainly in the transportation of dry (bulk) cargo and oil tankers,[40] two sectors with competitive market characteristics,[41] thus freight rates are shaped in the world freight

37 Weighted according to the load-bearing capacity (dwt).
38 Greek Controlled Shipping (February 2009) – Greek Shipping Cooperation Committee based on data from the Lloyd's Register-Fairplay.
39 International Energy Agency, *Oil Market Report*, 11 February 2010.
40 Bulk cargo ships account for 47% of the Greek-owned fleet, crude oil tankers for 35%, oil product tankers for 9% and containers for 5%.
41 See also: Clarkson Research Services (2004), "The Tramp Shipping Market".

rate market (price takers). Consequently, a lasting increase in receipts from the provision of sea transport services could be achieved through the enhancement and the expansion of the maritime cluster and the attraction of new companies. Traditionally, the main policy for the attraction of shipping companies has been the registration of ships under the Greek flag. However, policies that enhance the maritime cluster through the development of services that are auxiliary to shipping, such as banking, insurance (e.g. P & I clubs) and cargo and vessel brokerage, should also be examined. At the same time, essential to the development and maintenance of the maritime cluster are (i) the attraction of young people to the seafaring profession and (ii) the enhancement of the human capital of the merchant shipping industry. Finally, the development of Greece's port infrastructures, expanded cooperation with port facilities' management companies and the attraction of container shipping companies can contribute to increased receipts from services that are auxiliary to shipping.[42]

Chart 2.3 Evolution of the indices of freight rates for dry cargo vessels (BDI) and oil tankers (BDTI)

(average quarterly data)



Source: Clarkson Research Services.

2.F THE POTENTIAL OF "GREEN GROWTH" AND TACKLING CLIMATE CHANGE

The potential of "green growth"

"Green growth" can contribute to the economic development of Greece. It is a new productive restructuring model that brings about significant changes to technology, production and consumption. These changes are inextricably connected with the quality of products and the protection of the environment. Promoting green growth can make good use of Greece's competitive advantage in respect to renewable energy sources and improve its economic prospects, at the same time mobilising sizeable funds and human resources. Furthermore, the global problem of climate change and the orientation of the world economy towards solving it make the adoption of this growth model all the more imperative.[43]

Productive restructuring through a "green economy" agenda is one of the key orientations of the Stability and Growth Programme.[44] The turn towards this form of economic growth is directly associated, besides the need for addressing climate change, with Greece's rich potential as far as renewable energy sources (RES) are concerned. Green growth involves large-scale investment in energy-saving technologies and RES technologies, with the aim of substantially changing the energy mix by 2020, as well as enhancing the quality of products and services in sectors such as transportation, tourism, agri-food industry etc.

42 Policy Research Corporation (2008), *The role of Maritime Clusters to enhance the strength and development in European maritime sectors-Study Commissioned by the European Commission (DG MARE).*

43 Prime Minister's speeches of 30 November 2009 and 14 January 2010 and the speech of the Minister of Finance of 14 January 2010.

44 Ministry of Finance, *Update of the Hellenic Stability and Growth Programme*, January 2010.

In order to attain the abovementioned objective, the Ministry of Environment, Energy and Climate Change submitted a draft law on the acceleration of RES development.[45] The broad lines of the new draft law on RES involve a restructuring of the regulatory framework for licencing RES projects; the materialisation of the necessary infrastructure projects in the high-potential areas for the development of RES; changes in the existing Specific Framework for the Spatial Planning of RES; the implementation of development incentives and an integrated energy pricing policy; the enhancement of research and the improvement of Greece's electric transmission network in order to make better use of the energy produced. The proposed draft law[46] aims at restructuring and simplifying the licensing of RSE projects, reducing the licensing time from the current 3-5 years to less than 8-10 months. Besides the draft law in question, interventions for energy-efficient buildings[47] were promoted, expected to lead to a significant reduction in energy consumption and support crisis-hit sectors. Furthermore, long-term energy planning will focus on the decentralisation of energy production and the utilisation of the stock of lignite applying best practices for the minimisation of carbon dioxide emissions.[48]

Other green growth priorities described in the Stability and Growth Programme include the revitalisation of city centres, the efficient exploitation of water resources, the use of modern techniques for the management of waste, as well as a better protection of forests and protected areas. These actions will significantly contribute to job and income creation, the preservation of environment, as well as the creation of new development opportunities in deprived areas.

The National Strategic Reference Framework (NSRF) for 2007-2013 will be the main source of financing, through the strategic re-orientation of Business Schemes towards green growth, and will be adopted within the first quarter of 2010. At the same time, the implementation of this policy will be supported by the public investment budget (through the restructuring of expenditure and their increase), the revision of the investment law,[49] public-private partnerships and the establishment of the Hellenic Development Fund within 2010 for the enhancement of green growth and competitiveness. The implementation of this new policy will be coordinated by the inter-ministerial Committee on Investment and Competitiveness in an open consultation with the private sector. The submission of annual reports to the Parliament and the European Commission will guarantee the transparency and the monitoring of the progress made.

Tackling climate change

The UN Summit on climate took place in Copenhagen during 7-18 December 2009 with the participation of 193 leaders of developed and developing countries. The Copenhagen Climate Summit, in contrast with that of Kyoto, did not end up in a legally binding agreement on the limitation of greenhouse gas emissions from anthropogenic activity.

45 Ministry of the Environment, Energy and Climate Change, Draft Law on "Accelerating the development of Renewable Energy Sources to deal with climate change", 9 December 2009.

46 Some of the points of the draft law on RES are: (a) the share of RES in the total consumption of energy shall be 20% and 40% in the coverage of electric energy consumption by 2020; (b) simplification of the production licencing procedure and its detachment from the environmental licensing procedure; (c) issuance of production licences by RAE, and exemption from the obligation to obtain a production licence for RES facilities considered non-disturbing or of low disturbance level activities; (d) a significant part of the special RES producer fee is allocated to the benefit of local communities, directly to household consumers within the municipal department in which the RES project is installed, through their electricity bills; the remaining part of the income from the special RES duty is provided to the corresponding Municipality(ies) and to the Green Fund; (e) the Preliminary Environmental Assessment and Evaluation and environmental terms approval are merged in a uniform procedure; (f) the establishment of a special service for the promotion of investment in RES as a "one-stop shop".

47 Some key interventions refer to the following: a) elaboration of a design on the energy performance of buildings before the issuance of building permits for new constructions; (b) energy audit and energy classification of buildings; (c) on-the-spot inspection of boilers, heating installations and air-conditioning systems; (d) check of the credibility of inspections and imposition of sanctions. See press release of the Ministry of Environment, Energy and Climate Change, "Energy performance of buildings: Regulatory provisions for the implementation of Law 3661/2008", 11 January 2010.

48 Speeches of the Minister of the Environment, Energy and Climate Change, 16 October 2009, 2 December 2009 and 14 January 2010.

49 The existing law shall be in force until end-January 2010, while the new Development Law which focuses on the support of green development will enter into force in the first half of 2010.

Furthermore, it did not end up in the adoption of drastic measures for the reduction of emissions in industrial countries. Many stressed that the results of the summit were beneath expectations. In any case it appears that the willingness of many pollutant countries for mutual concessions is disproportionate to the intensity and the extent of the problems that have arisen or are expected to arise from climate change. However, some positive points were made, such as the establishment of a Financing Mechanism for developing countries, as well as of a Technology Mechanism for the support of actions that relate to the adaptation and mitigation of emissions.

The main points of the **Copenhagen Accord**[50] are the following:

- Strong political will to combat climate change is emphasised, the necessity for international cooperation on the urgent limitation of global and national greenhouse emissions is underlined and it is recognised that the respective time frame will be longer for developing countries.

- Developed countries are called upon to proceed to sizable and measurable emission cuts. Individual countries should submit their quantified targets for the reduction of emissions for 2020 by 31 January 2010.

- Developing countries should start mitigating their emissions and communicate their performance every two years, with provisions for international consultations and analyses. Nationally appropriate mitigation actions seeking international support will be recorded in a registry along with relevant technology, finance and capacity building support. These actions will be subject to international measurement, reporting and verification.

- Developed countries will provide resources to developing countries to enable and support enhanced action on mitigation, the reduction of emissions from deforestation and forest degradation, adaptation, technology development and transfer and capacity-building. In more detail, developed countries are committed to provide resources of about $30 billion in the period 2010-2012, with balanced allocation between adaptation and mitigation. In the context of meaningful mitigation actions, developed countries commit to a goal of mobilising jointly USD 100 billion dollars a year by 2020.

- The establishment of the Copenhagen Green Climate Fund and the setting-up of a Technology Mechanism to accelerate technology development and transfer are decided in support of actions on adaptation and mitigation.

50 UNFCCC/CP/2009/L.7 "Copenhagen Accord", 18 December 2009.

SPECIAL FEATURE 3
CONSIDERATIONS ON THE EUROPEAN AND THE GLOBAL ECONOMIC ADJUSTMENT

3.A EXIT STRATEGIES AT THE EUROPEAN AND THE INTERNATIONAL LEVEL, AND THE EU'S MEDIUM- TO LONGER-TERM STRATEGY FOR 2020

The most severe financial and economic crisis in the postwar period hit the global and European economies and plunged them into deep recession. The timely and wide-ranging measures taken by governments and central banks, as well as their coordination at the European and international levels, prevented the global financial system from collapsing and contributed to the stabilisation of the economies. Priority must now be given to the development and implementation of exit strategies from the extraordinary fiscal and monetary policy measures, as the self-sustaining recovery is gaining momentum.

At the European level, the development of policies aimed at strengthening the dynamics of the European economy over the medium to longer term has started in parallel with the design of an exit strategy from the extraordinary measures. The so-called "Europe 2020 Strategy" is meant to be the successor of the current Lisbon Strategy, the EU's reform strategy of the previous decade that helped the EU overcome the devastating impact of the recent crisis.

A.1 EXIT STRATEGIES

The gradual stabilisation of the financial system and the recovery of the global economy were followed by the development, both at European and at global level, of a framework of principles setting out appropriate exit strategies from the extraordinary measures taken to strengthen the stability of the financial system and of the real economy. In some cases, the exit strategies and the time horizon for their implementation have taken a more concrete form (see below).

In an effort to apply appropriate exit strategies, the economic policy in many advanced and emerging economies is faced with the very challenging task of balancing demand between the public and the private sector, as well as between economies with excessive external deficits and economies with excessive surpluses. At the same time, it is necessary to ensure the consolidation of the financial sector and the restructuring of the real economy. According to the IMF, fiscal policy must continue to support economic activity in the short term, since recovery is fragile. However, countries faced with growing concerns about their fiscal sustainability should make progress in devising and communicating credible exit strategies.[1]

At the European level

On 10/11 December 2009, the European Council emphasised that the fiscal exit strategy will be implemented within the framework of the Stability and Growth Pact, which remains the cornerstone of the EU's budgetary framework, and that the recommendations to countries in Excessive Deficit Procedure are an important tool for restoring sound public finances. In this context, the European Council reiterated its conclusions from 20 October 2009, whereby the fiscal exit strategy for countries with high deficit and debt will include a consolidation of well beyond the benchmark (reduction of the structural deficit by 0.5% of GDP per year), combined with structural reforms underpinning long-term fiscal sustainability.

As regards the withdrawal of support measures to the financial sector, the European Council agreed that the principles set out by the ECOFIN Council on 2 December 2009 must guide further work in this area. These principles are related to:

- the fact that banks must continue the work of cleaning up their balance sheets and strengthen their risk-bearing capacity (Member States should ensure that there are strong incentives for doing so), while banks' profits

1 See World Economic Outlook Update, January 2010, p. 5.

should be used to build up capital buffers and not to increase dividends or compensations;

• the incorporation of the Financial Stability Board recommendations in the national institutional frameworks and the implementation of sound practices concerning executive compensation in financial institutions. The European Commission is called to regularly report to the Council the implementation of such sound practices;

• the timely design of a transparent and coordinated phasing out of the different support schemes, in order to avoid negative effects, taking into account country- specific specificities;

• the elements that need to be taken into account to define the timing of exit from the extraordinary measures, such as macroeconomic and financial sector stability, the functioning of credit channels and an assessment of systemic risk. Taking into account the specific circumstances of individual Member States, the phasing out of support should start with government guarantees, by facilitating the exit of sound banks, thus incentivising other banks to address their weaknesses.

In December, ECB decisions were also taken on the gradual phasing out of certain extraordinary measures introduced in response to the financial crisis. On 3 December 2009, the Governing Council of the ECB decided to initiate the gradual phasing out of those non-standard measures that are no longer needed, given the improved conditions in financial markets, while continuing with a number of other components of the enhanced credit support. In particular, the 12-month operation in December 2009 was the last one at this maturity, while only one further 6-month operation will be conducted on 31 March 2010 (see also Chapter II.2). According to the ECB's announcement, the decision to gradually phase out some of the Eurosystem's non-standard measures helps avoid distortions that could arise if these measures were maintained for too long. The announcement further notes that the economy of the euro area will continue to benefit from the gradual pass-through of past reductions in key ECB interest rates and from the stabilisation in the liquidity conditions of banks that has taken place thanks in part to the adoption of the enhanced credit support measures.

At the global level

The preparation for the exit from the extraordinary measures was subject to consultation by the G20 countries, as well as to more specialised analyses and proposals by the IMF and the Financial Stability Board.

In their announcement of 7 November 2009, the G-20 finance ministers and central bank governors stressed that, while they intend to continue to provide support for the economy until recovery is secured, they are also committed to further develop their strategies for managing the withdrawal of the extraordinary economic and financial support measures. The IMF and the Financial Stability Board (FSB) will continue to review the exit strategies and their implementation, identifying areas where coordination is particularly important, and providing assessment of their collective overall impact on the global economy and the financial system. Moreover, the announcement mentions the work of the IMF and the FSB for the development of principles for exit.[2]

In his written testimony of 10 February 2010 before the House of Representatives about the Federal Reserve's exit strategy, the Chairman of the U.S. Federal Reserve System, Ben Bernanke, stated that a large part of the extraordinary lending facilities provided to the financial system has been closed, and pre-announced a further normalisation of the terms for the provision of liquidity to the financial system. Indeed, on 18 February 2010, the

2 See "IMF Note on Global Economic Prospects and Principles for Policy Exit", 6-7.11.2009, and "Exit from extraordinary sector support measures", Financial Stability Board, 6-7.11.2009.

Federal Reserve announced that it increases the discount rate by 25 basis points to 0.75%, specifying that this decision does not signal a change in the monetary policy stance, but an effort to further normalise the terms of the Federal Reserve's lending facilities offered to the financial system, by encouraging credit institutions to rely on private funding markets and to the Federal Reserve only as a backup source of funds.

A.2 THE EU'S MEDIUM- TO LONGER-TERM STRATEGY FOR 2020

The "EU 2020 Strategy" is meant to be the successor of the current Lisbon Strategy, the EU's reform strategy of the previous decade that helped the EU overcome the recent crisis. Despite the deficiencies observed, the Lisbon Strategy has been useful in setting a framework for strengthening European competitiveness and encouraging structural reform.[3] Although its main targets (employment participation rate of 70%, and research and development expenditure of 3% of GDP) were not achieved,[4] the Lisbon Strategy had contributed to the creation of 18 million new jobs in the EU before the outbreak of the global economic crisis, since unemployment decreased from 12% to 7% in the decade to 2008.[5]

On 24 November 2009, the European Commission issued a public consultation document on giving the EU economy a brighter future through the EU 2020 Strategy. The document stresses that:

"...The exit from the current crisis should be the point of entry into a new sustainable social market economy, a smarter, greener economy, where the key input will be knowledge. These new drivers should help us tap into new sources of sustainable growth and create new jobs to offset the higher level of unemployment our societies are likely to face in the coming years..."

The Commission believes that the EU 2020 Strategy should focus on the following areas:

- **Creating value by basing growth on knowledge**

Knowledge is the engine for sustainable growth. In a fast-changing world, what makes the difference is education and research, innovation and creativity. The framework conditions for innovation and creativity can still be much improved in Europe, for example by modernising the EU's intellectual property rights system. Access to credit should be boosted, through a combination of pooled public and private sources of growth capital.

The EU needs a European Digital Agenda to deliver an online single market, so that consumers can benefit from competitive prices offered in other Member States and SMEs can break into larger markets. Achieving "digital inclusion" is key to wider social inclusion.

- **Empowering people in inclusive societies**

The crisis has "changed the game". Many pre-crisis jobs have been destroyed and will not return. Europe cannot prosper unless workers have the skills to contribute to and benefit from a knowledge-based economy. Supply and demand need to be better matched, through labour mobility across and within borders and through better anticipation of future skills needs.

The European Commission is determined to advance the flexicurity agenda and to ensure it is better understood in terms not only of flexibility from employees but also of employers and governments shouldering more responsibility for investing in and protecting people. Those who cannot find a job should be supported both financially and through individualised help to regain access to the labour market.

3 European Council Conclusions, 10-11.12.2009.
4 See (i) *Financial Times*, "EU to plan 10 years of growth", 5.1.2010, and (ii) "The post-2010 Lisbon Process", D. Gross and F. Roth, CEPS, December 2008.
5 See announcement of the European Commission, 24.11.2009.

• **Creating a competitive, connected and greener economy**

The future will see high energy prices, carbon constraints and greater competition for resources and markets. All of these are risks but also present opportunities to create a new EU 2020 economy with a strong global competitive advantage. New greener technologies can stimulate growth, create new jobs and services and help the EU meet climate change goals. Failure to adapt to the 21st century would see Europe decline.

The policies at EU and national level to promote eco-innovation and energy-efficient products and systems should include emission trading, tax reform, subsidies and loans, public investment and procurement and targeting of research and innovation budgets.

Europe needs smarter transport infrastructures and an EU-wide "smart grid" for energy, as well as 100% broadband coverage as soon as possible. The EU and Member States should work together to make the right strategic investments to make two-thirds of electricity generation both low-carbon and more secure by the early 2020s.

Manufacturing will remain critical to the EU's future economic success. Europe needs a new industrial policy emphasising innovation capacity, new technologies, skills, fostering entrepreneurship and "internationalising" SMEs. Excess capacity in some sectors must be tackled. Those adversely affected will need to be supported.

Making it happen: Harnessing existing instruments in a new approach

To make a successful exit from the crisis and deliver the EU 2020 objectives, the Commission considers that a strategy for convergence and integration is needed, which recognises more explicitly the advanced interdependence between Member States, between different levels of government (EU, Member States, regions), between different policies and between policies and instruments, as well as interdependence at global level. The challenge of becoming an inclusive, smarter and greener economy will require increased policy co-ordination and better synergies. The integration of different policy instruments is necessary, linking institutional reforms, better regulation, new initiatives and public investment. In particular, it is necessary to:

Fully exploit the single market – The framework of the single market gives the size and the scale necessary to achieve these objectives.

Set EU 2020 in a global context – This new agenda is set in the context of globalisation which will remain one of the main drivers for European dynamism in the next decade.

Support growth through full use of the Stability and Growth Pact – The Stability and Growth Pact, in conjunction with other multilateral surveillance instruments, will play an important role in guiding budgetary policies to achieve fiscal consolidation and sustainable growth.

Reflect political priorities in the public budgets – Once agreed, these new priorities need to be reflected in budgetary policies.

Establish clear governance to make the new strategy effective – Only through partnership can the objectives be achieved since action is essential at the EU, national and regional levels, as well as the interplay between these levels.

The contribution of the Eurosystem to the consultation procedure on the new strategy

The Eurosystem, in its contribution[6] to the consultation on the EU 2020 strategy, notes, among others, the following:

6 See "Contribution of the Eurosystem of 14 January 2010 to the public consultation of the European Commission on the future EU 2020 strategy".

To successfully address the structural challenges faced by the European economy, the focus of the EU 2020 strategy should remain on raising potential growth and creating high levels of employment through well-functioning labour and product markets, sound financial systems and sustainable fiscal policies. At the same time, policies that enhance competition and innovation are urgently needed to speed up restructuring of the economies and investment, and to create the productivity gains necessary to overcome past weaknesses. Moreover, in view of the demographic changes, the EU 2020 strategy needs to continue to focus on the sustainability of pension systems. All structural reform measures need to be mutually reinforcing and should be pursued in a consistent manner that safeguards sound budgetary positions at all times.

Delivering precise and targeted recommendations under the EU 2020 strategy, which are addressed to all Member States, also those that are performing relatively well, will be essential to provide impetus for reform. In particular, it seems desirable to set ambitious targets for the functioning of the internal market. Moreover, there is a need for a further strengthening of country surveillance in the Eurogroup, which should include a regular review of national competitiveness developments and of imbalances and vulnerabilities within the euro area.

On 3 March 2010, after taking into consideration the conclusions of the public consultation, the European Commission announced its proposals for the new economic strategy "Europe 2020".[7] These rest on three interlocking and mutually reinforcing priority areas: smart growth (developing an economy based on knowledge and innovation), sustainable growth (promoting a resource-efficient, low-carbon, competitive economy), and inclusive growth (fostering a high-employment economy delivering social and territorial cohesion). Progress towards achieving these objectives will be measured against five representative headline EU-level targets, which Member States will be asked to translate into national targets reflecting specific starting points:

- 75% of the population aged 20-64 should be employed.

- 3% of the EU's GDP should be invested in research and development.

- The "20/20/20" climate and energy targets should be met (a reduction in carbon emissions by 20% compared to the levels of 1999, a 20% reduction in energy consumption and an increase of 20% in the use of renewable energy sources).

- The share of early school leavers should be under 10% and at least 40% of the younger generation should have a degree or diploma.

- 20 million less people should be at risk of poverty.

In order to meet the above targets, the Commission proposes a series of flagship initiatives, whose implementation is a shared priority and requires action at all levels: EU-level organisations, Member States, local and regional authorities.

The Commission proposals on the new economic strategy "Europe 2020" will be discussed during the Spring European Council on 25-26 March 2010.

3.B GLOBAL FINANCIAL CRISIS AND LIQUIDITY CRISES IN THE FINANCIAL SYSTEM

The global financial crisis has demonstrated the vital importance of adequate liquidity for the smooth functioning of the financial system. To understand the reasons leading to a liquidity crisis, as well as its transmission mechanisms, the individual types of liquidity risks and the channels through which they are interconnected are presented below. Here follows an analysis of the

7 "Europe 2020: Commission proposes new economic strategy in Europe", Brussels, 3.3.2010.

structural changes in the global financial system during the last decade and of their implications for its stability, with particular emphasis on understanding the recent financial crisis. Finally, the role of central banks in a financial crisis is outlined, followed by a presentation of the main intervention mechanisms they dispose, as well as of certain less conventional measures recently adopted by central banks around the world. Moreover, the constraints facing central banks efforting to stabilise the financial system are presented.

Liquidity

The various liquidity types

The term "liquidity" refers in this context to the existence of unobstructed flows between financial system agents. In particular, there exist three types of liquidity: central bank liquidity, market liquidity and funding liquidity. The first one refers to the liquidity that the central bank provides to the financial system, the second to the ability of carrying out financial transactions at low transaction cost and competitive market prices, and the third to the ability of solvent financial institutions to meet their liabilities as they become due. The funding liquidity of credit institutions is crucial for the functioning of an economy, given their key role in channeling central bank liquidity to the financial system.[8]

Accordingly, liquidity risk reflects a potential shortage in one of the above-mentioned liquidity types.[9] Market liquidity risk, i.e. the risk of inability to carry out transactions in individual markets, is connected to the efficiency of these markets, but also to investor confidence in the smooth functioning of the financial system. Funding liquidity risk reflects the probability, over a certain time horizon, that a financial institution will default on its debts.

Liquidity transmission channels

These three distinct types of liquidity are inextricably and dynamically interlinked. In normal times, when liquidity risk is low, the linkages act as a catalyst to the smooth and efficient functioning of the financial system, promoting its stability and providing for the best allocation of funds and other financial resources in the economy. In turbulent times, however, these linkages become the channels through which liquidity risk is propagated and transmitted throughout the financial system. This can be clearly illustrated in the period of October 2008, when the interbank market virtually stopped operating, triggering a knock-on effect on the entire financial system.

Despite the fact that the cases of particularly high systemic liquidity risk are relatively rare, liquidity risk is indeed inherent in the functioning of the financial system, since it stems from the role of credit institutions as intermediaries between depositors and investors. Banks provide liquidity in the form of long-term (not immediately payable) loans, which they draw from the short-term (immediately redeemable) deposits of their customers. This *de facto* leaves them vulnerable to funding liquidity risk because of the unavoidable (inherent) asset-liability mismatch in terms of maturity. In case they are faced with excess demand for immediate liquidity (the most extreme example would be a bank run), even the most solvent and creditworthy banks run the risk of bankruptcy.

The funding liquidity risk which is specific to a given credit institution could rapidly spill over to other credit institutions both through the interbank and the money markets, developing into a systemic liquidity risk.

8 The sources of credit institutions' funding liquidity are: a) the interbank market that constitutes the main source of liquidity, b) depositors, c) capital markets and money markets, through which credit institutions can obtain funding liquidity by means of securitisation, participation in syndicated loans, liquidation of their portfolios and issuance of corporate bonds, and d) the central bank.

9 Since central bank liquidity originates from the central bank itself, the latter can provide liquidity as and when it deems advisable. Therefore, it is practically impossible for this type of liquidity to fall short, unless the demand for domestic currency falls short, for example, during currency crises, or periods of extreme hyperinflation, events highly unlikely to occur in advanced, industrial economies.

In their everyday practice, banks provide liquidity to each other in the form of very short-term loans through the so-called interbank market. An unusual increase in a bank's liquidity needs reduces the common pool of liquidity, leading to higher interbank interest rates and shorter average loan maturities. For this reason, the other banks may preemptively intensify their efforts to ensure liquidity and, as a result, liquidity shortage in a given institution can rapidly develop into a systemic liquidity shortage, which can trigger multiple bank bankruptcies.

Moreover, in such cases credit institutions often seek to further enhance their liquidity by immediately liquidating part of their portfolios, resulting in the steep fall of prices and a parallel increase in money market volatility. Heightened uncertainty and the consequent weakening of investor interest in these markets translate into a sharp increase in the systemic market liquidity risk.

The strong linkage mechanisms between market liquidity and funding liquidity can then trigger spillover effects, causing a further intensification of the liquidity crisis.

Is there today a bigger risk of liquidity crises than in the past?

Liquidity crises of this nature are not rare. However, the most recent financial crisis was unprecedented in the sense that, on the one hand, it affected almost the entire global financial system and, on the other, it was exceptionally intense and protracted. These unusual characteristics reflect to a large extent a series of recent structural changes in the functioning of the international banking system itself.

Over the last decade, the way in which banks manage the loans they grant has changed structurally. Based on the traditional (and most commonly used) banking model, banks approve loans to individuals and enterprises; these are held to maturity as part of their portfolio. However, many international credit institutions have adopted an alternative practice in recent years: they combine their loan portfolios by creating new, complex bonds, known as collateralised debt obligations (CDOs), which they resell, thus managing to increase their liquidity. At the same time, some innovative types of financial institutions have penetrated to some extent into certain branches of conventional banking. Typical examples are, among others, "hedge funds" and "structured investment vehicles", which systematically invest in the above-mentioned complex financial derivatives.

In principle, the transfer of part of the credit risk away from the banking system is a positive development, provided that it can be more efficiently distributed to a wider range of financial institutions. Accordingly, the design of innovative financial products is also considered positive, given that they contribute to a more efficient portfolio management as they meet existing market needs. Nevertheless, both of these developments also entail significant risks to the stability of the global financial system.

- First of all, while conventional banks are subject to rigorous institutional supervision, under which they are required to maintain a minimum level of capital adequacy in order to meet their obligations, resulting in a decrease in their leverage, the institutional arrangements in place cannot provide a targeted supervision of the new types of financial institutions. This is the reason why the capital adequacy of the latter is often lower than that of conventional banks, making them more vulnerable to potential shocks.

- Second, by securitising their loans, credit institutions manage to avoid recording them in their financial statements. As a result, their capital adequacy ratio increases and they are able to grant new loans without violating supervisory rules. Additional risk-taking on the part of credit institutions translates into an increase in the overall credit risk and, there-

fore, in the vulnerability of the financial system itself.

• Third, new financial derivatives are often so complex that their proper valuation becomes particularly difficult. This fact, combined with the often multiple transfer of credit risk from the original creditor to different recipients, play a decisive role in limiting the transparency of the financial system both for investors and for regulatory and supervisory authorities, as it became difficult to access reliable and understandable information about the risks that various financial products and institutions face.[10]

• Fourth, to the extent that credit institutions have the option to virtually resell their loan portfolio instead of recording it in their balance sheets, they are less motivated to conduct thorough and rigorous controls on the solvency of their potential borrowers. Their wish not to reduce their reliability by reselling securitised non-performing loans and their obligation to cover relevant guarantees offset the above risk only partially.

• Fifth, by being exceptionally active in global markets, these new types of financial institutions have come to play a key role in the provision of liquidity to the financial system, i.e. in one of the typical activities of conventional banks. The investment behaviour of "hedge funds" is characteristic in this respect, as they try to benefit from erroneous market valuations, in the context of which they contribute greatly both to market efficiency and market liquidity. However, their access to adequate leverage is decisive for their ability to provide liquidity.

Owing to the protracted period of low interest rates, increased liquidity and relatively stable macroeconomic growth that preceded the outbreak of the financial crisis, increased risk appetite prevailed in financial markets, followed by correspondingly higher levels of leverage for many financial institutions, especially in the US. However, as uncertainty and mistrust between financial institutions regarding their creditworthiness began to grow and as liquidity in global markets began to dry up, the new types of financial institutions as well as conventional banks —namely the ones that had proceeded with loan securitisations— rapidly found themselves in great difficulty to fund their positions.

• Finally, risk stems also from the fact that, contrary to banks, the new types of financial institutions cannot resort to central banks for emergency liquidity.

Regular and extraordinary central bank interventions

During a liquidity crisis, the central bank is in a unique position, since its liquidity (in domestic currency terms) remains unaffected, a feature that explains the various mechanisms for stabilising the financial system that the bank has at its disposal.

Its key role is that of the lender of last resort for domestic credit institutions. In practice, the central bank intervenes by providing liquidity in domestic currency to those credit institutions that request it, depending on each institution's needs and the intensity of the destabilising trends in the financial system, accepting highly liquid securities as collateral. It is a direct and efficient mechanism for providing emergency liquidity, that the central bank launches at its discretion in its effort to stabilise the financial system.

Recently, central banks worldwide were forced to take a series of non-standard measures to cope with the intensity of the crisis and its multiple aspects. In their majority, these measures corresponded to the provision of a bigger —even unlimited in certain cases— amounts of liquidity, with longer maturities than usual, a wider range of financial institutions as beneficiaries, and relatively riskier securities as col-

10 By identifying low quality loans somewhere in the financial system, there is the subsequent risk of characterising all relevant products as having similar quality, due to the lack of more accurate information, thus accelerating the spillover of the crisis.

lateral. Exceptionally, certain central banks intervened immediately in order to smooth out the functioning of some individual markets (e.g. the corporate debt market), either by directly buying such securities or by financing other financial institutions to buy them. In addition, some central banks individually provided emergency assistance to banks or financial institutions, for which the avoidance of a potential bankruptcy was judged crucial to the stability of the financial system.

Every central bank seeks to implement a combination of measures and interventions that will optimally match the specific characteristics of the domestic financial system structure and its exposure to risk in a given crisis.[11] The central bank, however, does not seek to protect individual financial institutions but the stability of the entire financial system and to prevent a potential collapse and the consequent dramatic implications for economic activity as a whole.

Limitations on the efficiency of central bank interventions

Although the targeted provision of emergency liquidity is undoubtedly crucial in times of financial crisis, there are clear limitations as to what a central bank can achieve:

- First of all, central bank interventions can only provide short-term liquidity injections. Accordingly, the central bank has a short-term orientation aimed, in particular, at halting the vicious circle between funding and market liquidity risk, which would exert even stronger pressure on markets, and at restoring confidence in them. The supervisory and regulatory authorities are responsible for assessing and addressing, as far as possible, the structural causes of an increase in systemic liquidity risk, which is possible only after conditions have normalised.

- The extended provision of liquidity by a central bank creates certain dependence to the financial system, as it entails a corresponding increase in the funding risk of credit institutions, once its withdrawal begins.

- Furthermore, emergency liquidity is provided with cautiousness and prudence, since it could be misinterpreted by credit institutions as some kind of informal guarantee, practically encouraging irrational risk-taking on their part and, therefore, increasing the possibility of a financial crisis breaking out.

- In addition, although central banks would ideally wish to provide emergency liquidity against collateral only to solvent credit institutions with an exceptional liquidity shortage, it is difficult to distinguish those from non-solvent credit institutions, especially in periods of crisis. Consequently, the possibility of obtaining emergency liquidity provided by central banks risks to be exploited also by non-solvent banks, whose problems are not associated with the outbreak of a liquidity crisis and their ultimate aim is to avoid an imminent bankruptcy. This eventually turns out against the other credit institutions, since the liquidity provided by the central bank is not distributed in the best possible way and goes, in a sense, wasted, or is granted to all institutions under less favourable terms.

- On the other hand, the provision of emergency liquidity often carries a "stigma": the recourse of a financial institution to emergency liquidity is *de facto* indication that this institution failed to obtain liquidity from another source, which is likely to have a negative effect on investor sentiment, or even spread panic among investors, making its problems worse.

- When accepting a wider range of securities as collateral for the provision of liquidity, it is the central banks themselves that are essentially assuming the associated credit risk, some-

11 For example, during the recent crisis, the Federal Reserve System adopted several measures aimed at providing immediate support to selected capital markets; in the euro area, on the contrary, efforts mainly focused on the provision of liquidity to the banking sector. This certainly reflects the bank-based nature of financing in the economy of the euro area.

thing that leads them to adopt such measures only exceptionally and after careful consideration.

• Finally, a more general difficulty arises from the increasingly international —if not already globalised— character of modern banking and financial activities. Although international competition among financial institutions benefits performance and, consequently, economic growth, the danger of a minor crisis spilling over national borders and causing liquidity problems to the financial systems of a number of countries all at once is now greater. Thus, it becomes harder for national central banks to conduct a timely and effective crisis management.

Conclusions

To sum up, liquidity risk stems from the fundamentally intermediary role that banks play in an economy and is, therefore, inherent in the functioning of the financial system. Nevertheless, over the last years, the financial system grew increasingly dependent on the new types of financial institutions, whose smooth functioning is now an important factor for its stability, performance and liquidity; however, these institutions are not subject to adequate institutional regulation and supervision, their procedures and practices are not transparent enough, and they do not have the access that conventional banks have to emergency liquidity provision mechanisms. As a consequence, the financial system has become more vulnerable to financial liquidity crises than what used to in the past.

The role of a central bank as lender of last resort is of utmost importance for restoring financial stability in times of crisis, even within the contemporary, complex and globalised financial system, but it is not a panacea. As soon as a financial crisis is over, there begins a strenuous and time-consuming attempt to understand and address its deeper causes. This attempt is linked to the responsibilities of the supervisory and regulatory authorities of the financial system.

MONETARY POLICY MEASURES OF THE EUROSYSTEM

5 NOVEMBER 2009

The Governing Council of the ECB decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

20 NOVEMBER 2009

The Governing Council of the ECB decided to amend the rating requirements for asset-backed securities (ABSs) to be eligible for use in Eurosystem credit operations. The Eurosystem will require at least two ratings from an accepted external credit assessment institution for all ABSs issued as of 1 March 2010. In determining the eligibility of these ABSs, the Eurosystem will apply the "second-best" rule, meaning that not only the best, but also the second-best available rating must comply with the minimum threshold applicable to ABSs.

3 DECEMBER 2009

The Governing Council of the ECB decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

The Governing Council of the ECB also decided to continue conducting its main refinancing operation (MROs) and its longer-term refinancing operations (LTROs) as fixed rate tender procedures with full allotment at least until April 2010. The Governing Council decided, however, to carry out the last six-month refinancing operation on 31 March 2010. It also decided that the rate in the last 12-month longer-term refinancing operation, to be allotted on 16 December 2009, will be fixed at the average minimum bid rate of the MROs over the life of this operation.

14 JANUARY 2010

The Governing Council of the ECB decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

18 JANUARY 2010

The Governing Council of the ECB decided, in agreement with the Swiss National Bank, to stop conducting one-week Swiss franc liquidity-providing swap operations after 31 January 2010.

27 JANUARY 2010

The Governing Council of the ECB decided, in agreement with the Federal Reserve, the Bank of England, the Bank of Japan and the Swiss National Bank, to stop conducting US dollar liquidity-providing operations after 31 January 2010.

4 FEBRUARY 2010

The Governing Council of the ECB decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

4 MARCH 2010

The Governing Council of the ECB decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

The Governing Council also decided to continue conducting its main refinancing operations (MROs), as well as its special-term refinancing operations with a maturity of one maintenance period, as fixed rate tender procedures with full allotment for as long as necessary, and at least until the end of this year's ninth maintenance period on 12 October 2010.

The Governing Council also decided, to fix the rate in the last 6-month refinancing operation

to be allotted on 31 March 2010 at the bid rate of the last 12-month LTRO.

The Governing Council also decided to return to variable rate tender procedures in the regular 3-month longer-term refinancing operations (LTROs), starting with the operation to be allotted on 28 April 2010. Allotment amounts in these operations will be set with the aim of ensuring smooth conditions in money markets.

STATISTICAL APPENDIX

TABLES

Table 1 Consumer price index: general index and basic sub-indices

Period		General index		Goods		Services		CPI excluding fresh fruit/vegetables and fuel		CPI excluding food and fuel	
		(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year
2006		103.2	3.2	103.4	3.4	103.0	3.0	102.7	2.7	102.5	2.5
2007		106.2	2.9	105.9	2.5	106.5	3.5	105.7	2.9	105.5	3.0
2008		110.6	4.2	110.5	4.3	110.7	3.9	109.3	3.4	108.6	3.0
2009		111.9	1.2	109.9	-0.5	114.7	3.6	111.9	2.4	111.5	2.6
2008	I	108.8	4.3	108.9	5.0	108.8	3.3	107.3	2.9	106.5	2.3
	II	111.4	4.8	112.3	5.6	110.1	3.6	109.5	3.6	108.9	3.0
	III	110.7	4.7	110.3	5.1	111.3	4.2	109.2	3.7	108.5	3.2
	IV	111.4	2.9	110.6	1.7	112.6	4.5	111.2	3.5	110.7	3.4
2009	I	110.5	1.5	108.4	-0.5	113.5	4.3	110.7	3.2	110.0	3.3
	II	112.1	0.7	110.7	-1.5	114.1	3.7	112.0	2.3	111.6	2.5
	III	111.5	0.7	109.0	-1.2	114.9	3.3	111.4	2.1	110.9	2.3
	IV	113.6	2.0	111.7	1.0	116.3	3.2	113.4	2.0	113.3	2.4
2007	Jan.	104.5	2.7	103.9	2.3	105.2	3.3	104.5	3.1	104.4	3.1
	Feb.	103.2	2.7	101.7	2.0	105.2	3.4	103.1	3.3	102.6	3.5
	March	105.5	2.6	105.5	2.1	105.5	3.4	105.3	3.1	105.2	3.2
	Apr.	106.2	2.5	106.2	1.8	106.1	3.5	105.6	3.0	105.6	3.2
	May	106.5	2.6	106.7	1.9	106.1	3.6	105.7	2.9	105.7	3.1
	June	106.3	2.6	106.3	1.9	106.4	3.6	105.9	2.8	105.9	3.0
	July	105.5	2.5	104.8	1.6	106.6	3.7	105.1	2.9	105.0	3.2
	Aug.	104.8	2.5	103.3	1.7	106.8	3.6	104.3	2.9	103.9	3.1
	Sept.	106.9	2.9	106.7	2.6	107.0	3.4	106.4	2.7	106.3	2.8
	Oct.	107.6	3.1	107.8	3.0	107.3	3.3	107.0	2.7	106.7	2.5
	Nov.	108.4	3.9	109.0	4.5	107.6	3.2	107.4	2.9	106.9	2.5
	Dec.	108.8	3.9	109.2	4.3	108.4	3.3	107.9	3.0	107.4	2.5
2008	Jan.	108.6	3.9	108.4	4.3	108.8	3.4	107.2	2.6	106.5	2.0
	Feb.	107.7	4.4	107.1	5.3	108.6	3.3	106.1	3.0	105.1	2.4
	March	110.2	4.4	111.2	5.3	108.9	3.2	108.6	3.1	107.9	2.5
	Apr.	110.9	4.4	111.9	5.4	109.5	3.2	109.0	3.2	108.3	2.6
	May	111.7	4.9	112.7	5.6	110.3	3.9	109.7	3.8	109.1	3.1
	June	111.6	4.9	112.3	5.7	110.5	3.9	109.8	3.6	109.2	3.1
	July	110.7	4.9	110.5	5.4	111.0	4.1	109.0	3.7	108.3	3.2
	Aug.	109.7	4.7	108.6	5.2	111.1	4.0	108.1	3.6	107.2	3.2
	Sept.	111.8	4.6	111.9	4.8	111.7	4.4	110.4	3.7	109.9	3.4
	Oct.	111.8	3.9	111.6	3.5	112.0	4.4	110.8	3.5	110.3	3.4
	Nov.	111.5	2.9	110.8	1.7	112.4	4.5	111.1	3.5	110.6	3.5
	Dec.	111.0	2.0	109.2	0.0	113.4	4.6	111.6	3.4	111.2	3.5
2009	Jan.	110.5	1.8	108.1	-0.3	113.7	4.5	110.8	3.3	110.1	3.4
	Feb.	109.4	1.6	106.6	-0.4	113.3	4.3	109.5	3.2	108.5	3.3
	March	111.6	1.3	110.3	-0.8	113.5	4.2	111.9	3.1	111.4	3.2
	Apr.	112.0	1.0	110.5	-1.3	114.0	4.2	111.9	2.7	111.5	2.9
	May	112.2	0.5	110.8	-1.6	114.1	3.5	112.0	2.1	111.7	2.4
	June	112.2	0.5	110.7	-1.5	114.2	3.3	112.0	2.1	111.7	2.3
	July	111.3	0.6	109.0	-1.3	114.5	3.1	111.2	2.0	110.7	2.2
	Aug.	110.5	0.8	107.4	-1.1	114.8	3.3	110.4	2.1	109.7	2.3
	Sept.	112.6	0.7	110.5	-1.2	115.4	3.3	112.7	2.1	112.4	2.3
	Oct.	113.2	1.2	111.2	-0.4	115.8	3.4	113.0	2.0	112.8	2.3
	Nov.	113.7	2.0	112.0	1.1	116.1	3.2	113.4	2.0	113.3	2.4
	Dec.	113.9	2.6	111.7	2.3	117.0	3.1	113.9	2.0	113.8	2.4
2010	Jan.	113.1	2.4	110.2	2.0	117.0	2.9	112.6	1.6	112.2	1.9

Source: Calculations based on NSSG data.

Table 2 Harmonised index of consumer prices: general index and basic sub-indices

Period		General index		Unprocessed food		Processed food		Non-energy industrial goods	
		(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year
2006		103.3	3.3	101.9	1.9	105.2	5.2	101.6	1.6
2007		106.4	3.0	104.2	2.2	109.1	3.7	103.8	2.2
2008		110.9	4.2	108.3	4.0	114.6	5.0	105.9	2.0
2009		112.4	1.3	112.5	3.9	116.5	1.6	106.7	0.8
2008	I	109.0	4.3	108.3	4.1	113.6	5.4	103.2	1.3
	II	111.7	4.8	108.9	4.5	115.2	6.3	107.4	2.2
	III	111.0	4.8	104.7	1.6	114.8	5.7	104.4	2.3
	IV	111.9	3.1	111.4	5.7	115.0	2.9	108.6	2.2
2009	I	110.9	1.8	114.6	5.8	115.8	2.0	105.4	2.1
	II	112.6	0.8	115.3	5.9	117.0	1.6	107.8	0.3
	III	111.9	0.8	109.8	4.9	116.5	1.5	104.7	0.3
	IV	114.1	2.0	110.5	-0.8	116.8	1.5	109.1	0.4
2007	Jan.	104.8	3.0	104.8	3.5	107.8	5.6	103.0	2.5
	Feb.	103.1	3.0	103.2	-1.2	107.5	5.0	98.0	3.5
	March	105.7	2.8	104.2	0.0	107.9	4.5	104.8	2.7
	Apr.	106.5	2.6	105.6	0.2	108.3	4.7	104.8	2.1
	May	106.7	2.6	104.9	1.6	108.3	3.6	105.3	1.9
	June	106.6	2.6	102.0	2.6	108.5	2.8	105.4	1.9
	July	105.8	2.7	101.3	3.4	108.4	2.5	102.4	2.6
	Aug.	104.8	2.7	102.9	4.6	108.5	2.7	98.3	2.2
	Sept.	107.1	2.9	104.8	4.9	109.2	2.4	105.4	2.0
	Oct.	107.9	3.0	105.7	2.6	110.8	2.7	106.1	1.8
	Nov.	108.7	3.9	105.0	2.8	112.2	4.0	106.2	1.8
	Dec.	109.2	3.9	105.8	2.2	112.4	4.3	106.4	1.8
2008	Jan.	108.9	3.9	108.8	3.8	112.7	4.5	103.3	0.3
	Feb.	107.8	4.5	108.2	4.8	113.6	5.7	99.6	1.6
	March	110.3	4.4	108.0	3.7	114.3	6.0	106.8	1.9
	Apr.	111.2	4.4	111.0	5.2	114.9	6.1	107.0	2.2
	May	112.0	4.9	109.7	4.5	115.6	6.7	107.6	2.3
	June	111.9	4.9	105.8	3.7	115.0	6.1	107.7	2.2
	July	111.1	4.9	103.8	2.4	115.0	6.1	104.6	2.2
	Aug.	109.8	4.8	104.3	1.3	114.8	5.8	100.8	2.5
	Sept.	112.2	4.7	106.0	1.2	114.8	5.1	107.7	2.2
	Oct.	112.2	4.0	109.8	3.9	114.9	3.7	108.5	2.2
	Nov.	112.0	3.0	112.8	7.5	115.1	2.6	108.6	2.3
	Dec.	111.6	2.2	111.7	5.6	114.9	2.3	108.7	2.2
2009	Jan.	111.0	2.0	114.6	5.4	115.2	2.2	105.5	2.1
	Feb.	109.8	1.8	114.1	5.5	115.7	1.8	101.9	2.3
	March	112.0	1.5	114.9	6.4	116.5	1.9	108.9	2.0
	Apr.	112.5	1.1	116.1	4.6	117.1	1.9	107.7	0.7
	May	112.8	0.7	116.7	6.4	117.2	1.4	107.8	0.2
	June	112.7	0.7	113.0	6.8	116.8	1.5	107.8	0.2
	July	111.8	0.7	110.9	6.9	116.7	1.5	104.9	0.2
	Aug.	110.9	1.0	108.3	3.9	116.5	1.5	101.3	0.5
	Sept.	113.0	0.7	110.2	3.9	116.4	1.4	107.9	0.2
	Oct.	113.6	1.2	110.4	0.5	116.6	1.4	108.4	0.0
	Nov.	114.3	2.1	111.3	-1.3	116.9	1.5	109.4	0.7
	Dec.	114.5	2.6	110.0	-1.5	116.8	1.6	109.4	0.7
2010	Jan.	113.6	2.3	110.9	-3.2	117.0	1.6	105.2	-0.3

Source: Calculations based on NSSG data.

Table 2 Harmonised index of consumer prices: general index and basic sub-indices *(continued)*

Period		Energy		Services		HICP excluding unprocessed food and energy	
		(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year
2006		109.4	9.4	103.1	3.1	102.9	2.9
2007		111.8	2.1	106.9	3.7	106.2	3.2
2008		127.2	13.8	111.0	3.8	109.8	3.4
2009		111.8	-12.1	114.6	3.2	112.2	2.2
2008	I	125.4	21.2	108.9	3.1	107.7	2.9
	II	133.8	19.2	110.5	3.6	110.2	3.6
	III	135.8	21.1	111.6	4.1	109.7	3.8
	IV	113.9	-4.6	112.9	4.4	111.8	3.5
2009	I	103.1	-17.8	113.4	4.1	111.1	3.1
	II	109.4	-18.2	114.1	3.3	112.5	2.0
	III	115.3	-15.1	114.7	2.8	111.6	1.7
	IV	119.2	4.7	116.0	2.8	113.8	1.8
2007	Jan.	101.4	-3.8	105.7	3.7	105.1	3.6
	Feb.	102.6	-2.3	105.4	3.8	103.2	4.0
	March	106.2	-1.2	105.8	3.7	105.8	3.5
	Apr.	110.3	-1.5	106.7	3.5	106.3	3.2
	May	113.2	-0.2	106.5	3.8	106.4	3.1
	June	113.3	0.1	106.8	3.8	106.6	2.9
	July	112.9	-3.2	107.2	4.0	105.7	3.3
	Aug.	111.6	-3.7	107.2	3.9	104.4	3.3
	Sept.	112.0	1.7	107.3	3.7	107.0	2.9
	Oct.	114.4	7.7	107.6	3.3	107.6	2.6
	Nov.	121.9	17.6	107.8	3.4	108.0	2.9
	Dec.	121.7	16.8	108.8	3.2	108.5	2.9
2008	Jan.	123.1	21.4	109.1	3.3	107.7	2.5
	Feb.	124.8	21.6	108.7	3.2	106.4	3.1
	March	128.2	20.7	109.0	3.0	109.1	3.1
	Apr.	130.1	17.9	109.9	3.0	109.7	3.2
	May	134.3	18.7	110.7	3.9	110.4	3.8
	June	137.0	20.9	111.0	4.0	110.5	3.7
	July	138.0	22.2	111.3	3.9	109.6	3.7
	Aug.	135.2	21.1	111.4	3.9	108.4	3.8
	Sept.	134.3	19.9	112.0	4.4	111.0	3.8
	Oct.	124.9	9.2	112.3	4.4	111.4	3.6
	Nov.	114.0	-6.5	112.6	4.4	111.6	3.4
	Dec.	102.7	-15.6	113.8	4.5	112.2	3.4
2009	Jan.	102.6	-16.7	113.9	4.4	111.2	3.3
	Feb.	103.5	-17.0	113.1	4.1	109.7	3.1
	March	103.2	-19.5	113.3	3.9	112.3	3.0
	Apr.	106.9	-17.8	114.1	3.8	112.4	2.5
	May	109.0	-18.8	114.2	3.2	112.5	1.9
	June	112.3	-18.0	114.2	2.8	112.5	1.8
	July	114.3	-17.2	114.4	2.7	111.5	1.7
	Aug.	116.8	-13.6	114.6	2.9	110.4	1.9
	Sept.	114.9	-14.4	115.1	2.7	112.9	1.7
	Oct.	118.5	-5.1	115.4	2.8	113.2	1.7
	Nov.	120.3	5.5	115.8	2.9	113.8	2.0
	Dec.	118.9	15.7	116.8	2.6	114.3	1.8
2010	Jan.	123.0	20.0	116.7	2.5	112.8	1.4

Source: Calculations based on NSSG data.

Table 3 Industrial producer price index (PPI) for the domestic market: general index and basic sub-indices

Period		PPI-domestic market (General index)		Energy (total)		Fuel		General index excl. energy	
		(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year
2006		107.3	7.3	108.6	8.6	113.9	13.9	106.5	6.5
2007		111.7	4.1	115.4	6.3	117.0	2.7	109.4	2.7
2008		123.0	10.0	135.2	17.1	145.8	24.7	116.4	6.4
2009		115.8	-5.8	115.0	-15.0	104.2	-28.6	116.3	-0.1
2008	I	119.6	11.5	129.2	21.4	140.8	43.5	114.4	6.9
	II	125.8	13.5	143.0	25.4	168.5	45.6	116.5	7.2
	III	128.6	14.2	148.4	27.1	169.0	41.5	117.9	7.2
	IV	117.9	1.3	120.1	-3.5	105.0	-22.0	116.8	4.2
2009	I	113.4	-5.2	109.1	-15.6	87.3	-38.0	115.7	1.1
	II	114.7	-8.8	112.9	-21.0	102.3	-39.3	115.7	-0.7
	III	116.9	-9.1	117.3	-21.0	111.1	-34.3	116.7	-1.0
	IV	118.4	0.4	120.6	0.4	116.1	10.5	117.2	0.4
2007	Jan.	106.4	1.2	104.1	-1.9	92.1	-17.2	106.8	2.1
	Feb.	107.0	1.3	106.2	-0.6	97.8	-12.0	106.8	1.7
	March	108.3	1.9	108.8	0.7	104.4	-8.2	107.4	2.0
	Apr.	110.4	2.5	112.8	2.0	112.4	-9.2	108.7	2.2
	May	110.9	2.7	114.3	3.5	116.7	-5.1	108.7	1.9
	June	111.1	2.8	115.1	4.3	118.3	-3.5	108.7	1.7
	July	111.8	2.5	116.2	3.1	120.2	-6.1	109.1	1.8
	Aug.	112.2	2.6	116.1	2.7	116.7	-5.8	109.7	2.0
	Sept.	113.6	5.2	117.9	9.2	121.4	13.6	110.8	3.1
	Oct.	114.9	7.2	120.4	13.5	126.4	24.3	111.7	4.1
	Nov.	117.0	9.6	126.0	19.4	140.8	40.6	112.2	5.0
	Dec.	117.4	9.8	127.0	20.3	136.7	36.2	112.3	5.0
2008	Jan.	118.0	11.0	127.2	22.2	136.0	47.7	113.1	5.9
	Feb.	119.6	11.7	128.8	21.3	140.1	43.3	114.6	7.3
	March	121.1	11.9	131.6	20.9	146.2	40.1	115.5	7.5
	Apr.	122.8	11.3	135.9	20.4	153.4	36.5	115.8	6.6
	May	126.2	13.8	144.3	26.3	171.3	46.8	116.4	7.0
	June	128.3	15.5	148.9	29.4	180.9	52.9	117.3	7.9
	July	130.5	16.7	154.1	32.6	182.1	51.4	117.8	7.9
	Aug.	128.3	14.3	147.4	26.9	166.8	42.9	118.0	7.5
	Sept.	126.9	11.8	143.8	22.0	158.1	30.2	117.8	6.3
	Oct.	122.7	6.7	132.2	9.8	129.8	2.7	117.5	5.2
	Nov.	117.5	0.5	119.5	-5.2	103.3	-26.6	116.5	3.8
	Dec.	113.6	-3.2	108.7	-14.4	82.0	-40.0	116.2	3.5
2009	Jan.	114.0	-3.4	110.1	-13.4	88.4	-35.0	116.1	2.6
	Feb.	113.3	-5.3	108.9	-15.4	87.1	-37.9	115.6	0.8
	March	112.9	-6.8	108.2	-17.8	86.5	-40.9	115.3	-0.1
	Apr.	113.2	-7.9	108.8	-19.9	93.3	-39.2	115.5	-0.3
	May	114.3	-9.4	111.9	-22.5	100.4	-41.4	115.7	-0.6
	June	116.7	-9.1	118.1	-20.6	113.3	-37.4	115.9	-1.2
	July	116.0	-11.1	115.6	-25.0	107.4	-41.0	116.2	-1.3
	Aug.	117.8	-8.1	120.2	-18.5	117.2	-29.7	116.6	-1.2
	Sept.	116.9	-7.9	116.2	-19.2	108.6	-31.4	117.3	-0.5
	Oct.	118.0	-3.8	119.6	-9.6	114.0	-12.2	117.1	-0.4
	Nov.	118.4	0.8	121.0	1.3	117.2	13.5	117.1	0.5
	Dec.	118.7	4.5	121.2	11.4	116.9	42.6	117.4	1.0
2010	Jan.	120.0	5.2	125.8	14.2	124.5	40.9	116.8	0.6

Source: Calculations based on NSSG data.

Table 4 Industrial producer price index (PPI) for the external market and import price index in industry

Period		PPI – external market				Import price index		Import price index excl. energy	
		General index		General index excl. energy					
		(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year	(2005=100)	Percentage change over previous year
2006		104.8	4.8	103.0	3.0	104.2	4.2	102.7	2.7
2007		108.0	3.0	105.6	2.5	106.9	2.6	105.8	3.0
2008		114.9	6.4	108.9	3.2	114.5	7.1	108.4	2.5
2009		108.0	-6.0	109.4	0.5	112.5	-1.8	108.9	0.5
2008	I	113.2	8.5	108.0	3.6	111.5	8.1	107.3	2.5
	II	118.2	10.0	108.9	3.3	116.8	10.1	108.2	2.3
	III	119.2	9.8	109.7	3.6	118.6	10.1	109.1	2.8
	IV	108.9	-2.4	109.1	2.3	111.3	0.4	109.0	2.3
2009	I	104.4	-7.8	108.4	0.4	108.8	-2.4	108.7	1.4
	II	107.0	-9.5	108.7	-0.1	111.7	-4.4	108.7	0.5
	III	109.5	-8.2	109.9	0.2	114.2	-3.7	108.9	-0.2
	IV	111.0	2.0	110.7	1.5	115.4	3.7	109.1	0.1
2007	Jan.	103.3	-0.1	103.9	2.2	101.9	-1.3	104.4	3.4
	Feb.	104.4	0.6	104.3	2.0	103.1	-0.8	104.6	3.2
	March	105.4	0.7	104.8	2.3	104.3	-0.1	105.0	3.4
	Apr.	107.3	1.9	105.5	2.7	105.5	0.5	105.4	3.3
	May	107.3	2.0	105.2	2.4	106.1	0.9	105.7	3.2
	June	107.8	2.3	105.5	2.5	106.6	1.2	106.1	3.1
	July	108.5	2.4	105.6	2.7	107.7	2.3	106.1	3.1
	Aug.	108.0	1.0	105.7	2.0	107.2	2.3	106.1	2.8
	Sept.	109.2	4.1	106.2	2.3	108.2	4.3	106.4	3.0
	Oct.	110.4	5.8	106.7	2.9	109.8	6.1	106.4	2.7
	Nov.	112.3	7.7	106.6	2.7	111.7	8.2	106.5	2.5
	Dec.	112.0	7.8	106.8	3.3	110.9	8.0	106.6	2.6
2008	Jan.	112.1	8.6	107.3	3.3	110.6	8.6	106.9	2.4
	Feb.	113.2	8.4	108.2	3.8	111.6	8.3	107.4	2.7
	March	114.4	8.5	108.6	3.6	112.2	7.6	107.6	2.4
	Apr.	115.4	7.6	108.5	2.9	114.0	8.0	107.8	2.3
	May	118.4	10.3	108.7	3.3	116.9	10.1	108.1	2.3
	June	120.9	12.2	109.3	3.7	119.6	12.2	108.6	2.4
	July	121.1	11.6	109.5	3.6	121.0	12.4	108.8	2.5
	Aug.	118.7	10.0	109.5	3.6	118.6	10.6	109.1	2.8
	Sept.	117.8	7.9	110.1	3.6	116.0	7.2	109.5	3.0
	Oct.	113.3	2.6	109.7	2.8	114.0	3.8	109.5	2.8
	Nov.	108.9	-3.0	109.2	2.5	111.2	-0.5	108.8	2.2
	Dec.	104.3	-6.9	108.4	1.5	108.7	-2.0	108.6	1.9
2009	Jan.	105.0	-6.3	108.6	1.2	108.8	-1.7	108.7	1.7
	Feb.	104.5	-7.7	108.6	0.4	108.8	-2.5	108.8	1.3
	March	103.8	-9.2	108.0	-0.5	108.7	-3.1	108.7	1.1
	Apr.	105.0	-9.0	108.1	-0.4	109.7	-3.7	108.5	0.7
	May	106.6	-10.0	108.7	0.0	111.6	-4.5	108.7	0.6
	June	109.4	-9.5	109.3	0.0	113.9	-4.8	108.9	0.3
	July	108.2	-10.7	109.2	-0.2	113.3	-6.4	108.9	0.1
	Aug.	110.7	-6.8	110.0	0.4	115.2	-2.9	109.0	-0.1
	Sept.	109.6	-7.0	110.5	0.4	114.0	-1.7	109.0	-0.5
	Oct.	110.6	-2.4	110.7	0.9	115.0	0.9	109.1	-0.3
	Nov.	111.1	2.0	110.5	1.2	115.7	4.0	109.1	0.2
	Dec.	111.3	6.6	111.0	2.4	115.5	6.3	109.1	0.5
2010	Jan.	113.1	7.8	111.8	2.9	-	-	-	-

Source: Calculations based on NSSG data.

Table 5 Employed persons of 15 years and over, by branch of economic activity

(thousands)

		Q3 2009	
		Total employed persons	Salaried employees
Total		**4,540.1**	**2,929.3**
	Agriculture, forestry and fishing	545.4	52.8
	Mining and quarrying	15.9	14.8
	Manufacturing	514.2	378.7
	Electricity, gas, steam and air conditioning supply	25.8	25.2
	Water supply, sewerage, waste management and remediation activities	31.4	30.3
	Construction	376.9	257.9
	Wholesale and retail trade; repair of motor vehicles and motorcycles	806.6	431.8
	Transportation and storage	220.2	151.6
	Accommodation and food service activities	345.7	218.0
	Information and communication	84.1	74.2
	Financial and insurance activities	110.6	98.5
	Real estate activities	8.8	1.4
	Professional, scientific and technical activities	223.4	101.4
	Administrative and support service activities	74.9	60.2
	Public administration and defence; compulsory social security	376.2	376.2
	Education	317.8	292.3
	Human health and social work activities	230.5	196.3
	Arts, entertainment and recreation	52.2	36.6
	Other service activities	86.7	43.5
	Activities of households as employers, etc.	91.0	85.9
	Activities of extraterritorial organisations and bodies	1.8	1.8

Source: NSSG, Labour Force Survey.

Table 6 Balance of payments

(million euro)

		January-December			December		
		2007	2008	2009	2007	2008	2009
I	**CURRENT ACCOUNT BALANCE** (I.A+I.B+I.C+I.D)	**-32,602.2**	**-34,797.6**	**-26,703.9**	**-4,957.3**	**-3,132.8**	**-3,164.0**
I.A	***TRADE BALANCE*** *(I.A.1–I.A.2)*	***-41,499.2***	***-44,048.8***	***-30,760.3***	***-4,172.2***	***-3,057.5***	***-2,772.6***
	Oil trade balance	-9,219.6	-12,154.6	-7,596.5	-1,132.6	-570.2	-621.0
	Non-oil trade balance	-32,279.6	-31,894.3	-23,163.8	-3,039.6	-2,487.3	-2,151.6
	Ship balance	-5,520.3	-4,705.0	-3,356.9	-655.2	-266.6	-333.9
	Trade balance excl. oil and ships	-26,759.3	-27,189.3	-19,806.9	-2,384.4	-2,220.7	-1,817.7
	I.A.1 Exports of goods	*17,445.5*	*19,812.9*	*15,318.0*	*1,458.5*	*1,456.7*	*1,469.2*
	Fuel	3,037.3	4,254.5	3,063.2	298.7	267.3	370.0
	Ships (receipts)	2,275.4	1,582.0	771.7	118.5	85.7	11.0
	Other goods	12,132.8	13,976.5	11,483.1	1,041.3	1,103.7	1,088.2
	I.A.2 Imports of goods	*58,944.8*	*63,861.7*	*46,078.3*	*5,630.7*	*4,514.2*	*4,241.8*
	Fuel	12,256.9	16,409.0	10,659.8	1,431.3	837.5	991.0
	Ships (payments)	7,795.7	6,286.9	4,128.6	773.7	352.3	344.9
	Other goods	38,892.2	41,165.8	31,289.9	3,425.7	3,324.4	2,905.9
I.B	***SERVICES BALANCE*** *(I.B.1–I.B.2)*	***16,591.7***	***17,135.6***	***12,567.2***	***573.8***	***505.1***	***421.8***
	I.B.1 Receipts	*31,337.3*	*34,066.2*	*26,952.2*	*2,051.4*	*1,899.3*	*1,791.3*
	Travel	11,319.2	11,635.9	10,369.1	210.8	207.0	180.1
	Transport	16,939.3	19,188.3	13,552.2	1,551.4	1,365.4	1,258.0
	Other services	3,078.9	3,242.0	3,030.9	289.2	326.9	353.2
	I.B.2 Payments	*14,745.6*	*16,930.6*	*14,384.9*	*1,477.6*	*1,394.2*	*1,369.5*
	Travel	2,485.7	2,679.1	2,466.4	296.9	284.5	231.9
	Transport	7,771.3	9,316.0	7,073.4	749.6	653.9	657.9
	Other services	4,488.6	4,935.5	4,845.1	431.1	455.8	479.7
I.C	***INCOME BALANCE*** *(I.C.1–I.C.2)*	***-9,285.8***	***-10,643.0***	***-9,803.5***	***-944.1***	***-890.6***	***-902.6***
	I.C.1 Receipts	*4,558.5*	*5,573.2*	*4,124.9*	*395.3*	*486.0*	*317.9*
	Wages, salaries	366.9	344.7	294.6	31.7	28.2	24.0
	Interest, dividends, profits	4,191.7	5,228.5	3,830.3	363.6	457.8	293.9
	I.C.2 Payments	*13,844.3*	*16,216.2*	*13,928.4*	*1,339.3*	*1,376.6*	*1,220.5*
	Wages, salaries	332.6	410.1	411.9	33.4	45.1	41.1
	Interest, dividends, profits	13,511.7	15,806.1	13,516.4	1,305.9	1,331.5	1,179.4
I.D	***CURRENT TRANSFERS BALANCE*** *(I.D.1–I.D.2)*	***1,591.1***	***2,758.6***	***1,292.6***	***-414.9***	***310.2***	***89.4***
	I.D.1 Receipts	*6,608.1*	*6,882.7*	*5,380.7*	*966.8*	*763.4*	*329.6*
	General government (mainly transfers from the EU)	4,361.2	4,678.8	3,527.9	780.7	608.0	190.7
	Other sectors (emigrants' remittances etc.)	2,246.9	2,203.9	1,852.8	186.0	155.5	138.9
	I.D.2 Payments	*5,017.0*	*4,124.1*	*4,088.1*	*1,381.6*	*453.3*	*240.2*
	General government (mainly payments to the EU)	3,825.4	2,717.6	2,679.6	1,294.8	350.9	122.3
	Other sectors	1,191.6	1,406.4	1,408.5	86.9	102.4	117.9
II	**CAPITAL TRANSFERS BALANCE** (II.1– II.2)	**4,332.3**	**4,090.8**	**2,017.4**	**1,349.2**	**143.1**	**53.6**
	II.1 Receipts	*4,673.9*	*4,637.8*	*2,328.1*	*1,378.9*	*185.5*	*84.4*
	General government (mainly transfers from the EU)	4,401.4	4,241.9	2,133.2	1,339.8	174.2	65.6
	Other sectors	272.4	395.9	194.9	39.2	11.3	18.8
	II.2 Payments	*341.6*	*547.0*	*310.7*	*29.8*	*42.4*	*30.8*
	General government (mainly payments to the EU)	27.1	192.0	14.4	1.0	1.5	1.5
	Other sectors	314.5	354.9	296.3	28.7	40.9	29.2
III	**CURRENT ACCOUNT AND CAPITAL TRANSFERS BALANCE** (I+II)	**-28,269.9**	**-30,706.8**	**-24,686.4**	**-3,608.2**	**-2,989.7**	**-3,110.4**
IV	**FINANCIAL ACCOUNT BALANCE** (IV.A+IV.B+IV.C+IV.D)	**27,570.2**	**29,914.2**	**24,225.6**	**3,417.9**	**2,754.9**	**2,453.5**
	IV.A DIRECT INVESTMENT [1]	***-2,290.2***	***1,420.7***	***1,091.7***	***-92.2***	***354.7***	***-243.7***
	By residents abroad	-3,832.9	-1,650.4	-1,323.3	-513.3	235.5	-318.0
	By non-residents in Greece	1,542.7	3,071.1	2,415.0	421.0	119.2	74.3
	IV.B PORTFOLIO INVESTMENT [1]	***17,441.7***	***16,428.0***	***27,103.8***	***4,046.5***	***659.2***	***-5,070.2***
	Assets	-16,351.1	-268.9	-4,533.0	2,250.9	4,593.0	-753.7
	Liabilities	33,792.8	16,696.9	31,636.8	1,795.6	-3,933.8	-4,316.5
	IV.C OTHER INVESTMENT [1]	***12,740.6***	***12,094.6***	***-3,636.9***	***-395.3***	***1,766.9***	***7,819.4***
	Assets	-16,266.1	-27,823.3	-23,875.7	-3,213.6	-5,491.9	270.2
	Liabilities	29,006.8	39,917.8	20,238.8	2,818.4	7,258.8	7,549.2
	(General government loans)	*-2,341.7*	*-572.7*	*-2,335.0*	*-80.0*	*-78.0*	*-133.2*
	IV.D CHANGE IN RESERVE ASSETS [2]	***-322.0***	***-29.0***	***-333.0***	***-141.0***	***-26.0***	***-52.0***
V	**ERRORS AND OMISSIONS**	**699.7**	**792.6**	**460.8**	**190.2**	**234.8**	**656.9**
	RESERVE ASSETS [3]				***2,491.0***	***2,521.0***	***3,857.0***

Source: Bank of Greece.
1 (+) net inflow, (-) net outflow.
2 (+) decrease, (-) increase.
3 Following Greece's entry in the euro area in January 2001, reserve assets, as defined by the European Central Bank, comprise monetary gold, the "reserve position" in the IMF, "Special Drawing Rights", and Bank of Greece's claims in foreign currency on non-euro area residents. Excluded are euro-denominated claims on non-euro area residents, claims (in foreign currency and in euro) on euro area residents, and the Bank of Greece share in the capital and reserves of the ECB.

Table 7 Monetary aggregates of the euro area[1]

(outstanding balances in billion euro, not seasonally adjusted)

End of period		Currency in circulation (1)	Overnight deposits (2)	M1 (3) = (1) + (2)	Deposits with agreed maturity up to two years (4)	Deposits redeemable at notice up to three months (5)	M2 (6) = (3) + (4) + (5)	Repurchase agreements (7)	Money market fund shares/units (8)	Debt securities up to two years (9)	M3[2] (10) = (6) + (7) + (8) + (9)
2005		532.9	2,948.6	3,481.5	1,132.4	1,548.0	6,162.0	221.9	615.8	124.4	7,124.1
2006		592.3	3,166.0	3,758.3	1,422.0	1,556.0	6,736.4	248.0	614.6	196.0	7,794.9
2007		638.6	3,262.5	3,901.1	1,987.9	1,540.8	7,429.8	282.9	660.4	312.2	8,685.4
2008		722.9	3,312.4	4,035.3	2,494.7	1,565.4	8,095.4	330.1	726.1	266.8	9,418.4
2009		770.0	3,787.2	4,557.2	1,904.3	1,805.3	8,266.8	330.3	650.6	140.0	9,387.8
2007	Jan.	575.6	3,110.0	3,685.6	1,454.2	1,557.5	6,697.3	262.3	641.6	217.6	7,819.0
	Feb.	578.7	3,099.2	3,677.9	1,476.6	1,546.2	6,700.7	268.8	651.9	228.6	7,850.2
	March	588.5	3,150.3	3,738.8	1,540.6	1,544.0	6,823.4	282.0	666.2	236.6	8,008.2
	Apr.	594.7	3,163.6	3,758.3	1,573.7	1,536.3	6,868.2	281.6	681.7	238.4	8,070.1
	May	597.6	3,182.6	3,780.2	1,608.2	1,533.5	6,921.9	285.2	702.3	250.8	8,160.3
	June	604.9	3,244.4	3,849.3	1,640.6	1,526.7	7,016.6	282.2	698.9	238.3	8,236.1
	July	612.9	3,223.2	3,836.1	1,704.2	1,517.0	7,057.2	287.1	712.4	235.4	8,292.1
	Aug.	610.6	3,143.6	3,754.2	1,775.0	1,509.1	7,038.3	297.6	705.9	256.3	8,298.2
	Sept.	610.4	3,217.0	3,827.4	1,803.3	1,502.6	7,133.2	295.4	682.2	278.3	8,389.2
	Oct.	613.5	3,182.3	3,795.8	1,900.6	1,526.6	7,223.0	293.5	684.0	293.7	8,494.4
	Nov.	618.6	3,217.2	3,835.8	1,925.8	1,520.0	7,281.6	301.8	696.7	307.2	8,587.4
	Dec.	638.6	3,262.5	3,901.1	1,987.9	1,540.8	7,429.8	282.9	660.4	312.2	8,685.4
2008	Jan.	623.1	3,235.3	3,858.5	2,052.0	1,548.0	7,458.5	307.3	737.2	295.3	8,798.3
	Feb.	628.7	3,179.1	3,807.9	2,127.3	1,545.3	7,480.5	314.3	749.6	273.8	8,818.2
	March	632.9	3,226.4	3,859.3	2,144.1	1,551.0	7,554.3	314.0	742.5	279.0	8,889.9
	Apr.	641.4	3,195.4	3,836.8	2,231.5	1,549.7	7,618.1	328.9	751.3	267.6	8,965.9
	May	645.8	3,221.6	3,867.3	2,267.8	1,546.1	7,681.2	333.3	755.8	283.9	9,054.3
	June	652.1	3,262.1	3,914.3	2,270.1	1,542.8	7,727.1	330.3	733.0	280.8	9,071.2
	July	658.8	3,179.5	3,838.4	2,371.3	1,533.5	7,743.1	333.1	743.2	285.4	9,104.9
	Aug.	656.1	3,133.6	3,789.7	2,431.5	1,531.1	7,752.3	343.1	757.9	276.6	9,129.9
	Sept.	657.2	3,219.2	3,876.4	2,435.1	1,521.2	7,832.7	345.6	731.1	286.0	9,195.3
	Oct.	698.9	3,245.0	3,944.0	2,503.6	1,517.0	7,964.6	351.0	729.8	275.9	9,321.2
	Nov.	703.7	3,265.3	3,969.0	2,520.7	1,521.4	8,011.1	336.6	739.7	274.2	9,361.5
	Dec.	722.9	3,312.4	4,035.3	2,494.7	1,565.4	8,095.4	330.1	726.1	266.8	9,418.4
2009	Jan.	712.3	3,383.4	4,095.7	2,387.3	1,610.9	8,093.9	324.0	759.9	216.8	9,394.7
	Feb.	716.0	3,386.2	4,102.2	2,350.4	1,633.9	8,086.5	327.4	779.9	215.0	9,408.8
	March	720.0	3,411.0	4,131.0	2,301.8	1,654.2	8,087.0	338.5	780.8	194.4	9,400.6
	Apr.	729.2	3,468.5	4,197.7	2,281.7	1,676.4	8,155.7	338.2	781.8	205.4	9,481.1
	May	732.0	3,488.9	4,220.9	2,236.4	1,692.4	8,149.6	336.2	771.6	198.5	9,455.9
	June	735.0	3,576.7	4,311.7	2,162.8	1,704.1	8,178.6	347.2	741.7	182.0	9,449.5
	July	745.5	3,565.7	4,311.2	2,128.6	1,722.9	8,162.7	320.0	758.0	173.8	9,414.4
	Aug.	741.2	3,576.5	4,317.7	2,087.9	1,739.8	8,145.4	310.8	759.3	157.5	9,373.0
	Sept.	740.6	3,638.6	4,379.2	2,020.2	1,747.1	8,146.5	335.2	740.5	148.5	9,370.8
	Oct.	745.5	3,689.1	4,434.5	1,975.5	1,763.6	8,173.6	309.4	734.9	139.0	9,356.9
	Nov.	750.1	3,722.1	4,472.2	1,925.3	1,768.1	8,165.6	314.9	721.8	128.6	9,330.8
	Dec.*	770.0	3,787.2	4,557.2	1,904.3	1,805.3	8,266.8	330.3	650.6	140.0	9,387.8

Source: ECB.
* Provisional data.
1 Monetary aggregates comprise monetary liabilities of MFIs and central government (Post Office, Treasury) vis-à-vis non-MFI euro area residents excluding central government.
2 M3 and its components exclude non-residents' holdings of money market fund shares/units and debt securities of up to two years.

Table 8 The Greek contribution to the main monetary aggregates of the euro area

(outstanding amounts in billion euro, not seasonally adjusted)

End of period		Overnight deposits			Deposits with an agreed maturity up to two years	Deposits redeemable at notice up to three months[1]	Repurchase agreements (repos)	Money market fund shares/units	Debt securities up to two years[2]	Total[3] (M3 excluding currency in circulation) (7)=(1)+(2)++(3)+(4)++(5)+(6)
		(1)	Sight deposits and current accounts (1.1)	Savings deposits (1.2)	(2)	(3)	(4)	(5)	(6)	
2005		99.2	24.8	74.4	51.8	4.4	2.7	4.9	0.4	163.4
2006		100.1	26.0	74.1	69.3	2.9	1.6	5.8	0.5	180.2
2007		98.8	28.2	70.6	97.6	2.3	0.7	7.9	-1.6	205.7
2008		90.6	25.9	64.7	137.8	1.9	0.4	2.3	2.1	235.1
2009		102.9	30.8	72.1	134.0	3.1	0.2	1.5	-0.1	241.7
2007	Jan.	95.5	23.9	71.7	72.9	2.9	1.5	5.9	0.4	179.1
	Feb.	95.0	24.0	71.0	73.7	2.8	1.4	6.2	0.3	179.5
	March	96.7	25.3	71.4	76.0	2.7	1.2	6.5	0.3	183.4
	Apr.	96.2	24.4	71.8	77.3	2.7	1.1	6.7	0.2	184.2
	May	94.3	24.4	69.8	79.4	2.7	1.3	7.0	-0.5	184.2
	June	99.8	27.5	72.2	80.8	2.7	1.4	7.5	-1.1	191.0
	July	96.7	25.3	71.4	87.8	2.6	1.0	7.6	-1.8	194.0
	Aug.	96.5	25.4	71.1	88.4	2.6	0.9	7.8	-1.9	194.3
	Sept.	96.1	25.3	70.8	89.1	2.5	0.8	7.8	-1.7	194.6
	Oct.	94.3	25.3	69.0	92.0	2.4	0.9	8.0	-1.8	195.8
	Nov.	94.6	26.5	68.1	94.9	2.3	0.8	8.1	-1.6	199.0
	Dec.	98.8	28.2	70.6	97.6	2.3	0.7	7.9	-1.6	205.7
2008	Jan.	93.7	25.7	68.0	102.9	2.1	0.7	7.7	-1.1	206.1
	Feb.	91.1	24.7	66.4	106.3	2.2	0.6	7.8	-0.5	207.6
	March	93.3	27.2	66.2	107.1	2.1	0.6	7.8	0.2	211.2
	Apr.	92.2	25.4	66.8	110.6	2.1	0.5	7.6	0.4	213.4
	May	90.2	24.4	65.8	114.9	2.0	0.6	7.4	0.6	215.8
	June	94.0	27.4	66.5	115.6	2.0	0.6	7.3	1.4	220.9
	July	90.6	24.8	65.8	119.2	1.9	0.5	6.9	1.9	221.0
	Aug.	89.5	24.4	65.1	124.2	1.9	0.5	6.8	2.2	225.1
	Sept.	91.5	26.5	65.0	126.4	2.0	0.9	6.3	2.5	229.5
	Oct.	89.0	24.8	64.2	133.7	2.0	1.1	3.0	2.2	231.1
	Nov.	86.9	24.5	62.4	138.2	2.0	0.5	2.5	2.2	232.3
	Dec.	90.6	25.9	64.7	137.8	1.9	0.4	2.3	2.1	235.1
2009	Jan.	87.8	24.9	62.9	142.0	2.1	0.3	2.0	1.8	236.0
	Feb.	87.7	24.8	62.9	142.3	2.1	0.3	1.9	1.6	235.9
	March	88.5	24.6	63.9	142.0	2.1	0.2	1.5	1.5	235.9
	Apr.	93.2	26.9	66.2	140.8	2.4	0.3	1.5	2.0	240.2
	May	92.0	25.7	66.3	140.3	2.5	0.3	1.5	1.9	238.5
	June	97.0	29.2	67.8	140.7	2.7	0.3	1.6	1.5	243.7
	July	96.4	27.8	68.6	137.9	2.9	0.3	1.7	1.3	240.4
	Aug.	97.9	28.6	69.4	138.1	3.0	0.2	1.7	1.2	242.1
	Sept.	98.9	29.1	69.8	138.8	2.9	0.2	1.7	1.0	243.6
	Oct.	97.5	28.0	69.5	137.8	3.1	0.2	1.7	0.9	241.1
	Nov.	98.6	29.5	69.1	135.2	3.1	0.2	1.6	0.3	239.0
	Dec.	102.9	30.8	72.1	134.0	3.1	0.2	1.5	-0.1	241.7

Source: Bank of Greece.

1 Including savings deposits in currencies other than the euro.

2 This aggregate is calculated on a consolidated basis with the other euro area countries and thus does not include domestic MFIs' holdings of debt securities up to two years issued by euro area MFIs.

3 As in all other euro area countries, Greece's M3 can no longer be calculated accurately, since part of the quantity of euro banknotes and coins in circulation in each country is held by residents of other euro area countries (as well as non-euro area residents). Owing to these technical problems, the compilation of the Greek M0, M1, M2 and M3 was discontinued in January 2003.

Table 9 Greece: deposits of domestic firms and households with OMFIs,[1] by currency and type

(outstanding balances in million euro, not seasonally adjusted)

End of period		Total deposits	Breakdown by currency		Breakdown by type		
			In euro	In other currencies	Sight deposits	Savings deposits	Time deposits[2]
2005		156,857.7	135,797.3	21,060.4	22,180.2	79,800.8	54,876.7
2006		173,370.4	151,321.5	22,048.9	23,525.0	77,858.2	71,987.2
2007		197,233.6	173,493.8	23,739.8	25,014.1	73,562.0	98,657.6
2008		227,246.6	200,631.7	26,614.8	21,819.5	67,328.3	138,098.8
2009		237,788.7	217,649.0	20,139.7	26,320.0	75,811.2	135,657.6
2007	Jan.	171,937.9	149,321.7	22,616.2	20,943.4	75,322.8	75,671.7
	Feb.	172,166.2	150,424.2	21,742.0	21,109.9	74,619.3	76,437.1
	March	176,068.3	154,217.8	21,850.5	22,393.4	74,931.5	78,743.4
	Apr.	177,261.9	155,599.4	21,662.5	21,878.6	75,236.8	80,146.5
	May	177,486.2	154,859.0	22,627.2	21,160.9	73,954.4	82,370.9
	June	184,148.2	161,027.9	23,120.2	24,695.0	75,647.6	83,805.6
	July	188,181.4	164,079.4	24,102.0	22,986.4	74,519.2	90,675.9
	Aug.	188,054.4	163,993.2	24,061.2	22,398.6	74,358.8	91,297.0
	Sept.	188,469.8	164,667.0	23,802.8	22,697.5	73,977.4	91,794.9
	Oct.	187,503.6	163,407.0	24,096.6	22,480.6	72,098.4	92,924.6
	Nov.	190,515.3	166,375.1	24,140.1	23,484.5	71,094.6	95,936.3
	Dec.	197,233.6	173,493.8	23,739.8	25,014.1	73,562.0	98,657.6
2008	Jan.	196,029.3	171,471.0	24,558.4	21,730.7	70,740.5	103,558.2
	Feb.	197,402.8	172,633.7	24,769.0	21,120.5	69,152.9	107,129.4
	March	200,449.4	176,402.8	24,046.5	23,638.8	68,859.6	107,950.9
	Apr.	202,569.8	177,766.0	24,803.9	22,180.8	69,469.5	110,919.5
	May	204,884.2	179,218.0	25,666.2	21,494.7	68,386.4	115,003.1
	June	209,079.3	183,406.2	25,673.0	23,992.6	69,113.2	115,973.4
	July	209,789.6	182,926.7	26,862.8	21,779.6	68,266.6	119,743.4
	Aug.	213,380.5	183,997.1	29,383.4	21,087.0	67,628.4	124,665.1
	Sept.	217,309.1	187,754.2	29,555.0	22,865.0	67,505.7	126,938.4
	Oct.	222,016.1	191,243.7	30,772.4	21,220.1	66,784.6	134,011.4
	Nov.	223,573.2	192,418.3	31,154.8	20,110.1	64,962.1	138,501.0
	Dec.	227,246.6	200,631.7	26,614.8	21,819.5	67,328.3	138,098.8
2009	Jan.	228,575.7	200,330.3	28,245.4	20,677.5	65,526.4	142,371.8
	Feb.	229,135.0	201,123.7	28,011.4	20,830.7	65,570.3	142,734.0
	March	230,077.2	205,500.1	24,577.2	20,745.6	66,556.9	142,774.7
	Apr.	233,781.5	209,547.7	24,233.7	22,923.0	69,222.0	141,636.5
	May	232,033.2	208,321.3	23,711.9	21,702.7	69,329.2	141,001.3
	June	237,260.8	214,261.2	22,999.6	24,853.6	71,093.8	141,313.4
	July	234,280.2	211,612.8	22,667.4	23,691.2	72,079.7	138,509.3
	Aug.	236,154.8	212,681.8	23,473.0	24,540.1	72,881.4	138,733.3
	Sept.	237,583.2	214,967.3	22,615.9	24,676.0	73,232.1	139,675.2
	Oct.	235,263.9	213,527.0	21,736.8	24,091.1	73,104.2	138,068.6
	Nov.	234,252.3	213,048.3	21,204.0	25,339.8	72,720.1	136,192.5
	Dec.	237,788.7	217,649.0	20,139.7	26,320.0	75,811.2	135,657.6

Source: Bank of Greece.
1 Other Monetary Financial Institutions (OMFIs) comprise credit institutions (other than the Bank of Greece) and money market funds.
2 Including blocked deposits.

Table 10 Money market interest rates

(percentages per annum, period averages)

Period		Overnight deposits[1]	1-month deposits[2]	3-month deposits[2]	6-month deposits[2]	9-month deposits[2]	12-month deposits[2]
2005		2.09	2.14	2.18	2.23	2.28	2.33
2006		2.83	2.94	3.08	3.23	3.35	3.44
2007		3.87	4.08	4.28	4.35	4.41	4.45
2008		3.87	4.28	4.64	4.73	4.76	4.83
2009		0.71	0.89	1.22	1.43	1.54	1.61
2007	Jan.	3.56	3.62	3.75	3.89	3.99	4.06
	Feb.	3.57	3.65	3.82	3.94	4.03	4.09
	March	3.69	3.84	3.89	4.00	4.06	4.11
	Apr.	3.82	3.86	3.98	4.10	4.19	4.25
	May	3.79	3.92	4.07	4.20	4.30	4.37
	June	3.96	4.10	4.15	4.28	4.40	4.51
	July	4.06	4.11	4.22	4.36	4.47	4.56
	Aug.	4.05	4.31	4.54	4.59	4.63	4.67
	Sept.	4.03	4.43	4.74	4.75	4.73	4.72
	Oct.	3.94	4.24	4.69	4.66	4.65	4.65
	Nov.	4.02	4.22	4.64	4.63	4.62	4.61
	Dec.	3.88	4.71	4.85	4.82	4.80	4.79
2008	Jan.	4.02	4.20	4.48	4.50	4.50	4.50
	Feb.	4.03	4.18	4.36	4.36	4.35	4.35
	March	4.09	4.30	4.60	4.59	4.59	4.59
	Apr.	3.99	4.37	4.78	4.80	4.81	4.82
	May	4.01	4.39	4.86	4.90	4.94	4.99
	June	4.01	4.47	4.94	5.09	5.23	5.36
	July	4.19	4.47	4.96	5.15	5.25	5.39
	Aug.	4.30	4.49	4.97	5.16	5.23	5.32
	Sept.	4.27	4.66	5.02	5.22	5.29	5.38
	Oct.	3.82	4.83	5.11	5.18	5.21	5.25
	Nov.	3.15	3.84	4.24	4.29	4.33	4.35
	Dec.	2.49	2.99	3.29	3.37	3.42	3.45
2009	Jan.	1.81	2.14	2.46	2.54	2.59	2.62
	Feb.	1.26	1.63	1.94	2.03	2.09	2.14
	March	1.06	1.27	1.64	1.77	1.84	1.91
	Apr.	0.84	1.01	1.42	1.61	1.69	1.77
	May	0.78	0.88	1.28	1.48	1.57	1.64
	June	0.70	0.91	1.23	1.44	1.54	1.61
	July	0.36	0.61	0.97	1.21	1.33	1.41
	Aug.	0.35	0.51	0.86	1.12	1.24	1.33
	Sept.	0.36	0.46	0.77	1.04	1.16	1.26
	Oct.	0.36	0.43	0.74	1.02	1.14	1.24
	Nov.	0.36	0.44	0.72	0.99	1.12	1.23
	Dec.	0.35	0.48	0.71	1.00	1.12	1.24
2010	Jan.	0.34	0.44	0.68	0.98	1.11	1.23

Source: Bloomberg.
1 Euro overnight index average (EONIA).
2 Euro interbank offered rates (EURIBOR).

Table 11 Greek government paper yields

(percentages per annum, period averages)

Period		Yield on one-year Treasury bills	Bond yields						
			3-year	5-year	7-year	10-year	15-year	20-year[1]	30-year
2005		2.33	2.65	2.92	3.22	3.59	3.80	3.92	4.14
2006		3.44	3.58	3.72	3.87	4.07	4.16	4.23	4.42
2007		4.45	4.21	4.30	4.34	4.50	4.67	–	4.81
2008		4.83	4.27	4.51	4.54	4.80	5.18	–	5.30
2009		1.61	3.12	4.22	4.49	5.17	5.61		5.83
2007	Jan.	4.06	4.01	4.08	4.13	4.28	4.33	4.38	4.51
	Feb.	4.09	4.03	4.09	4.14	4.30	4.35	4.40	4.54
	March	4.11	4.00	4.04	4.08	4.20	4.27	4.33	4.49
	Apr.	4.25	4.17	4.24	4.28	4.40	4.46	4.52	4.70
	May	4.37	4.31	4.37	4.40	4.51	4.59	–	4.77
	June	4.51	4.52	4.65	4.68	4.80	4.97	–	5.05
	July	4.56	4.54	4.64	4.67	4.79	4.96	–	5.02
	Aug.	4.67	4.28	4.41	4.47	4.62	4.85	–	4.91
	Sept.	4.72	4.20	4.34	4.39	4.56	4.82	–	4.92
	Oct.	4.65	4.19	4.34	4.39	4.58	4.82	–	4.92
	Nov.	4.61	4.08	4.16	4.20	4.43	4.73	–	4.88
	Dec.	4.80	4.16	4.28	4.29	4.53	4.83	–	4.97
2008	Jan.	4.50	3.88	4.02	4.17	4.40	4.76	–	4.95
	Feb.	4.35	3.68	3.83	4.09	4.36	4.79	–	4.99
	March	4.67	3.92	4.10	4.24	4.42	4.95	–	5.16
	Apr.	4.81	4.15	4.31	4.32	4.54	5.05	–	5.20
	May	4.99	4.35	4.46	4.46	4.74	5.08	–	5.21
	June	5.36	4.97	5.08	4.96	5.17	5.37	–	5.40
	July	5.39	4.94	5.04	4.98	5.15	5.38	–	5.44
	Aug.	5.32	4.53	4.64	4.63	4.87	5.15	–	5.25
	Sept.	5.38	4.42	4.65	4.65	4.88	5.26	–	5.36
	Oct.	5.26	3.97	4.48	4.53	4.93	5.22	–	5.26
	Nov.	4.35	4.12	4.65	4.70	5.09	5.49	–	5.52
	Dec.	3.45	4.28	4.89	4.76	5.08	5.67	–	5.82
2009	Jan.	2.62	3.93	5.22	5.26	5.59	6.21	–	6.46
	Feb.	2.14	3.91	5.19	5.25	5.70	6.13	–	6.26
	March	1.91	4.05	5.08	5.16	5.87	6.11	–	6.28
	Apr.	1.77	3.63	4.72	4.71	5.50	5.78	–	5.86
	May	1.64	3.10	4.14	4.53	5.22	5.54	–	5.71
	June	1.61	3.05	4.20	4.55	5.33	5.73	–	5.93
	July	1.41	2.57	3.62	3.99	4.89	5.40	–	5.70
	Aug.	1.33	2.52	3.41	3.77	4.52	4.93	–	5.26
	Sept.	1.26	2.26	3.36	3.77	4.56	4.91	–	5.31
	Oct.	1.24	2.26	3.37	3.78	4.57	4.97	–	5.39
	Nov.	1.23	2.45	3.63	4.06	4.84	5.51	–	5.65
	Dec.	1.24	3.72	4.67	5.01	5.49	6.10	–	6.11
2010	Jan.	1.23	4.72	5.40	5.61	6.02	6.50	–	6.36

Source: Bank of Greece.
1 As of May 2007, there is no bond in the market with a residual maturity close to 20 years.

Table 12 Greece: domestic MFI loans[1] to domestic firms (by branch of economic activity) and households

(balances in million euro)

End of period		Grand total	Firms						Households			
			Total	Agricul-ture	Industry[2]	Trade	Tourism	Other	Total	Housing	Consumer credit	Other
2004		123,993.8	71,433.0	3,248.0	15,675.6	18,821.6	4,040.0	29,647.8	52,560.8	34,052.2	17,053.8	1,454.8
2005		149,903.2	81,009.5	2,975.9	17,933.0	21,321.0	4,348.7	34,430.9	68,893.7	45,419.8	21,825.1	1,648.8
2006		179,452.3	93,575.8	3,185.2	19,514.6	23,711.9	4,799.7	42,364.4	85,876.5	57,145.0	26,596.6	2,134.9
2007		215,405.2	111,288.8	3,304.1	21,487.7	27,671.7	5,883.4	52,941.9	104,116.4	69,363.3	31,942.4	2,810.7
2008		249,661.1	132,458.0	3,855.7	24,872.7	32,985.0	7,031.6	63,713.0	117,203.1	77,699.9	36,435.0	3,068.2
2009		253,429.1	133,794.5	3,962.1	23,685.2	33,519.2	7,358.0	65,270.0	119,634.6	80,558.6	36,044.3	3,031.7
2007	Jan.	179,422.1	92,476.7	3,068.1	19,276.7	23,260.6	4,877.8	41,993.5	86,945.4	57,943.7	26,871.9	2,129.8
	Feb.	181,890.6	93,752.2	3,085.0	19,327.6	23,688.6	5,019.6	42,631.4	88,138.4	58,862.9	27,102.3	2,173.2
	March	186,317.2	96,295.3	3,103.4	19,636.8	24,466.8	5,107.7	43,980.6	90,021.9	60,254.6	27,544.9	2,222.4
	Apr.	187,655.4	96,341.2	3,059.6	19,630.1	24,394.5	5,210.1	44,046.9	91,314.2	61,092.5	28,041.1	2,180.6
	May	190,564.2	97,674.8	3,087.7	20,090.5	24,671.2	5,287.7	44,537.7	92,889.4	62,004.3	28,688.9	2,196.2
	June	197,784.1	102,988.6	3,272.4	20,567.5	25,615.5	5,404.2	48,129.0	94,795.5	63,273.7	29,077.6	2,444.2
	July	199,855.6	103,304.8	3,286.4	20,540.3	25,665.1	5,428.6	48,384.4	96,550.8	64,380.3	29,568.6	2,601.9
	Aug.	202,346.7	104,528.9	3,349.0	20,726.7	25,789.2	5,423.6	49,240.4	97,817.8	65,153.9	30,031.5	2,632.4
	Sept.	205,778.7	106,262.2	3,359.5	21,077.1	26,488.2	5,493.2	49,844.2	99,516.5	66,115.5	30,440.6	2,960.4
	Oct.	207,246.5	106,274.5	3,382.6	21,084.3	26,495.4	5,607.0	49,705.2	100,972.0	67,002.5	31,072.7	2,896.8
	Nov.	210,926.0	108,543.8	3,395.7	21,418.7	26,856.6	5,670.4	51,202.4	102,382.2	68,022.9	31,603.6	2,755.7
	Dec.	215,405.2	111,288.8	3,304.1	21,487.7	27,671.7	5,883.4	52,941.9	104,116.4	69,363.3	31,942.4	2,810.7
2008	Jan.	217,681.5	112,572.1	3,395.9	21,628.1	27,826.1	5,949.5	53,772.5	105,109.4	70,031.5	32,311.0	2,766.9
	Feb.	221,160.9	114,445.3	3,551.6	22,122.4	28,100.8	6,208.4	54,462.1	106,715.6	70,833.7	33,069.7	2,812.2
	March	225,312.1	117,396.4	3,585.0	22,454.7	28,954.8	6,308.3	56,093.6	107,915.7	71,660.6	33,367.2	2,887.9
	Apr.	226,983.0	118,260.9	3,708.2	22,484.7	29,279.8	6,498.5	56,289.7	108,722.1	72,270.5	33,677.9	2,773.7
	May	230,680.4	120,638.9	3,775.9	23,263.1	30,045.2	6,595.4	56,959.3	110,041.5	73,006.6	34,195.7	2,839.2
	June	235,808.2	124,189.4	3,842.1	23,777.8	30,938.0	6,770.9	58,860.6	111,618.8	74,064.3	34,606.4	2,948.1
	July	238,348.9	125,439.9	3,858.3	24,133.5	31,227.2	6,817.4	59,403.5	112,909.0	74,829.6	35,132.8	2,946.6
	Aug.	240,859.5	127,250.3	3,901.1	24,320.3	31,558.0	6,888.1	60,582.8	113,609.2	75,203.6	35,483.3	2,922.3
	Sept.	244,061.5	128,963.4	3,915.0	24,490.4	32,045.4	7,036.7	61,475.9	115,098.1	76,055.4	36,037.0	3,005.7
	Oct.	247,989.9	131,808.1	3,967.3	24,774.4	32,314.2	7,023.5	63,728.7	116,181.8	76,853.9	36,281.9	3,046.0
	Nov.	248,676.0	132,136.3	4,019.4	25,167.9	32,952.8	6,948.0	63,048.2	116,539.7	77,003.3	36,492.2	3,044.2
	Dec.	249,661.1	132,458.0	3,855.7	24,872.7	32,985.0	7,031.6	63,713.0	117,203.1	77,699.9	36,435.0	3,068.2
2009	Jan.	250,265.9	132,994.0	3,879.2	24,943.5	33,244.5	7,081.3	63,845.5	117,271.9	77,812.6	36,449.3	3,010.0
	Feb.	250,437.8	132,950.9	3,932.8	25,001.1	33,454.1	7,147.8	63,415.1	117,486.9	78,002.9	36,512.8	2,971.2
	March	249,959.8	132,575.4	3,826.7	24,491.4	33,708.3	7,154.2	63,394.8	117,384.4	78,066.3	36,369.2	2,948.9
	Apr.	250,464.0	133,055.7	3,939.7	24,529.9	34,056.7	7,197.4	63,332.0	117,408.3	78,235.2	36,244.7	2,928.4
	May	250,865.1	133,181.8	3,973.5	24,639.9	34,176.4	7,312.3	63,079.7	117,683.3	78,395.5	36,317.7	2,970.1
	June	249,675.6	131,689.8	3,988.6	24,379.8	33,745.1	7,405.9	62,170.4	117,985.8	78,734.2	36,280.8	2,970.8
	July	250,473.4	132,139.5	4,011.1	24,363.4	33,772.5	7,380.1	62,612.4	118,333.9	79,041.9	36,383.9	2,908.1
	Aug.	250,706.5	132,234.2	3,913.2	24,231.8	33,321.5	7,195.7	63,572.0	118,472.3	79,144.6	36,445.0	2,882.7
	Sept.	251,819.5	132,923.8	3,969.7	24,042.4	33,775.1	7,192.4	63,944.2	118,895.7	79,560.2	36,391.6	2,943.9
	Oct.	251,578.0	132,632.9	3,986.7	23,886.2	33,454.3	7,172.1	64,133.6	118,945.1	79,670.0	36,328.7	2,946.4
	Nov.	251,898.4	132,795.9	4,028.0	23,892.2	33,207.0	7,248.6	64,420.1	119,102.5	79,958.2	36,165.9	2,978.4
	Dec.	253,429.1	133,794.5	3,962.1	23,685.2	33,519.2	7,358.0	65,270.0	119,634.6	80,558.6	36,044.3	3,031.7

Source: Bank of Greece.
1 Including loans, corporate bonds held by MFIs, securitised loans and securitised corporate bonds.
2 Comprising manufacturing and mining.

Table 13 Greece: bank rates on new euro-denominated deposits of euro area residents

(percentages per annum, period averages unless otherwise noted)

Period		Deposits by households			Deposits by non-financial corporations		Repurchase agreements (repos)
		Overnight deposits[1,2]	Savings deposits[2]	Deposits with agreed maturity up to one year	Overnight deposits[2]	Deposits with agreed maturity up to one year	
2005		0.91	0.88	2.23	0.60	2.09	2.00
2006		1.02	0.98	2.86	0.79	2.81	2.67
2007		1.22	1.14	3.95	1.03	3.94	3.70
2008		1.25	1.17	4.87	1.09	4.48	3.93
2009		0.63	0.56	2.74	0.50	1.65	0.68
2007	Jan.	1.16	1.10	3.50	0.91	3.49	3.32
	Feb.	1.16	1.10	3.51	0.87	3.54	3.35
	March	1.18	1.11	3.64	0.99	3.73	3.53
	Apr.	1.20	1.13	3.74	0.98	3.81	3.60
	May	1.20	1.13	3.74	1.05	3.81	3.63
	June	1.24	1.15	3.95	1.05	4.01	3.80
	July	1.24	1.16	4.00	1.15	4.03	3.86
	Aug.	1.24	1.16	4.09	1.12	4.10	3.87
	Sept.	1.25	1.17	4.24	1.08	4.20	3.93
	Oct.	1.25	1.17	4.26	1.01	4.04	3.88
	Nov.	1.25	1.17	4.25	1.07	4.20	3.91
	Dec.	1.23	1.16	4.52	1.05	4.33	3.76
2008	Jan.	1.24	1.16	4.35	1.09	4.13	3.87
	Feb.	1.25	1.16	4.30	1.12	4.19	3.88
	March	1.25	1.17	4.42	1.06	4.44	4.01
	Apr.	1.25	1.17	4.68	1.06	4.41	3.98
	May	1.24	1.16	4.73	1.07	4.39	3.99
	June	1.25	1.17	4.85	1.06	4.51	4.44
	July	1.26	1.17	5.09	1.15	4.59	4.20
	Aug.	1.26	1.18	4.99	1.13	4.69	4.22
	Sept.	1.28	1.19	5.11	1.09	4.80	4.76
	Oct.	1.27	1.20	5.37	1.18	4.71	4.26
	Nov.	1.27	1.19	5.22	1.05	4.51	3.08
	Dec.	1.24	1.16	5.36	0.96	4.36	2.52
2009	Jan.	1.15	1.05	4.89	0.92	3.53	1.65
	Feb.	0.98	0.88	3.87	0.73	2.36	1.33
	March	0.79	0.74	3.25	0.58	2.03	1.11
	Apr.	0.69	0.62	2.84	0.51	1.85	0.79
	May	0.58	0.50	2.58	0.48	1.67	0.71
	June	0.53	0.45	2.55	0.44	1.45	0.58
	July	0.52	0.46	2.34	0.46	1.25	0.43
	Aug.	0.50	0.45	2.24	0.40	1.12	0.34
	Sept.	0.48	0.43	2.08	0.38	1.14	0.30
	Oct.	0.43	0.37	2.08	0.37	1.16	0.27
	Nov.	0.43	0.37	2.01	0.41	1.08	0.32
	Dec.	0.43	0.37	2.10	0.35	1.18	0.34

Source: Bank of Greece.
1 Weighted average of the current account rate and the savings deposit rate.
2 End-of-month interest rate.

Table 14 Greece: bank rates on new euro-denominated loans to euro area residents

(percentages per annum, period averages unless otherwise noted)

Period		Loans to households[1]					Loans to non-financial corporations[1]		
			Consumer loans		Housing loans			With a floating rate or an initial rate fixation of up to one year	
		Loans without defined maturity[2,3]	With a floating rate or an initial rate fixation of up to one year	Average rate on total consumer loans	With a floating rate or an initial rate fixation of up to one year	Average rate on total housing loans	Loans without defined maturity[3,4]	Up to €1 million	Over €1 million
2005		13.36	8.47	9.06	4.06	4.15	6.90	5.08	3.62
2006		13.45	7.89	8.58	4.24	4.30	7.18	5.76	4.37
2007		14.09	7.70	8.47	4.57	4.46	7.54	6.57	5.32
2008		14.80	8.65	8.96	5.10	4.81	7.61	6.82	5.71
2009		14.39	8.59	9.33	3.52	3.94	6.07	4.62	3.52
2007	Jan.	13.87	7.35	8.30	3.92	4.29	7.32	6.27	5.22
	Feb.	13.86	7.53	8.40	3.80	4.24	7.34	6.36	5.01
	March	13.88	7.60	8.23	4.00	4.28	7.45	6.38	5.08
	Apr.	13.97	7.72	8.36	4.45	4.37	7.50	6.45	5.12
	May	13.92	8.18	8.74	4.46	4.41	7.47	6.51	5.06
	June	14.09	7.82	8.61	4.90	4.52	7.56	6.48	5.32
	July	14.12	8.00	8.70	5.01	4.53	7.56	6.44	5.12
	Aug.	14.15	8.38	8.78	5.00	4.58	7.74	6.76	5.48
	Sept.	14.14	7.50	8.54	4.93	4.64	7.68	6.78	5.68
	Oct.	14.13	7.22	8.08	4.96	4.63	7.62	6.75	5.50
	Nov.	14.50	7.54	8.47	4.68	4.53	7.65	6.81	5.50
	Dec.	14.47	7.61	8.37	4.76	4.45	7.56	6.83	5.79
2008	Jan.	14.48	8.09	8.49	4.61	4.39	7.50	6.66	5.48
	Feb.	14.48	8.28	8.60	4.67	4.40	7.50	6.62	5.32
	March	14.46	8.57	8.59	4.77	4.47	7.55	6.65	5.68
	Apr.	14.52	8.79	8.72	4.83	4.50	7.62	6.79	5.66
	May	14.48	8.73	8.88	4.94	4.57	7.62	6.83	5.64
	June	14.49	8.41	8.78	5.05	4.68	7.59	6.91	5.82
	July	14.98	9.10	9.01	5.30	4.83	7.79	7.03	6.05
	Aug.	15.16	8.73	8.99	5.34	4.98	7.78	7.11	5.82
	Sept.	15.15	8.77	9.08	5.45	5.03	7.94	7.24	6.04
	Oct.	15.28	8.64	9.38	5.92	5.35	7.81	7.40	6.31
	Nov.	15.24	8.88	9.50	5.35	5.30	7.49	6.41	5.59
	Dec.	14.83	8.76	9.46	4.92	5.21	7.13	6.18	5.07
2009	Jan.	14.81	9.15	9.82	4.55	4.97	6.66	5.45	4.24
	Feb.	14.72	8.84	9.81	4.16	4.65	6.63	4.99	4.12
	March	14.46	8.62	9.71	3.83	4.32	6.38	4.71	4.10
	Apr.	14.44	9.17	9.72	3.64	4.11	6.11	4.36	3.79
	May	14.31	8.54	9.14	3.52	3.97	6.10	4.56	3.59
	June	14.32	7.59	8.93	3.46	3.86	6.06	4.59	3.33
	July	14.44	8.36	9.09	3.27	3.68	5.87	4.33	3.44
	Aug.	14.33	8.54	8.99	3.27	3.72	5.83	4.41	3.22
	Sept.	14.31	8.43	9.25	3.19	3.57	5.82	4.44	3.23
	Oct.	14.20	9.06	9.46	3.15	3.56	5.79	4.43	2.96
	Nov.	14.22	8.59	9.13	3.14	3.49	5.80	4.49	2.99
	Dec.	14.08	8.18	8.94	3.08	3.41	5.81	4.70	3.24

Source: Bank of Greece.
1 Associated costs are not included.
2 Weighted average of the rates on loans to households through credit cards, on open account loans and on overdrafts from current accounts.
3 End-of-month interest rate.
4 Weighted average of the rates on corporate loans via credit lines and on overdrafts from sight deposit accounts.

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