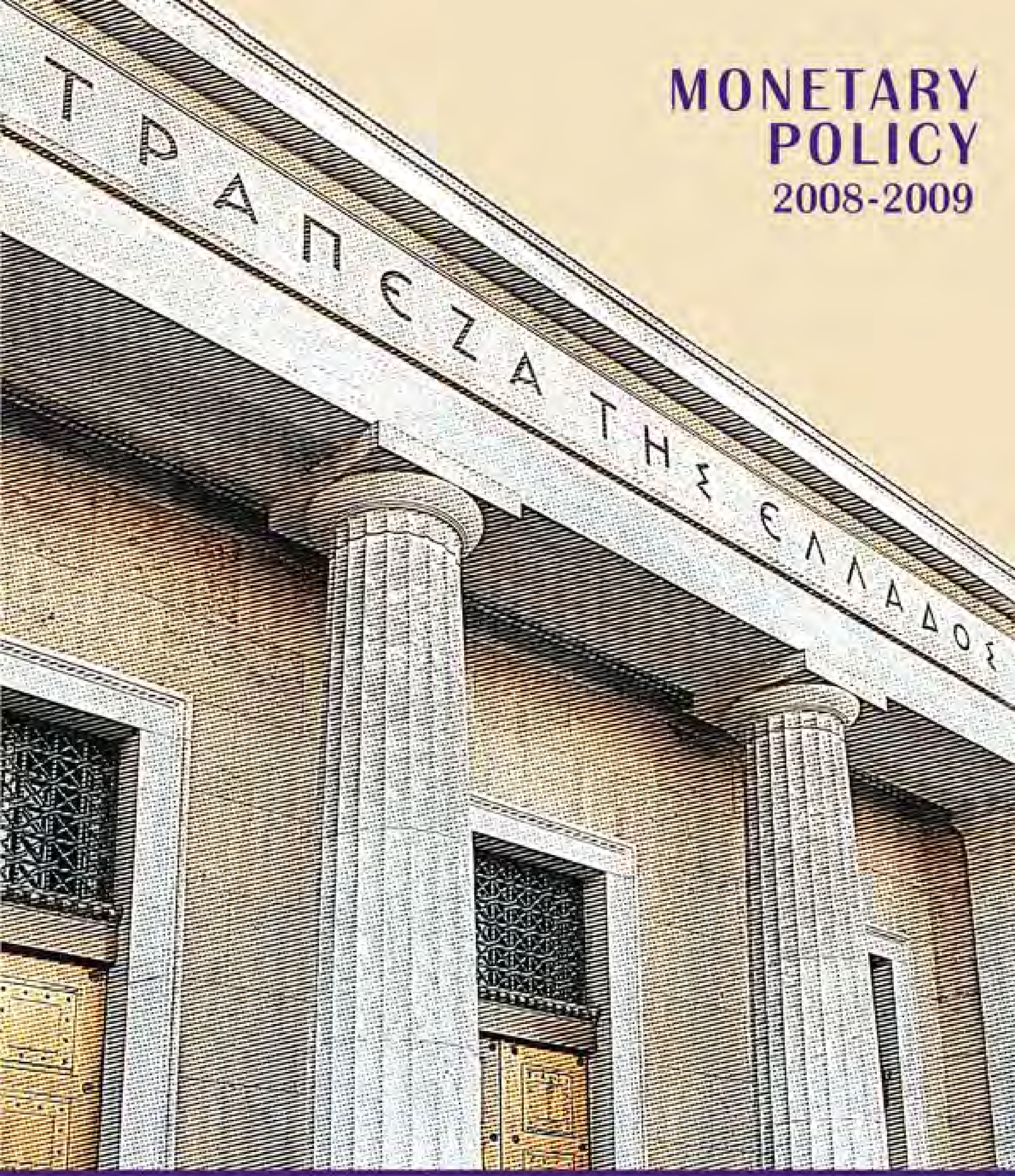
MONETARY POLICY
2008-2009



FEBRUARY
2009

BANK OF GREECE
EUROSYSTEM

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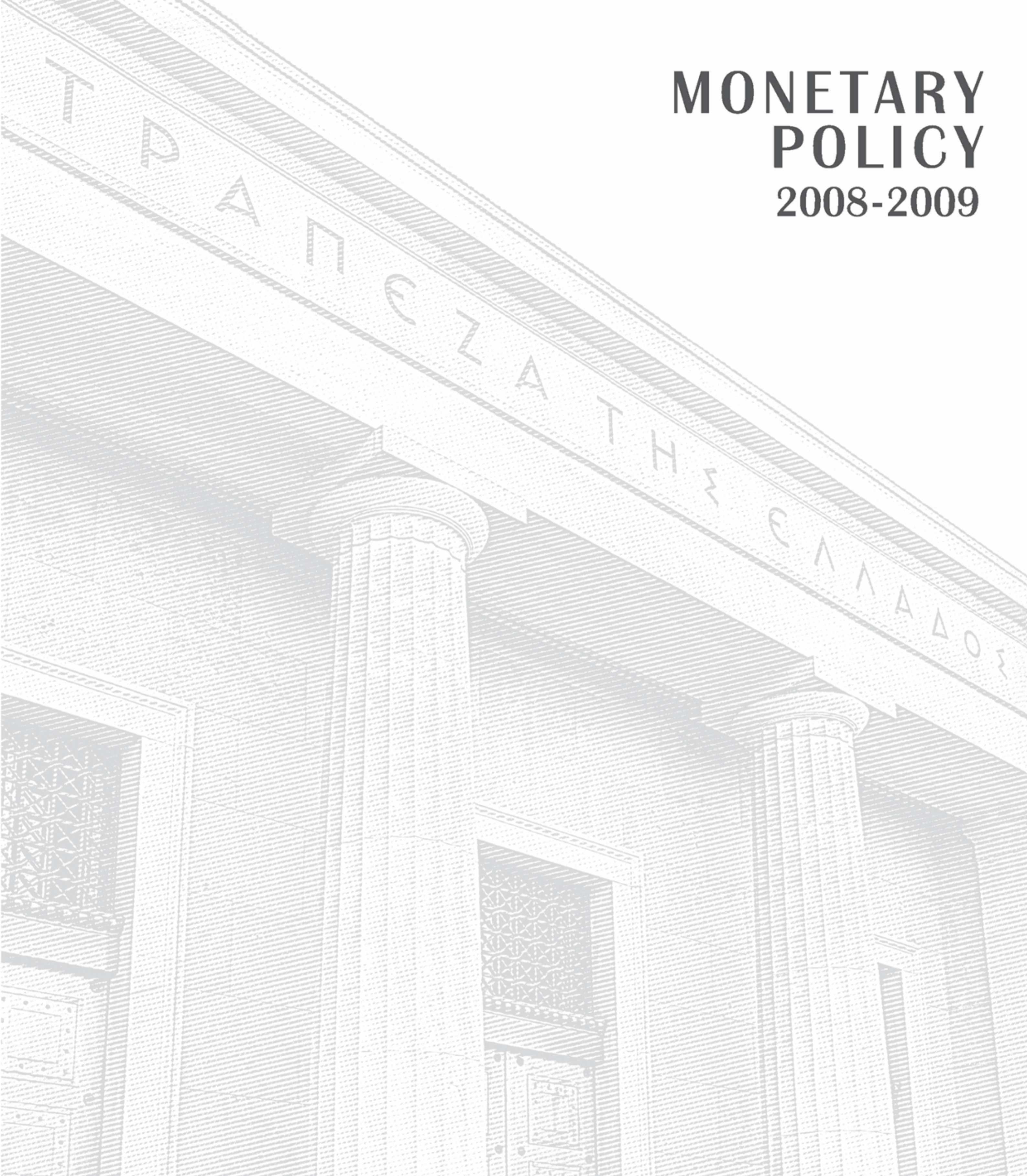

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To the Greek Parliament and
the Cabinet

In accordance with its Statute, the Bank of Greece hereby submits its Report on Monetary Policy 2008-2009 to the Greek Parliament and the Cabinet.

In the *Monetary Policy – Interim Report 2008* submitted last October, the Bank of Greece stressed that the factors that had supported strong and uninterrupted growth for a number of years were losing momentum, due *inter alia* to the deepening international crisis. In addition, during the years of economic upswing, inflation had persisted at relatively high levels, while the current account deficit had continued to widen and the external debt had continued to grow. The size and persistence of these imbalances suggested that the structural reforms implemented till then had been insufficient, possibly reflecting a climate of complacency. With the impact of the international crisis on the Greek economy now becoming noticeable, there is no longer room for complacency.

According to the analysis presented in the Report, the outlook for the global economy and the euro area in 2009 is grim. A gradual recovery of the global economy is projected for 2010, but the sustainability of the recovery will depend on the restoration of financial sector functioning and of confidence. The current crisis is the most severe since the 1930s and exiting from it will not be easy or fast. In order to address it, important action is being taken at the European and the international level. In the euro area, the single monetary policy contributes to price stability in the medium term and the interest rate on the Eurosystem's main refinancing operations has been cut by a cumulative 225 basis points since October, while the Eurosystem has been providing credit institutions with liquidity in order to avert a disruption to financial stability. Similar interventions are also being made by other central banks. In addition, the governments of the EU Member States (including Greece) are implementing stimulus packages designed to reinforce the liquidity and capital of financial institutions, totalling €2.9 trillion (or 23% of the EU-27 GDP in 2008). Meanwhile, the European Economic Recovery Plan contains a set of fiscal and other measures amounting in value to 1.5% of the EU GDP, while significant fiscal stimulus measures have been adopted by many countries around the world. At the same time, progress is being made in creating a new architecture for the global financial system, so as to help address the challenges posed by the recent crisis – in particular in order to curb the short-termism of financial companies and investors, reduce the pro-cyclicality of the credit system and enhance transparency.

The global crisis has had a negative impact on Greece's credit system and real economy. However, there is no room for a fiscal stimulus, given the widening of the fiscal deficit in 2008, the persistently high public debt and the considerable deterioration in government borrowing terms over the last few months, while the increase in borrowing costs spreads to the entire economy. This is why the deficit must be reduced to below 3% this year and eliminated by 2012. However, even though there is no room for fiscal stimulus, economic activity can be supported by reallocating expenditure and promoting microeconomic reforms that can produce quick results. According to the Report, 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.

For 2009, Greece's GDP growth rate is projected to slow down considerably to around 0.5% (from roughly 3% in 2008). Behind the continued, albeit slower, GDP growth are factors that mitigate the impact of the global crisis. One of these factors is the government's liquidity-support package, which under certain preconditions could support an annual rate of credit expansion to households and enterprises of about 10% in 2009. As for the other economic and financial fundamentals, the upward trend of employment is expected to come to a halt in 2009, while unemployment will rise. Average annual inflation in 2009 is projected to drop to 1.8% or even less, but core inflation is expected to decrease by much less. The current account deficit will narrow, but remain large. Meanwhile, the rate of credit expansion to enterprises decelerated only marginally in 2008, but is expected to slow more this year. The rate of credit expansion to households decelerated considerably, reflecting a marked slowdown in housing loans and a limited slowdown in consumer loans. Interest rates on deposits rose in the course of 2008. Interest rates on loans to businesses and households recorded an increase until October (though a limited one in the case of businesses), but fell in the last two months of 2008.

Greek banks have remained fundamentally healthy and strong. The Bank of Greece has called upon banks to implement policies that will safeguard financial stability. Banks are already utilising the provisions of Law 3723/2008 which are meant to increase bank liquidity, strengthen banks' capital base and avert the risk of a credit crunch.

As stressed in the Report, Greece's macroeconomic imbalances and chronic structural weaknesses must be boldly addressed to achieve substantial progress towards sustainable growth. A credible medium-term strategy must be adopted that will help implement the reforms that were not put into place during the past 15 years, with fiscal consolidation receiving top priority. Such an approach will ensure the unhindered financing of public and, ultimately, private sector borrowing requirements, with positive repercussions on confidence. It will also create the necessary preconditions that will set the engine of growth firmly back into motion, when the recovery of the global economy gets under way, and also support a growth dynamics that is far-reaching, more outward-looking, stronger and sustainable, i.e. that will respect and protect the environment while also securing additional resources for the reinforcement of social cohesion.

The main axes of this strategy would be to secure the soundness of the public sector and improve its efficiency, enhance the production base through investment, increase the rate of employment, constantly upgrade human resources and strengthen competition in all markets. The current pattern of energy production and consumption must also be changed (including the further deregulation of the energy market) not only from the viewpoint of climate change and the need both to protect the environment and to improve the quality of living, but also because such a change could contribute to a large increase in investment and employment and a reduction in the country's energy dependence.

Such a strategy can be implemented more effectively if based on a strong public consensus. Achieving such a consensus will require an open public debate that will touch upon the substance of the issues, focusing on the fair distribution of burdens and the widest possible diffusion of benefits, so that society as a whole can gain in the medium and the long term.

Athens, February 2009

George Provopoulos
Governor

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I THE INTERNATIONAL FINANCIAL AND ECONOMIC CRISIS AND THE PROSPECTS OF THE GREEK ECONOMY

After several years of growth but also of complacency, the global crisis is now "knocking at the door" of the Greek economy. To address the crisis, the country must, starting immediately, make the adjustments that it did not make in the past

Last October, the Bank of Greece, in its *Monetary Policy – Interim Report 2008*, stressed that, owing *inter alia* to the international crisis, the favourable factors that had supported a buoyant and uninterrupted growth in Greece for a number years were losing momentum. With domestic demand growth outpacing the production capacity of the economy, inflation remained persistently above the euro area average, the current account deficit continued to widen excessively and the external debt of both the private and the public sectors continued to grow. As stated in the above Report, the size and persistence of these imbalances suggested that the structural reforms carried out were insufficient, possibly reflecting, in part, a climate of complacency which was generated by relatively robust growth and the fact that euro area participation had led to low interest rates and favoured conditions of stability.

Now that the global crisis is “knocking at the door” of the Greek economy, there is no longer room for complacency. During the good times, Greece did not put in place policies that could have allowed the country to cope with the effects of the crisis from a better position. Greece must thus adopt a credible medium-term plan that will include all the reforms that were not implemented during the past 15 years, with fiscal consolidation being the country’s top priority. This is the only way to convince international markets of the country’s credibility and to secure the unhindered financing of the borrowing requirement of the public sector and, ultimately, of the private sector as well; it is also the only way to create the conditions for setting the growth process back in motion and preventing it from breaking down due to chronic weaknesses, once the global economy starts recovering. In other words, this is the way to safely set in motion a growth dynamics which will be far-reaching, more outward-looking, stronger and sustainable – i.e. one that will respect and protect the environment. At the same time, such a policy can secure additional resources that could be used to reinforce social cohesion.

Euro area membership is a valuable shield that helps protect the Greek and the other euro area economies from the strong shocks of the global financial crisis, but, naturally, cannot alone address chronic structural weaknesses. Euro area membership is a stepping stone for reaping the benefits of monetary stability and the single European market. Exploiting these advantages should be aimed at through the necessary adjustments and reforms.

The crisis, the most severe since the early 1930s, is being addressed through unprecedented interventions at the global level, which are coordinated and bold – Exiting from the crisis, however, will not be easy or fast

The world economy is in the midst of the most severe financial and economic crisis since the early 1930s. The strong turbulence, which began in the United States in August 2007 and spilled over to the rest of the world, is continuing for the second year running and peaks from time to time. The prolonged financial market turbulence has caused the global outlook for output, employment and international trade to deteriorate rapidly, especially in the last few months. At the current stage, developments in the financial and the real sectors of the global economy form a negative feedback loop. The malfunctioning of financial markets squeezes economic activity and this, in turn, further undermines the capital position of the financial sector and its ability to finance businesses and households. Breaking this vicious circle will be neither easy nor fast.

The breadth and depth of the problems with which the financial sector is faced and the close link and interdependence between national economies have prompted the international community – governments, central banks, supervisory authorities and international financial organisations — to make coordinated and bold interventions, which are unprecedented. These interventions mainly aim to mitigate financial shocks and reduce their impact on the real economy. In addition, they seek to increase the resilience of the financial system to the threats entailed by the deterioration of macroeconomic aggregates. Meanwhile, an intense consultation is taking place at the international level, focusing on the effective reform of the financial system so as to correct its current weaknesses and ensure that episodes of generalised instability do not occur in the future.

These interventions should significantly reduce the adverse effects of the financial crisis on the world economy, but will not eliminate them. As the financial turbulence continues and its macroeconomic implications are felt more, the international organisations keep revising downwards their forecasts on global economic activity. According to the latest estimates, the volume of world trade will contract in 2009, after expanding strongly in recent years.

Greece's financial system and real economy are being adversely affected by the international crisis

The international crisis is having a negative impact on Greece's financial system and real economy, given that the lack of liquidity in international markets is gradually affecting banks' liquidity and therefore the amount of credit extended to households and businesses. Moreover, exports of domestic goods and services are being hit by weakening global economic activity and world trade. The government's liquidity-support package is aimed at preventing a credit crunch and at bringing the rate of credit expansion to levels sufficient to foster GDP growth. According to Bank of Greece estimates, the annual growth rate of the Greek economy, after having fallen to approximately 3% in 2008 (from 4.0% in 2007), will decline much further in 2009 (to around 0.5%) but will remain positive, whereas GDP in the euro area as a whole and in the EU is forecast to shrink by almost 2%. Meanwhile, annual inflation soared in mid-2008, mainly because of the hikes in the international prices of food and oil. Subsequently, as these prices began to drop, inflation decreased and in December reached its lowest level since 2000. Falling international prices of oil and other commodities and sluggish aggregate demand will continue to squeeze inflation, which is expected to average less than 2% in 2009. Nevertheless, core inflation is expected to drop only slightly and remain higher than the corresponding figure for the euro area.

Greece has no room for a fiscal stimulus – Instead, it must reduce its deficit to below 3% in 2009 and eliminate it by 2012. Medium-term planning and the implementation of extensive reforms, particularly in the public sector, are also needed. Such planning and reforms would improve the terms of government borrowing and ensure growth prospects

In a steadily deteriorating international environment, the domestic macroeconomic imbalances and structural weaknesses become more visible and create an additional problem, which Greece must deal with as a top priority. Specifically, while the global economic recession, along with the severe domestic slowdown, would normally point to the need for a fiscal stimulus, there is no room for such an option, given the large size of the fiscal deficit, the public debt and the current account deficit. Conducting a disciplined fiscal policy is necessary both in order to meet the requirements of the revised (and flexible) Stability and Growth Pact and to improve the terms of government borrowing on the world market, which also affect the terms of private sector borrowing. Thus, it is indispensable to adopt an economic policy along the following lines:

- An immediate reduction of the fiscal deficit to below 3% of GDP this year and its further reduction by about 1% of GDP per annum over the next three years, so that it is eliminated by 2012. This deficit reduction is not as difficult as it appears at first, provided that the huge tax evasion is at least partly curbed and, more importantly, that the squandering in government spending is reduced and the efficiency of public finances increases. According to a working paper published by the ECB, the *same* volume of public goods and services could be provided in Greece with nearly 30% *less* expenditure.[1]

- Medium-term planning and the implementation of reforms, primarily in the broader public sector. Without extensive and radical changes in the structure of the public sector, neither deficits (namely, the fiscal deficit and, partly, the current account deficit) nor public debt can be reined in, both of which today are major sources of problems.

These policies are necessary in order to immediately restore the country's fiscal credibility and enhance consumer, investor and market confidence in the prospects of the economy and the stability of its financial system, so as to mitigate the effects of the international crisis and ensure sustainable long-term growth. As already noted, the only way to shield the economy against external shocks and ensure strong growth and low inflation in the long run is to set a far-reaching, more outward-looking, strong and sustainable growth dynamics into motion. Such a dynamics should be based on: securing the soundness of the public sector and improving its efficiency, strengthening the production base through investment, raising employment rates, improving the quality of human resources, fostering competition in markets, and changing the existing pattern of energy production and consumption so as to achieve, *inter alia*, greater efficiency of energy resources and protect the environment.

Although there is no room for fiscal stimulus, economic activity can be boosted by reallocating expenditure and promoting microeconomic reforms that have a more immediate effect

As fiscal relaxation is not an option, only by reallocating government spending and improving its efficiency would it be possible in the current conjuncture to come up with the necessary resources to:

- support, through targeted interventions, the more vulnerable social groups; and

- enhance public investment, which has proved to be more growth-generating than other forms of public expenditure (which should be restricted).

Economic activity can also be bolstered by the speedy promotion of reforms (e.g. reducing red tape and strengthening competition) that do not entail a budgetary cost, but directly contribute to productivity gains. **A typical example of one such reform is the deregulation of the energy market, which could largely boost investment, improve the country's energy balance and ensure better environmental protection.**

If the confidence of markets and domestic economic agents is gained, a *prima facie* restrictive fiscal policy could in fact have an expansionary effect

Greater efficiency in government spending and the implementation of a policy aimed at eliminating fiscal imbalances could help gain the confidence of international markets and domestic economic agents. **Thus, a *prima facie* restrictive fiscal policy could in fact have an expansionary effect. Conversely, in the current circumstances, a *prima facie* expansionary fiscal policy in Greece would turn out to be restrictive, as it would entail fiscal costs several times higher in both the short and the medium term.**

***

The 2009 outlook for the world and the euro area economies appears very gloomy – A significant

1 See Afonso, L. Schuknecht and V. Tanzi, "Public sector efficiency: an international comparison", ECB Working Paper No. 242, July 2003, pp. 20-22.

economic slowdown is expected in Southeastern Europe

Global economic activity steadily weakened in the last months of 2008 and continues to do so this year. According to the latest IMF projections (released on 28 January 2009), world GDP growth will fall to almost nil in 2009 (0.5%), from 3.4% and 5.2% in 2008 and 2007 respectively. World trade volume will also decrease by 2.8%, after rising strongly in recent years. By contrast, inflation had started to decline in the last few months of 2008 and is expected to reach very low levels in 2009, reflecting (i) the unwinding, since mid-2008, of past hikes in oil and other commodity prices and (ii) a significant reduction in demand. Furthermore, the ILO's report on global employment trends (also released on 28 January) predicts that the global unemployment rate as a percentage of the labour force will reach 6.5% in 2009 and, if economic conditions continue to deteriorate, could rise further to 7.1%.This means that the number of unemployed could grow by as much as 50 million compared with its 2007 level (before the global economic slowdown started).

• In **the advanced economies**, economic activity decelerated markedly to 1.0% in 2008, according to IMF estimates. Domestic demand in these economies was adversely affected by tighter credit standards, the erosion of real incomes (due to a surge in inflation until mid-2008), the drop in the value of household assets (as a result of the significant decline in stock prices internationally and the fall in real estate prices in many economies), as well by a general deterioration in consumer and investor confidence. External demand was also affected as economic activity slowed sharply in most emerging and developing economies. The outlook for the advanced economies in 2009 is generally negative as, according to the IMF, economic activity should fall by 2.0%, or even more if strains on the international financial system intensify and consumer and investor confidence continues to deteriorate. Despite declining considerably in the last few months of 2008, the average inflation rate for these economies is estimated at 3.5% for 2008, up from 2.1% in 2007. It is expected that in 2009 inflation will drop to a low of just 0.3% on account of the reasons stated above.

• In **the euro area**, the GDP growth rate was 0.9% in 2008, much lower than in 2007 (2.7%), as the repercussions of the international financial crisis became more noticeable, especially since the second half of the year. Negative GDP growth rates in most euro area countries in the second half of 2008 are expected to persist at least in the first half of 2009. For 2009 as a whole, the European Commission (January 2009) predicts a 1.9% decrease in GDP. Inflation in the euro area, which was 1.6% in December 2008 and 1.1% in January 2009, is expected to remain at low levels in 2009, with average annual inflation dropping to 1.0%, according to the latest European Commission forecasts.

• GDP growth in **the emerging and developing economies** weakened in 2008, but remained relatively strong (2008: 6.3%, 2007: 8.3%). In the last quarter of the year, the slowdown was considerable, mainly on account of contracting export markets in the advanced economies. This slowdown was most pronounced in economies that rely heavily on exports of oil and other commodities, as the prices of these products dropped significantly. It is expected that GDP growth will continue to decelerate considerably to 3.3% in 2009. Inflation in the emerging and developing economies decreased in late 2008, as a result of declines in the prices of oil and other commodities, but, at a projected 5.8% for 2009 (2008: 9.2%), will remain much higher than that in advanced economies.

• **The emerging economies of Southeastern Europe**, which, unlike the emerging economies in other parts of the world, have relatively high current account deficits, have proved to be more vulnerable to the deteriorating international environment, as they have been adversely affected both by reduced external demand and by higher external borrowing costs.

Although the rather large stocks of foreign reserves of these economies serve as a buffer, international developments have caused investor confidence to decline and have put downward pressure on their foreign exchange markets and particularly on their stock markets. According to the latest forecasts by the European Commission, growth in Bulgaria and Romania (both are EU Member States) will slow to 1.8% in 2009 (from 6.4% and 7.8% in 2008, respectively). Moreover, according to the revised forecasts of the European Bank for Reconstruction and Development, average growth in Southeastern European countries (with the exception of Turkey) will be 1.5% in 2009, down from 7.3% in 2008, whereas Turkey's GDP will contract by 3% this year, after expanding by 1.5% in 2008.

A gradual recovery of the world economy is expected to begin in 2010, but its sustainability will depend on the pace at which the functioning of the financial system as well as credit flows can return to normal, and the pace at which confidence can be restored

The IMF expects that the ongoing efforts to ease tensions in the credit markets, as well as the expansionary fiscal policy and monetary policy measures adopted, will lead to a gradual recovery in global economic activity in 2010. However, the uncertainty surrounding this outlook is high. **The sustainability of the recovery, as well as the effectiveness of the fiscal stimulus packages, hinge on the restoration of the normal functioning of the global financial system (which will normalise credit flows) and on the return of confidence to pre-turmoil levels.**

The single monetary policy in the euro area contributes to price stability in the medium term – The rate on the Eurosystem's main refinancing operations has been reduced by 225 basis points since October

The ECB Governing Council formulates monetary policy with a view to achieving the Eurosystem's primary objective, i.e. price stability in the medium term. During the period of tight monetary policy, which began in December 2005 and ended in the third quarter of 2008, there was a total of 9 increases in the ECB's key interest rates, each by 25 basis points. Since October 2008, the Governing Council of the ECB, taking into account the waning of inflationary pressures, largely due to the fall in commodity prices and to the negative effect of the intensifying financial turmoil on the real economy, has proceeded to a series of cuts in the main refinancing rate, lowering it by a total of 225 basis points. These reductions brought the main refinancing rate to 2.0% in January 2009. Several other central banks also made successive cuts in their policy rates over the same period.

Underlying the decisions to reduce the Eurosystem's key interest rates was the assessment by the ECB Governing Council that the intensification of the financial turmoil since mid-September 2008 is having considerable negative effects on aggregate demand over an extended period of time and is thus contributing to containing inflationary pressures. In addition, falling commodity prices also contribute to the easing of inflationary pressures, while inflation has been on a downward path since August 2008. At the same time, the growth rates of monetary and credit aggregates continue to decline.

The Governing Council of the ECB expects that, due to the substantial decline in commodity prices and aggregate demand, inflation will drop further in the coming months and — in the medium term — will be at a level consistent with price stability. Provided that the prices of crude oil and other commodities do not significantly exceed the levels anticipated by the futures market, annual inflation should fall to very low levels around mid-2009 (owing to base effects stemming from hikes in oil prices in the corresponding period of 2008). However, this decline will be temporary and inflation will pick up again in the second half of 2009 (on account of base effects associated with relatively low oil prices in the corresponding period of 2008).

These forecasts are, however, subject to considerable uncertainty. Inflation could accelerate if commodity prices rise again, while greater-than-assumed inflationary pressures may be exerted by domestic factors in the euro area. For these reasons, the Governing Council of the ECB has called upon the social partners to adopt a responsible stance with regard to price-setting and wage negotiations. On the other hand, the drop in commodity prices could turn out to be larger than currently expected, in which case inflation would be lower than expected.

To assess the risks to price stability, the Governing Council of the ECB, in addition to the economic analysis, also takes into account a monetary analysis. Specifically, the Governing Council has stressed that the continued deceleration of both M3 growth and credit expansion confirms that inflationary risks are on a downward trend in the medium to longer term.

Through continuous and substantial interventions in the money market, the Eurosystem provides liquidity to credit institutions in order to prevent the tensions and disruptions in the interbank market from jeopardising financial stability

The intensification of the financial turmoil around the world after the bankruptcy of Lehman Brothers in the US in mid-September 2008 and the significant problems that hit the banking system of several EU countries has also considerably increased tensions in the euro area interbank market. For one, the spread between the Euribor rate and the expected EONIA rate widened considerably. Secondly, the volume of interbank transactions has decreased since mid-September 2008, as credit institutions with liquidity surpluses refrain from channelling them to the interbank market, mainly owing to a lack of confidence in the creditworthiness of other credit institutions. Instead, they prefer to place these surpluses with the Eurosystem's deposit facility, thereby causing a significant increase in the outstanding balances under this facility. Lately, however, it seems that these disruptions are subsiding and tensions in the euro area interbank market are gradually easing.

The Eurosystem's interventions have been decisive in mitigating disruptions and easing tensions. Specifically in October 2008, in response to the developments that began unfolding in mid-September, the Governing Council of the ECB decided, on a temporary basis and until the functioning of the interbank market is restored, to:

- conduct liquidity-providing operations as fixed rate tenders with full allotment;

- increase the frequency of longer-term refinancing operations;

- enlarge the set of eligible collateral accepted in Eurosystem credit operations; and

- broaden the set of eligible counterparties in quick tender operations.

Moreover, the Eurosystem continued to work closely with the Federal Reserve System, in order to regularly provide liquidity in US dollars to euro area credit institutions, while a similar working arrangement was also set up with the central bank of Switzerland.

With these interventions, the Eurosystem effectively acted as an intermediary between banks with liquidity surpluses and those in need of additional liquidity. This is reflected in the impressive rise, in the range of 30%, in the Eurosystem's total assets after the bankruptcy of Lehman Brothers (12 September 2008-30 January 2009).

Important interventions are being implemented, both at the European and the international level, to smooth conditions in the financial markets and boost the real economy

Globalisation has obviously influenced the speed at which the financial turmoil has spread around the world. Fortunately, however, it has also influenced the scale of response to the crisis. It is very important that governments, central banks and international organisations reacted more promptly this time, taking into account the lessons from previous major crises. They are also acting in a coordinated manner, not only to prevent a further deterioration of the situation but also to gradually restore normal conditions on a sustained basis. The size of this mobilisation is attested to by numerous recent facts, including:

- The interventions made by the ECB, in coordination with other central banks, to smooth conditions in the interbank market (discussed above).

- The government plans adopted in EU Member States (including Greece) to enhance the liquidity and capital of monetary and financial institutions. These plans, which amount to some €2.9 trillion (or 23% of the EU-27 GDP in 2008), were drawn up along jointly-agreed action lines. As noted above, the successful implementation of these plans, both in EU countries and the rest of the world, will be crucial to the effectiveness of other policies and the sustainability of economic recovery.

- The European Economic Recovery Plan, which is a package of fiscal (and other) measures amounting to 1.5% of EU GDP. This Plan can contribute to the faster recovery of the European economy, as it provides for a sizeable fiscal support, taking advantage of the room for manoeuvre provided by the Stability and Growth Pact. **Countries like Greece, however, with a high public debt and large current account deficits, have practically no room for manoeuvre. In countries like these, any relaxation of fiscal prudence would be detrimental to the economy and to the fiscal outlook itself in the medium term since it would further increase debt servicing costs.**

- Similar interventions by central banks and governments in many countries including the United States and China (see Box II.1).

A new architecture is needed for the global financial system in order to address the challenges brought to light by the crisis. To this end, it is essential to curb the short-termism of businesses and investors, to reduce the pro-cyclicality of the credit system and to enhance transparency

One of the challenges facing the global economy today is the creation of a new architecture for the global financial system. Such an architecture would imply new tasks both for the central banks and other supervisory authorities, as well as for commercial banks and other financial intermediaries. The G-20 leaders have already set the principal goals —enhanced transparency and accountability; more effective supervision; promoting market integrity and the protection of investor and consumer interests; broader international co-operation; and reforming international financial organisations, such as the IMF and the World Bank— and have drawn up the relevant timetable. Meeting these goals will ensure that economic recovery, once started, will take place in safer conditions, i.e. with less uncertainty and fewer risks to the world economy and the international credit system. It is particularly important to address the three problems that have proved to be the major causes of the emergence or the spreading of the crisis:

- First, there is a need to **curb the short-termism** of financial corporations and investors. In other words, there is a need to eliminate the incentives that lead to too much focusing on short-term returns at the expense of longer-term targets, on which, however, systemic stability and social welfare depend. Such short-sightedness inevitably leads to a distorted perception of risks or of the losses to be incurred if the risks materialise.

- **Second, the pro-cyclicality of the credit system**, i.e. its potential to amplify the fluctuations of the economic cycle, which refuels financial instability, must be reduced. One of the basic manifestations of this phenomenon is the tendency of credit institutions to take excessive risks during cyclical upturns and to adopt an excessively conservative stance during downturns which deprives businesses and households of necessary funding. Limiting this procyclicality can be achieved through appropriate changes to certain elements of the regulatory framework, including the method of setting capital requirements, publication rules and some of the valuation standards. The competent international bodies are currently looking into the best possible solutions to these issues.

- Third, **transparency** must be enhanced across all parts and facets of the credit system, from financial products and bank balance sheets to rating agencies, auditing and valuation standards and methods of supervision. Transparency is an essential requirement for the efficient operation of markets, as it may prevent them from taking on excessive risks during upturns and protect them from credit crunches during downturns, while also reducing the potential for a so-called "herd behaviour". Greater transparency would require stricter and more effective rules on the dissemination of information regarding structured credit products, as well as increased availability of data on systemically important financial institutions which are not covered by the framework for prudential supervision, such as hedge funds.

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Despite rising, economic activity in Greece will be subdued in 2009

The slowdown in the Greek economy's growth became visible as of mid-2007 and continued into 2008. This generally reflects a gradual weakening of the factors that for a long time had supported high growth rates which exceeded the economy's productive capacity. It also reflects the first impact from the international financial turmoil and the decline in global growth rates. Available data suggest that the downturn in activity peaked in the fourth quarter and, as estimated by the Bank of Greece, GDP growth for 2008 as a whole came to around 3%, compared with 4% in 2007. In 2009, it is expected that the impact from the international financial and economic crisis on the Greek economy will be heavier and GDP growth will further drop substantially, to stand around 0.5%.

Specifically, the **financial crisis** is affecting economic activity in Greece through:

- the tightening of credit standards by banks for corporate and household loans, which limits the *supply* of loans; and

- the considerable drop in business and household confidence, which leads to a decline in the propensity to consume and invest in dwellings and erodes business risk appetite, thus reducing also *demand* for credit.

The expected decline in household and corporate credit growth is expected to impact on private consumption (the increase of which will further slow down considerably), housing investment (which will continue to decrease) and business investment (which will remain almost unchanged). The path of business investment in 2009 is expected to be unfavourably affected also by the deterioration in demand, as well as the aforementioned drop in profitability in 2008.

Additionally, the **global economic crisis** will have direct consequences. The strong slowdown in world GDP growth to 0.5% and the decline of 2.8% in world trade volumes that are expected for 2009 will unfavourably affect Greek goods exports, which are mainly directed to the EU countries (where a recession is expected) and non-EU Balkan countries (where a considerable slowdown in growth is forecast). Moreover, travel receipts from visitors from Western Europe, the United States, Southeastern Europe and Russia (where GDP will decrease by 0.7% this year, according to

IMF forecasts) will probably fall. Moreover, it is practically certain that transport (shipping) receipts will decrease due to the drop in freight rates and global trade volumes.

However, certain factors dampen the effects of the crisis on domestic economic activity

On the other hand, there are certain factors that dampen the above negative consequences:

- Due to the relatively high "oil intensity" of the Greek economy, the steep fall in international crude oil prices has contributed to a marked decline in inflation this year, an improvement in real disposable income and consumer demand, as well as a drop in production costs.

- For most wage-earners in the business sector of the economy, wage increases for this year are determined by the two-year collective agreements signed in 2008. Even assuming that the current economic conditions will affect unfavourably negotiated wages, it is estimated that average *real* earnings will rise by 2.6-3.7%, since average annual inflation will fall considerably.

- The impact from the financial crisis was much smaller on the Greek banking system than on other countries' banking systems. Underlying this were Greek banks' marginal exposure to assets directly or indirectly associated with the initial causes of the crisis, their low dependence on markets for funding, their satisfactory capital adequacy and leverage ratios, as well as a tightening of credit standards and continuous controls by the Bank of Greece. Moreover, the implementation of the government's scheme for enhancing liquidity of the economy (see Box VI.1) is expected to support —under certain conditions— an annual growth rate of credit to households and businesses of around 10% in 2009. This rate, although markedly lower than in 2008 (December: 16.4%), is enough to underpin continued growth of GDP.

- The *public* investment cuts projected in the 2009 budget could be less severe if it becomes possible to finance public investment expenditure e.g. by curtailing other government expenditures and speeding up the absorption of resources under the National Strategic Reference Framework, as also envisaged in the European Economic Recovery Plan. Moreover, the implementation of already approved PPPs and of projects earmarked for support under the Development Law that have not yet been completed, as well as the possibility of important investments in the energy sector, may prevent a fall in total business investment in 2009.

- The growth of total domestic demand (i.e. consumption and investment) will slow considerably to a very low level, but domestic output (i.e. GDP) growth will be somewhat higher. This will be so because —due to the expected drop in imports (mainly of consumer durables and capital goods)— demand for domestically produced products will rise relatively more than total domestic demand (for domestically produced and for imported products).

- Finally, developments in the Greek real estate market are not as unfavourable as in certain other advanced economies.

The effective implementation of the Greek scheme for enhancing liquidity of the economy is crucial for the macroeconomic outlook

Growth forecasts for the Greek economy in 2009 are surrounded by considerable uncertainties and the final outcome may be better or worse. However, it is considered more probable that GDP growth will be lower than forecast, mainly because —as estimated by international organisations— this is also the case for the prospects of global economic growth, which directly affect the Greek economy. **A crucial assumption of this forecast is also that the implementation of schemes for enhancing liquidity of the economy by sup-**

porting banks not only in Greece, but also internationally, will be successful and effective. Specifically, it has been assumed that the operation of financial markets will return to normal gradually, banks' borrowing costs will fall and confidence will be progressively restored. Any deviation from the main objects or failure to fully implement the measures for enhancing liquidity would delay the normalisation of the financing of the economy, with negative implications for growth rates.

The upward trend in employment will come to a halt and unemployment will increase in 2009

The average annual rate of increase in the total number of employed persons in the January-October 2008 period reached 1.2%, unchanged year-on-year. As a result of the higher annual rise in employment than in the labour force in the first ten months of 2008, the unemployment rate fell to 7.5% in that period, from 8.3% in the same period of 2007. The decline in the unemployment rate is broadly based across age groups in both genders, with the exception of men aged 20-24, where the unemployment rate is rising.

In 2009, it is expected that the upward trend of employment recorded in recent years will come to a halt. Actually, in particular sectors (e.g. manufacturing exports, import trade, construction, tourism, finance) or categories of workers (such as temporarily employed or non-resident workers) employment may decrease. The total number of employed persons will probably remain unchanged, while average working hours in the non-agricultural private sector are expected to fall. However, the unemployment rate may not rise considerably, as annual labour force growth has dropped to 0.6% in the last four years, after standing higher than 1% in the 1998-2004 period.

Average annual inflation in Greece will fall to 1.8% or lower this year, but core inflation will decline much less

In mid-2008, average annual inflation reached a post-1998 high, mainly reflecting external factors, i.e. the large rise in international oil and food prices, as well as domestic ones, i.e. the increase in unit labour cost growth. However, the gradual decline since mid-2008 in international oil and food prices led in the last quarter of the year to a considerable decline in inflation, which fell to a post-June 2000 low of 2.2% in December.

Annual inflation is expected to continue to fall until mid-2009, when it will probably stand around 1%, before rising again. These changes expected in the course of the year mainly reflect the projected year-on-year changes in oil prices every month in 2009. It is estimated that average annual HICP inflation may fall to 1.8% or lower in 2009 (from 4.2% in 2008). However, core inflation is forecast to drop much less, remaining relatively high at 3.0-3.1% (from 3.4% in 2008). The decline in core inflation will be mainly due to the fact that excess demand conditions, which had already weakened in 2008, have reversed this year, and the narrowing of profit margins observed last year is expected to continue. The expected further considerable slowdown in demand growth implies that the "output gap" of the Greek economy will be negative, after remaining positive all recent years. The "output gap" is the difference between the level of actual output (i.e. actual GDP) and the level of potential output (i.e. potential GDP) and is expressed as a percentage of potential GDP. Moreover, the expected unit labour cost growth rate, which will slow somewhat, albeit remaining high, will have a less pronounced inflationary impact.

The current account deficit will drop in 2009, but will remain high

The current account deficit grew by €4.4 billion or 16% year-on-year in the January-November 2008 period. This is attributable to, mainly, a rise in the net oil import bill and higher net interest, dividend and profit payments (largely associated with an increase in non-residents' public debt holdings) and, secondarily, a hike in the trade deficit excluding oil and ships and in net payments for other services. By contrast, net transport (shipping) and travel receipts, as well as EU current transfers, rose, while net payments for purchases of ships fell. For 2008 as a whole, it is estimated that the current account deficit rose by around half percentage point of GDP to 14.7%, from 14.1% of GDP in 2007. It is also estimated that the combined current and capital account deficit, which reflects the economy's external financing requirements (i.e. net inflows from borrowing and from portfolio and direct investment), came to about 13% of GDP, compared with 12.2% in 2007. *On a national accounts basis*, it is estimated that the current account deficit reached 14.6% of GDP, from 14.0% in 2007.

In 2009, the current account deficit will be considerably affected by the deterioration of the international and the domestic economic environment and is expected to drop significantly as a percentage of GDP, mainly because the expected fall in imports of goods has a larger relative weight than the anticipated drop in exports of goods and services. Specifically, exports of goods excluding oil will be adversely affected by the slowdown in domestic demand growth, while the net oil import bill will decrease as a result of the decline in average annual oil prices.

However, the deficit will remain high and will probably start widening again once the economy starts to recover. **Therefore, there is still a pressing need to implement policy measures over the medium and the long term in order to tackle the basic macroeconomic imbalances and chronic structural weaknesses that have led to high current account deficits. These imbalances and weaknesses include the shortfall of total domestic saving with respect to domestic investment expenditure (chiefly because private saving as a percentage of GDP is very low and public saving is negative), the continued decline in the international cost and price competitiveness of the Greek economy, as well as low structural competitiveness.**

Of particular importance is the fact that the current account deficit is partly accounted for by the public sector's imbalances. The current fiscal deficit and a considerable share of private investment are financed through borrowed funds and other resources from abroad, since household saving is very low and insufficient. For example, during the last five years, the negative saving of general government added two percentage points of GDP to the current account deficit (on average per year). **Further, the chronically low productivity of the public sector also "feeds" the current account deficit, as it affects unfavourably the competitiveness of the Greek economy.**

Credit growth to the private sector slowed, but remained high

The annual rate of increase in the outstanding balance of the total financing of the economy by domestic MFIs[2] reached a high level during 2008, showing an overall rising trend until October, before slowing in the last two months (December 2008: 13.9%, October 2008: 18.0%, 2007 Q4: 13.5%). Specifically, the rate of change in the outstanding balance of the financing of the private sector (households and firms) followed a downward path since the beginning of 2008, but remained high (December 2008: 16.4%, 2007 Q4: 21.7%). By contrast, the outstanding balance of general government financing showed a positive rate of change in July 2008 for the first time since September 2006. This rate remained positive also in the months that followed (December 2008: 1.3%, 2008 Q4: 8.1%, 2007 Q4: -16.1%), reflecting increased domestic MFI holdings of government securities.

2 The financing of the economy by domestic MFIs comprises outstanding MFI loans to corporations, households and general government, as well as total Greek government debt securities and corporate bonds held by the central bank, credit institutions and money market funds. Moreover, the calculation of the rate of change in total financing, apart from the change in pertinent balances, also includes securitised loans and total write-offs made by banks during the reference period.

Strong growth of credit to businesses slowed marginally in 2008, but is expected to slow further this year

The sustained high rate of increase in the outstanding balance of private sector financing in 2008 is associated with the fact that domestic MFIs were able to meet high demand for credit, mainly by businesses, taking advantage primarily of their deposit base and, secondarily, of refinancing through the Eurosystem. Specifically, the rate of increase in the outstanding balance of financing of businesses slowed marginally (December 2008: 19.8%, 2007 Q4: 20.1%). Underlying this development were businesses' increased needs for working capital, as well as their expectations of tighter credit standards and conditions in the future, which led them to expedite borrowing from credit institutions. Moreover, the limited ability of businesses to raise funds through the capital market strengthened the role of the banking system as a source of finance. It should be noted, however, that the *net flow of new bank lending* showed a considerable downturn in November and December of 2008 (of 62.7% year-on-year), which led to a slowdown in the annual rate of change in the outstanding balance of financing of businesses in the last months of the year. This slowdown may continue. On the loan supply side, there are still indications of a tightening of credit standards in the future against the background of a deteriorating economic environment and increased credit risk. At the same time, demand for credit is expected to fall, as implied by a worsening of business confidence.

Growth of credit to households: its slowdown in 2008 was considerable for housing loans and subdued for consumer loans

The annual rate of change in the outstanding balance of financing of households slowed considerably (December 2008: 12.8%, 2007 Q4: 23.6%). This development mainly reflects the steep decline in the growth of housing loans (December 2008: 11.4%, 2007 Q4: 23.3%) and is partly associated with an increase in the corresponding borrowing rates (at least until October). Developments in housing loans are also connected with the tightening of MFIs' credit standards and conditions and, most notably, households' reticence to buy or build a house due to the increased uncertainty about the prospects of the economy and, by implication, their incomes. *The net flow of new housing loans* in November and December 2008 fell by almost half year-on-year.

The annual rate of increase in the outstanding balance of consumer loans decelerated in 2008, but remained high, as it stood at 16.0% in December (2007 Q4: 22.6%). This slowdown reflects a tightening of MFIs' credit standards as well as a steep decline in households' expectations, which drives down demand for consumer loans. This development became more pronounced in November and December 2008, as implied by a 68% year-on-year drop in the *net flow of new consumer loans*.

Growth of credit to the private sector will slow this year, but it is expected that – under certain conditions – it may stand around 10% and support sustained economic growth

Considering trends in recent months and the impact from the global financial and economic crisis on credit supply and demand (already discussed), it is expected that the rate of increase in the outstanding balance of financing of the private sector will decelerate in 2009. However, the implementation of the Greek scheme for enhancing liquidity of the economy (Law 3723/2008, presented in Box VI.1) is expected to support growth of credit to households and businesses at a rate of around 10% in 2009, subject to the following key conditions:

• **First** and foremost, banks should fully utlise the provisions of the scheme for enhancing liquidity of the economy (totalling €28 billion). Greek banks have already started to take advantage of the scheme in order to strengthen their capital base by issuing preference shares and to increase their liquidity through Greek government securities and State guarantees for loans to be granted by credit institutions to businesses and households.

- **Second**, the growth rate of economic activity should be close to the aforementioned forecasts, so that disposable income remains at a level that will lead to satisfactory growth of deposits.

- **Third**, the government's shift to domestic borrowing (through the issuance of securities at competitive rates recently offered in the domestic market) should have an only limited impact on private deposits with banks (and —indirectly— on the growth of credit to households and businesses).

- Finally, it is **crucial** that banks adopt realistic policies as regards provisioning and the strengthening of their capital base, taking into account the experience from earlier banking crises, which had led to a considerable increase in non-performing loans.

Interest rates on loans to businesses fell, although interest rates on deposits and loans to households rose

During 2008, deposit rates rose, mainly reflecting a hike in time deposit rates, as banks sought to strengthen their deposit base by offering attractive terms. Specifically, the interest rate on new time deposits (the most important deposit category) rose considerably in Greece and was (until November, last month for which comparative data are available) the highest in the euro area.

Interest rates on loans to non-financial firms showed a limited increase until October 2008, but declined in the last two months of the year, reflecting the effect of a reduction in their average maturity and the cuts in the ECB's key interest rate. Interest rates on consumer and housing loans to households recorded a larger increase until October owing to higher risk premia, which are associated with, among other things, a rise in non-performing loans in this loan category. In the last two months of 2008, interest rates on household loans fell slightly, but remained higher than in December 2007.

The interest rate spread narrowed more than the euro area average

The difference between the weighted average of interest rates on new bank loans and the corresponding average for new deposits (interest rate spread) shrank by 30 percentage basis points in Greece and 24 basis points in the euro area in the January-November 2008 period (for which comparative data are available), as a result of a higher increase in deposit than in lending rates. (In Greece, this spread narrowed by 70 basis points during the *whole* of 2008.) Despite the faster decrease in the interest rate spread in Greece, it remains higher than the average spread in the euro area. Thus, in November 2008, the interest rate spread was 385 basis points in Greece and 285 basis points in the euro area. The causes of the interest rate spread differentials among euro area countries have been discussed in detail in previous reports. Regarding Greece, one of these causes is the different composition of both deposits and loans. The interest rate spread in Greece would be lower (by 35 basis points) if the composition of deposits and loans were the same in Greece as in the euro area.

The spread between Greek and German government bond yields widened considerably

The adverse impact of the international financial crisis on the real economy, which was more marked at the end of 2008, and the ensuing considerable increase in uncertainty led to a shift in demand to securities perceived as safer; as a result, market prices rose and yields on euro area (mainly German) government bonds fell in the last quarter of the year. By contrast, during the same period Greek government bond yields rose slightly. Due to these developments, the spread between Greek and German bonds widened considerably across the maturity spectrum, reaching a historical high after Greece's entry into EMU. However, a considerable increase in this spread, albeit to a lesser extent, was also observed in the bonds of other euro area countries, such as Ireland, Italy, Belgium, Portugal and Spain. This reflects the differentiation of investors' behaviour towards government securities of particular countries, in line with credit and liquidity risks. Specifically, investors expressed their concern about the impact of the financial turmoil on countries with high public debts, debt servicing costs and current account deficits. The considerable fall in transactions on the secondary market also had a negative effect. Specifically, the spread between ten-year Greek and German government bond yields grew considerably from end-October onwards. At end-December 2008, this spread stood at 228 basis points, compared with just 29 basis points at end-December 2007. At the beginning of 2009, this spread initially showed an increase, reaching 295 basis points, before falling somehow, to 250 basis points at end-January.

Share prices on the Athens Exchange plummeted in 2008, while funds raised by firms were much lower

Developments in the Athens Exchange in 2008 were marked by a substantial fall in share prices (of 65.5% between end-December 2007 and end-December 2008), which was also observed internationally, an ensuing drop in transactions, and very moderate fund-raising by firms (funds raised were lower by 94%). The downward path of share prices continued (with fluctuations) into January 2009. It should be pointed out, however, that equities have a small share in households' wealth, while the impact of wealth changes on consumer demand is considered to be weak in Greece. By contrast, fund-raising through the stock exchange is a considerable source of business funding and its large decline is, as already mentioned, one of the reasons why businesses resorted more to bank financing.

Greek banks remain fundamentally sound and strong

The continued malfunctions in international money and capital markets have had a negative impact on the real economy, which became stronger in the last months of 2008. Inevitably, these conditions affect the stability of the international and, certainly, the Greek banking system and gradually lead to conditions of credit scarcity. However, due to the marginal exposure of Greek banks to assets directly or indirectly connected with the causes of the turmoil, as well as their satisfactory capital adequacy and leverage ratios, their low dependence on the money market for raising funds, the tightening of credit standards and the continuous conduct of examinations by the Bank of Greece, the fundamentals of the Greek banking system have been little affected; as a result, Greek banks remain fundamentally sound and strong.

The Bank of Greece has recommended that banks implement appropriate policies for ensuring financial stability

Nevertheless, the Bank of Greece, in the light of increasing risks from the economic slowdown, high volatility in money and capital markets, liquidity stresses and reduced profitability, calls on banks to implement appropriate policies ensuring financial stability. Moreover, also taking into account developments in banks' profitability, loan book quality, and liquidity and capital adequacy ratios, the Bank of Greece has urged Greek banks to make use of the government's scheme for enhancing liquidity of the economy with a view to preventing a credit crunch and enhancing banks' capital base. At the same time, the Bank of Greece has asked banks to cut dividends (in order to increase their capital), increase loan-loss provisions and reduce bonuses to senior officers.

The Bank of Greece has recommended that the Greek banks active in the South-eastern European countries (including Turkey), the economies of which face increased risks in the current conjuncture, should assess carefully local economic conditions and the possibility of being exposed —if these conditions deteriorate— to not only credit, but also foreign exchange risk.

Banks have started taking advantage of the scheme introduced by Law 3723/2008 in order to enhance their liquidity and capital base and to prevent a credit crunch

Banks have already started taking advantage of the scheme introduced by Law 3723/2008, which is in harmony with the common principles agreed in the informal summit of the euro area countries on 12 October 2008 and provides for three measures:

- State participation in the capital of credit institutions through the acquisition of preference shares with a value of up to €5 billion;

- provision of State guarantees with a value of up to €15 billion to beneficiary credit institutions for loans to be granted to them by 31 December 2009 with a maturity of three months to five years; and

- issuance by 31 December 2009 of government securities with a value of up to €8 billion and a maturity of up to three years, to be lent to beneficiary credit institutions for enhancing liquidity, since these securities can then be used as collateral for obtaining credit from either the Eurosystem or the interbank market.

The total amount available under these measures (€28 billion) corresponds to about 11.5% of Greece's 2008 GDP, which falls short of the average of similar measures taken by other countries of the euro area (about 26.5% of the 2008 GDP) and of the EU-27 (around 23% of the 2008 GDP), despite big differences across countries. As already mentioned, it is expected that the full implementation of this scheme can support an annual household and corporate credit growth of around 10% in 2009 and sustain GDP growth.

The fiscal deficit increased in 2008

As estimated in the Updated Stability and Growth Programme for 2008-2011 (released in January 2009), the general government deficit rose to 3.7% of GDP in 2008, from 3.5% in 2007, and is projected to remain at 3.7% in 2009 before dropping to 3.2% in 2010 and to 2.6% in 2011. The general government debt is estimated to have edged down marginally to 94.6% of GDP in 2008, from 94.8% in 2007, and is projected to amount to 94.7% of GDP in 2011.

The worsening terms for government borrowing reflect heightened market concerns about Greece's fiscal performance and its current account deficit

The unfolding global financial crisis, which has, *inter alia*, led to a drastic reassessment of credit risk, has vividly brought to light the chronic structural weaknesses and the macroeconomic imbalances that the Greek economy suffers from. The widening of the yield spread between Greek and the corresponding German bonds (across the entire maturity spectrum) over the past few months reflects heightened market concerns about Greece's very high public debt (the second highest in the EU) and its inability to rein in the fiscal deficits and achieve a sustainable fiscal adjustment in spite of strong growth rates for more than the last ten years. This widening yield spread is also a sign of the markets' concern about Greece's exceptionally wide current account deficit, which continues to increase and which the fiscal deficit (as mentioned above) continues to feed into, and about Greece's failure to adopt adequate structural measures. Finally, there have been questions about Greece's frequent revisions of its statistical data (especially fiscal data) and the substantial shortcomings in recording certain government liabilities (e.g. public hospital liabilities).

Contrary to what would have happened in the past, these concerns cannot affect the foreign exchange market, as Greece is a euro area member, but they do affect borrowing terms for the Greek government.

The markets consider Greece's current fiscal position to be unsustainable

In the past few months, the upward revision —to 3.5% of GDP— of the general government deficit for 2007 (released on 22 October 2008), estimates that the 2008 deficit-to-GDP ratio would be well in excess of 3% and the overoptimistic forecasts of the Budget for 2009 were negatively received on the world markets, which view Greece's current fiscal position as unsustainable, especially in the light of the already high public debt, the liabilities of the social security system and the wide current account deficit.

Even though other countries are expected to report even greater fiscal deficits than Greece over the period 2008-2010, their respective yield spreads against the corresponding German bonds are much smaller than Greece's. The reason for this is that the economies in question have gone into a recession and that their deficit is mainly of a cyclical nature, while their public debt is much lower than Greece's. On the contrary, the problems that Greece faces and that are a source of concern for the markets (the fiscal deficit, public debt, the current account deficit, meeting the obligations of the social security system) are essentially of a structural nature.

The yield spread between Greek bonds and the corresponding German securities started to widen in early 2008. The yield spread for the 10-year bond rose from 29 basis points in December 2007 to 66 basis points by end-August 2008. After "Standard and Poor's" rating agency downgraded Greece's key sovereign credit rating, the yield on the Greek government 5-year bonds issued on 20 January 2009 came to 5.6% and the spread with the corresponding German securities widened to 325 basis points. Just as the very narrow yield spread in the past reflected a general *underestimation* of the risks on the global markets, the recent strong widening of the yield spreads reflects a generalised excessive reluctance of investors worldwide to assume risks (which leads to an *overestimation* of risk).

It should be noted that, until now, the widening of the yield spread had taken place against a backdrop of substantial falls in all interest rates (especially in German bond yields), which had somewhat contained the increase in the cost of new government borrowing for Greece. In upcoming months, however, 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. In such an event, market prices of bonds are likely to fall and bond yields are in general likely to increase. As a result, the increase in the costs of government borrowing for Greece would be even greater.

The increase in borrowing costs for the Greek government spills over to the entire economy

As government borrowing costs are rising, short-term measures must be adopted immediately to lower the fiscal deficit; these must be combined with a medium-term plan aimed at sustainable fiscal adjustment and structural reforms, so as to boost investor confidence. This is all the more necessary as **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**. Therefore, if bold measures are not taken, the increase in government borrowing rates will burden the entire Greek economy, with negative effects on the growth rate, economic activity, employment and public debt dynamics.

The deficit must be lowered to below 3% this year, while the fiscal imbalances must be substantially reduced in the medium term – There are, however, ways to support economic activity

The fiscal measures that need to be taken should not be aimed at boosting total demand by increasing public expenditure and cutting back on taxation, as in other countries, but rather at lowering the general government deficit to below 3% of GDP this year and at lowering it further, by around 1% of GDP *per annum*, over the next three years, thereby eliminating it by 2012. As mentioned previously, this could be achieved by curbing at least part of the enormous tax evasion and the squandering of public funds and by improving the efficiency of public spending. Given that Greece has no room for fiscal relaxation, one way to bolster economic activity would be to reallocate public expenditure and increase its efficiency, with a view to supporting, through targeted actions, the socially weaker groups of the population and to financing public investment (which is more growth-enhancing). The prompt implementation of reforms that do not have a fiscal cost but contribute directly to improving productivity could also have a positive impact on growth. The European Economic Recovery Plan, which has been adopted by the European Council and concerns all the EU Member States, contains a set of ten actions for structural interventions over a two-year horizon, which could stimulate demand and bolster the resilience of the European economies. Implementing these actions is considered imperative in the case of Greece.

In the medium term, fiscal imbalances must be substantially reduced by generating substantial primary surpluses (in the order of 4.5-5% of GDP, based on indicative calculations – see Box I.1), so as to substantially reduce the debt-to-GDP ratio to below the reference value of 60% mentioned in the Maastricht Treaty, within a reasonable timespan, for instance within a decade. This is imperative in order, *inter alia*, to cope with the increase in public expenditure because of population ageing. It must be clearly set out in the medium-term planning that the target is to achieve sustainable fiscal adjustment and thereby change the state of public finances and the role of the public sector in Greece. When a country like Germany is willing to go as far as to amend its Constitution to send a signal to the markets that any deviation from fiscal targets for the purpose of addressing the crisis is only temporary and will be corrected as soon as possible, Greece will obviously have to do much more. (A set of proposals for structural measures of fiscal policy geared towards reaching these objectives is summarised in Box I.1.)

The macroeconomic imbalances and structural weaknesses must be boldly addressed and substantial progress must be made towards sustainable growth

The planning of the extensive structural reforms needed to improve the state of the Greek economy must be governed by the need to deal boldly with macroeconomic imbalances and chronic structural weaknesses. This planning must aim for a substantial improvement of productivity and competitiveness and for full fiscal consolidation. In addition, it must aim for growth sustainable over the long term – i.e. a growth that does not harm but, rather, respects and protects the environment. As mentioned previously, this is the only safe way of shielding the economy from the strong global shocks but also of achieving strong growth rates with price stability in the medium term. Therefore, the focus must continuously be on a far-reaching, more outward-looking, stronger and sustainable growth dynamics. Such a dynamics can be effectively supported by the general policy guidelines stemming from the Lisbon Strategy, which is binding for all the EU Member States. The central goal of this strategy is to increase the competitiveness of the European economies. The main policy guidelines are mentioned below.

• **Consolidation and increased efficiency of the public sector**. The European Commission, in its recent recommendations (28 January 2009) to the EU Member States for the implementation of the structural reforms provided for by the Lisbon Strategy, in its chapter on Greece lists by order of priority: the pursuit in the medium term of fiscal consolidation, an improvement in the efficiency of primary public expenditure, speeding up reforms in tax administration and the drawing up and execution of the budget, a reduction in the debt-to-GDP ratio and a fast implementation of the pension system reform. (As mentioned previously, recommendations in the same direction by the Bank of Greece, which have been reiterated on other occasions, are presented in Box I.1.) The European Commission also mentions that Greece must (a) implement a reform of the public administration by building up effective regulatory, control and enforcement capacities, and (b) reduce red tape and simplify the regulatory environment for business activity. In the *Monetary Policy – Interim Report 2008* released last October, the Bank of Greece had also stressed that the improvement in the business environment and in the tax collection mechanism is directly related, *inter alia*, to the fight against corruption.

• **Strengthening the production base through investment.** Apart from increasing the efficiency of public administration, reducing red tape and simplifying the business environment, mentioned previously, other factors that can help improve the quality and efficiency of investment are: the implementation of reforms to increase investment in R&D and the more effective use of resources from the Structural Funds, listed by the Commission as a high priority. The strengthening of competition, as elaborated below, can also contribute to this outcome.

• **Increase in the employment rate and upgrading of human resources**. The European Commission gives priority to the strengthening of active labour market policies, transforming undeclared work into formal (legal) employment, reducing the non-wage costs of low-paid labour, modernising employment protection legislation, accelerating the implementation of reforms on education and training as well as on lifelong learning, and facilitating the transition to work. The Bank of Greece, in its *Monetary Policy – Interim Report 2008*, released last October, had pointed out that an improvement in childcare infrastructure, the promotion of equal employment opportunities between men and women and the removal of tax disincentives could contribute to the integration into the labour market of population groups with relatively low participation rates, especially women and older persons.

• **Strengthening competition in all markets**. Listed as a priority by the European Commission is the need for measures to increase competition in professional services (the self-employed). Interventions are, however, needed to boost competition in other sectors as well (such as the energy and the road transport sectors), as pointed out in the *Monetary Policy – Interim Report 2008* of the Bank of Greece last October.

• **Change the current pattern of energy production and consumption**. As has been repeatedly stressed, the Greek economy is particularly energy-consuming and its oil dependence remains high, in spite of the utilisation of renewable energy sources (hydroelectric and wind), as well as lignite. In addition, according to existing assessments, Greece as a Mediterranean country will be more harshly affected by the climate change. The new European policy on energy and climate change that has been gradually adopted over the past two years by the European Council calls upon all EU Member States to reduce greenhouse gas emissions, improve energy efficiency and increase the use of renewable energy sources. Greece's implementation of this policy presupposes, among other factors, a better organisation of production, with the introduction of less energy-consuming technology, as well as a better organisation of urban life – with better public transport, so as to reduce the use of more energy-consuming transport means, and with the use of new technologies and renewable energy sources for the insulation and heating of houses and other buildings. Implementing these changes will require proper planning and incentives. **It is very important for Greece to make progress towards the goals set by the new European policy. Such progress is necessary not only with regard to climate change and the ability to improve the quality of life, but also because it could generate substantial investment and help strengthen competition in the energy sector, create new businesses and a large number of new jobs, significantly reduce the country's energy dependence and lower the current account deficit. The present conjuncture must not be seen as an obstacle to such developments. On the contrary, energy and so called "green" investment can give a much needed boost to economic recovery, as stressed in the European Economic Recovery Plan.**

The proper policy mix will set the growth engine back into motion and boost confidence in the prospects for the economy

This type of planning is obviously a necessary ingredient of the economic policy mix that could set the growth engine back into motion. This would boost the confidence of foreign investors and international markets, as well as of Greek enterprises and households in the prospects of the Greek economy. Such a plan will be easier to implement more effectively if based on a strong public consensus. Achieving such a consensus would require an open public debate that would go into the substance of the issues and focus on the fair distribution of burdens, i.e. the sacrifices needed in the short term, and the widest possible diffusion of benefits, so that society as a whole can gain in the medium and the long term.

Box I.1

GUIDELINES OF A MEDIUM-TERM PROGRAMME FOR SUSTAINABLE FISCAL ADJUSTMENT

CONTAINMENT OF PUBLIC EXPENDITURE

Both international and Greek experience have shown that the possibility of fiscal adjustment being sustainable increases when it is based on the containment of budgeted primary expenditure.[1] The reduction of public expenditure should be considered by the markets as of a lasting character. In Greece, the reduction of the fiscal deficit in the 1990s by 10 percentage points of GDP was rather the result of the increase in tax receipts and the reduction in interest payments than of the cut in primary expenditure. This was the reason why the trend of deficit reduction easily reversed after 2001. A fiscal adjustment which is mainly based on the reduction in public expenditure is most likely to lead to an "expansionary fiscal adjustment" – namely, the reduction of the deficit may lead to an acceleration of economic growth and an increase in production and employment.[2]

According to the above, the *containment of public expenditure* should constitute *a priority and the core of every effort for the attainment of a sustainable economic position* and the containment

1 Many researchers have also come to the same conclusion; see for instance C.J. McDermott and R.F. Wescott "An Empirical Analysis of Fiscal Adjustments", *IMF Staff Papers*, No 4, volume 43, December 1996.
2 See, for instance, Alesina, A. and S. Ardagna, "Tales of Fiscal Adjustment", *Economic Policy*, volume 27, 1998, pp. 489-545. See also footnote 16 below.

of the fiscal imbalances of the Greek economy.[3] The effective control of primary expenditure requires a systematic effort, continuity and consistency, a change in mentality, and cooperation of all ministries and other competent bodies.

The most important measure for the control and containment of public expenditure is the *establishment of numerical fiscal rules*[4] *regarding the level (either in absolute terms or in relation to GDP) or the annual rate of increase in public expenditure.*[5] Greece is the only country in the EU that has not enacted such rules.

According to a European Commission survey,[6] the number of numerical fiscal rules in effect in the Member-States of EU-25 quadrupled[7] in the period 1990-2005. Furthermore, the rules now cover many more components of general government than in the past. The most recent development is the imposition of numerical rules also on social security expenditure. National rules operate as a complement and support the corresponding rules of the Maastricht Treaty and the Stability and Growth Pact.

The European Commission survey has shown that the introduction of numerical fiscal rules in a country and the enlargement of their scope to include an ever-increasing part of general government have led to the reduction of the cyclically adjusted deficit (or an increase in the surplus) of the country. Moreover, the imposition of numerical fiscal rules on primary expenditure has led to the reduction in the primary expenditure to GDP ratio. The effectiveness of the rules is enhanced when they obtain a statutory form,[8] when they have enjoyed wide publicity and when powerful mechanisms exist to ensure their enforcement.

The effectiveness of these rules is directly associated with transparency. The targeted fiscal variables should be precisely defined, their development be systematically monitored and outcomes be measurable. The rules must be considered permanent and cover all the parts of general government (e.g. central government, hospitals, local authorities, universities etc.) and not only central government, while the annual targets must be linked to corresponding medium-term targets. Furthermore, it has to be clear which body or individual is responsible for the attainment of each target, while the control of the final outcome must be conducted by a body of independent auditors. Finally, the existence of the appropriate institutional framework for the operation of these rules is of crucial importance. Measures that fall within this category include the drafting of multi-annual budgets, the establishment of systems for the evaluation of public expenditure during the budget process (e.g. a zero-based budget approach), timely drafting and submission of the budget to Parliament along with all necessary information, as well as the restructuring of the budget and the establishment of additional budgets, so as to cover all the remaining sectors of general government (social security organisations, local authorities, public hospitals, universities etc.).

3 The Bank of Greece has repeatedly referred to the need for reduction and containment of public expenditure. See e.g. (a) *Annual Report 1999* (b) *Annual Report 2001*, p. 53, (c) *Annual Report 2003*, pp. 69-71, with a comprehensive presentation of the numerical fiscal rules and of certain prerequisites for the control of expenditure and fiscal deficits, (d) *Annual Report 2004*, p. 65 (e) *Annual Report 2006*, pp. 213-216, (f) *Monetary Policy–Interim Report 2008*, p. 24.
4 Preferably by a law of superior status.
5 For the importance of properly designed rules on expenditure, see also "Ten years of the Growth and Stability Pact", ECB, *Monthly Bulletin*, October 2008, p. 65. Also, Deroose, S., M. Larch and A. Schaechter, "Constricted, lame and pro-cyclical? Fiscal policy in the euro area revisited", European Commission, Economic Papers No. 353, December 2008.
6 See European Commission, *Public Finances in EMU-2006*, pp. 122-168.
7 According to the survey, in 1990 there were 16 numerical rules, while in 2006 there were 66 rules. This, of course, is partly attributable to the enlargement of the Community. See European Commission, *Public Finances in EMU-2006*, pp. 136-148.
8 E.g. rules included in the Constitution or in legal provisions are more effective than those based on political agreements.

Moreover, certain new institutions must be introduced. It would be useful, for instance, to set up an independent specialised unit,[9] which will analyse and evaluate the budget, monitor its execution during the year and will submit frequent periodical reports to the National Delegation. The relevant discussion at Parliament will have to take place not only when the budget is submitted thereto, but also during the fiscal year, as well as after its termination, so that any divergences from the budget aggregates may be accounted for and approved of.

Furthermore, as concerns local authorities, which in the last 15 years record major deficits, an "*internal stability and growth pact*" should be drawn up between central government and local authorities and at the same time effective control mechanisms should be established. It is inconceivable that commitments at a general government level do exist without any commitment of major components of general government committed. It should be noted that several EU countries (e.g. Italy) do have an "internal stability pact".[10]

In parallel with the containment of expenditure, it is also necessary to restructure it in favour of those categories that promote economic growth, such as expenditure on education, research and development and the creation of infrastructures. In recent years this expenditure, particularly public investment expenditure, has declined as a percentage of GDP. This restructuring will improve the "quality" of public finances.

CURBING TAX EVASION

Along with the containment of expenditure, the hardest possible effort must be made in order to curb tax evasion. The intensity, size and the social repercussions of this phenomenon are so huge that a drastic course of action is imperative. The curbing of tax-evasion can yield huge government revenue and make a major contribution to the reduction of deficits. As in the case of expenditure, the problem of tax evasion is structural and its resolution requires systematic efforts, consistency and continuity, a broader social consensus and cooperation among many agencies and government services. Tax evasion can take various forms, depending on the category of tax, the type of economic activity (e.g. small or large enterprises) and the employment status of the taxpayer (e.g. salaried workers, self-employed etc.) That is why tax evasion cannot be addressed by any single measure alone. Rather, it requires a whole set of measures as well as the cooperation of many agencies.

Apart from the marginal tax rate imposed on the tax payer, the size of tax evasion is determined by two further factors: the chances of being caught and the severity of the penalty imposed in such cases. Both factors are within the control of tax authorities.

In Greece, penalties for tax evasion are high and often disproportionate to the amount of tax evaded. It would seem appropriate to restore some sort of proportionality between the gravity of the violation and the relevant penalty. The big problem, however, is that the likeliness of tax-evasion cases being detected and punished is almost zero, as a result of the inefficiency of the competent services and the complexity of tax regulations, which favours non-transparent practices. Furthermore, some tax evaders argue that the tax system is unfair or that tax revenue is not properly managed. These perceptions favour extensive tax evasion.

9 Similar to that of the Congressional Budget Office of the US Congress.
10 Many surveys have come to the conclusion, that when the responsibility for effecting expenditure, at the same time, and finding revenue is concentrated on the same body, then the relevant decisions are made with greater caution. If, however, the responsibility for the receipt of revenue lies with one body and that for carrying out expenditure lies with another, then fiscal management is much looser.

Any effort to combat tax evasion will have to start from the improvement of the tax-collection mechanism and the introduction of tighter tax controls. The chances of tax evasion cases being detected and punished must by all means be increased. *No tax measure can substitute for an efficient tax-collection mechanism.*

Measures for combatting tax evasion must include the abolition of "arrangements" for the settlement of pending tax cases at exceptionally favourable terms for tax evaders. The continuous recourse to "arrangements" leads to a more extensive tax evasion in the long-term, as non-compliers incorporate this practice in their expectations and do not fulfil their tax obligations to the detriment of compliant taxpayers.

Dealing with tax evasion and successfully containing expenditure would enable the creation of a stable tax system. As a result of tax competition prevailing in the European Union, there is no room for an increase in tax rates or the imposition of new taxes.[11] A stable tax system will allow the attraction of more foreign direct investment, which is particularly low in Greece.

REDUCTION OF PUBLIC DEBT

The ongoing financial crisis has clearly revealed the problems created for the Greek economy from the existence of a high public debt, expecially when this is combined with other features that hamper the economy. A high public debt (a) renders public finances vulnerable to a rise in the interest rates on government borrowing,[12] (b) considerably reduces the scope for a counter-cyclical fiscal policy, and (c) leads to a higher cost of debt refinancing. The most dangerous development, however, is the strengthening of debt dynamics, when a high public debt is accompanied by a rise in real interest rates and weakening economic growth, as is the case today[13] (and was also in the period 1990-1993). In such periods the debt-GDP ratio tends to increase, acting as a drag on growth.

Despite the reduction of the debt ratio due to the upward revision of GDP, it remains high (it is the second in size in the European Union) and constitutes a very important source of macroeconomic imbalance at the present juncture. In the last 15 years the debt-to-GDP ratio, although it was reduced, remained high in spite of the exceptionally favourable conditions that prevailed from mid-90s until end-2007. The characteristics of this period were high economic growth rates, the noticeable drop of interest rates (up until the end of 2005), the collection of considerable revenue from privatisations, the inflow of resources from EU funds and the creation of important primary surpluses (until 2001).

On the basis of indicative calculations taking account of current conditions,[14] the reduction in the debt-to-GDP ratio to 60% in a decade (until 2018), requires each year the creation of sizeable primary budget surpluses, of the order of 4.5-5% of GDP. Surpluses of this level may be achieved only by the considerable reduction of primary expenditure[15] and the increase in receipts (from tax-evasion). It is very important to immediately check debt dynamics, because, if the debt-to-GDP

11 In Greece's neighbouring countries income tax rates range between 10% and 16%.

12 This rise may be attributable either to a generalised increase in interest rates or to an increase in the spread between the yields of the Greek securities against those of the German ones, as is the case today.

13 Since April 2008 the Bank of Greece had pointed out that the conditions favouring the reduction of the debt-to-GDP ratio had weakened. See *Annual Report 2007*, April 2008, p. 112.

14 With nominal rates at about 5.5% and a GDP growth rate of 4.5% at current prices, in order for the debt to be reduced to 60% of GDP until 2018, a primary surplus of about 4.5-5% of GDP annually is required.

15 See W. Koehler-Toeglhofer and M. Zagler, "Public debt dynamics during different fiscal policy regimes", p. 24 (an article presented at the conference on public debt, organised by the Bank of Italy in Perugia on 1-3 April 2004).

ratio starts to increase again, it is possible that the yield spread of Greek bonds vis-à-vis the German ones will increase more, creating even bigger problems in the Greek economy and increasing debt dynamics.

It should be pointed out that, in the case of Greece, a fiscal adjustment which will be primarily based on the sustainable reduction in primary expenditure (and its restructuring in terms of quality) and the containment of tax evasion, thus creating primary surpluses and reducing the debt-to-GDP ratio, is most likely to lead to the increase in private consumption and economic activity[16] (i.e. to have an expansionary effect). According to certain researchers, a restrictive fiscal policy may have expansionary effects[17] on an economy with a high public debt. The expansionary effect is mainly achieved through the strengthening of confidence, the drop in interest rates, the change in expectations regarding the future levels of tax burden, etc.[18] At the current economic juncture Greece, due to the specific fiscal problems it is faced with, will have to follow a restrictive fiscal policy, unlike many other countries of the European Union. What is sought here is for the markets to perceive that the reduction in primary expenditure and fiscal adjustment are of a lasting character and that there is a relevant "commitment", so that fiscal policy becomes more credible.

THE IMPLICATIONS OF POPULATION AGEING – NEED FOR IMMEDIATE REDUCTION OF TAX EVASION AND INCREASE IN THE CORRESPONDENCE BETWEEN THE SOCIAL SECURITY CONTRIBUTIONS AND BENEFITS

The impact of population ageing on the budget is expected to be particularly strong in the case of Greece, due both to its adverse demographic developments and prospects and to certain features of its pension system.[19] The future (implicit) liabilities of the pension system are estimated to exceed the current level of nominal GDP. The measures taken in 2008 regarded mainly the unification of the numerous pension funds. The social security issue is a complex problem not directly associated with the ongoing crisis; it is of a structural nature and calls for a comprehensive, far-reaching approach.

There is, however, an issue which will has to be dealt with immediately, namely *contribution evasion*. In parallel and simultaneously with efforts to curb tax evasion, a programme aimed at addressing contribution evasion[20] must also be developed. As in the case of tax evasion, in this case, too, the contribution collection mechanism must be improved. However, the most important measure for the reduction of contribution evasion is the increase in the *correspondence* between contributions and benefits.

The current relationship between an insured person's total contributions and the pension he/she will receive is rather loose, particularly for lower pensions. A closer link between the "insurance effort"[21] and the level of pension will automatically reduce contribution evasion, particularly in

16 See (a) Giavazzi, F. and M. Pagarro, "Can severe fiscal contractions be expansionary? Tales of two small European countries", CERP, Discussion Paper No. 417, (1990). (b) Giavazzi, F. and M. Pagarro, "Non-Keynesian effects of fiscal policy changes: International evidence and the Swedish experience", *Swedish Economic Policy Review*, 3(3), 1996, pp. 67-103. (c) Perotti, R., "Fiscal policy in good times and bad", *Quarterly Journal of Economics*, volume 114, 1999, pp. 1399-1436. (d) Blanchard, O., "Comment on Giavazzi and Pagarro", Blanchard, O. and S. Fischer (eds) NBER *Macroeconomics Annual*, No. 5, Cambridge Mass: The MIT Press, 1990, pp. 111-112.

17 Sutherland, A. "Fiscal crisis and aggregate demand: Can high public debt reverse the effects of fiscal policy?", *Journal of Public Economics*, vol 65, 1997, pp. 213-240.

18 See footnote 16 above.

19 As concerns the implications of population ageing for the sustainability of public finances, see also Balassone, F., and J. Cuncha, G. Langenus, B. Manzke, J. Pavot, D. Prammer and P. Tommasino, "Fiscal sustainability and policy implications for the euro area", ECB Working Paper No. 994, January 2009. The study includes indicators for Greece.

20 The competent services should exchange information, given that quite often the effort to conceal the turnover of a business from the tax services is associated with respective actions to conceal the number of employees etc.

21 The total contributions during the working life of the insured.

certain sectors and occupations. Each insured person should have an "account", the balance of which would be communicated to him/her regularly (e.g. biannually). It should be clear to all insured persons (from the beginning of their working lives) that the bigger the balance of their account, the bigger the pension they will receive. In this context, the "welfare component" of the pension should stop being paid by the social security funds and should instead be covered by the budget. However, this welfare component should not act as a disincentive for the insurance effort, as is the case today with the minimum pension.[22] This will improve the system's transparency and the sense of justice, thus further reducing contribution evasion.

22 The welfare component of the pension should be granted on the basis of strict criteria to insured persons who, for objective reasons, were unable to credit considerable contributions to their "account".

II THE EXTERNAL ENVIRONMENT OF THE GREEK ECONOMY

I ECONOMIC DEVELOPMENTS AND PROSPECTS INTERNATIONALLY AND IN THE EURO AREA

I.I OVERVIEW OF INTERNATIONAL DEVELOPMENTS AND PROSPECTS[1]

The external environment of the Greek economy deteriorated strongly in the second half of 2008, as the global economy entered the worst postwar economic juncture, faced with a double crisis, both at a financial and at a macroeconomic level. Since September 2008 international economic developments have been rapid. The speed of the facts that took place and the breadth and depth of their impact surpassed all previous forecasts of international organisations.[2] The simultaneous occurrence of these facts and the size of their impact on all the economies worldwide led to an unprecedented, in modern economic history, international cooperation[3] for the adoption of extraordinary and effective measures aimed at addressing the turmoil.[4]

The powerful and coordinated interventions of governments, central banks and international financial organisations for the provision of liquidity, funds and guarantees are estimated to have helped ward off the danger of collapse of the global financial system. Moreover, the negative interactions of financial and macroeconomic developments, the looming danger of the transformation of the current recession into an economic depression worldwide and the lessons from the past urged economic authorities to announce and take extraordinary macroeconomic measures, particularly in the period October-December, to stimulate decelerating economic activity (see Box II.1).

The deterioration of the international economic environment in 2008, both in the euro area and in the Greek economy, is mainly attributable to two external economic disturbances:

- the exceptionally steep further rise in the international commodity prices (mainly of crude oil and food) in the first half of 2008, which led to the soaring of inflation and the compression of real incomes and consumption, and

- the unexpected intensification of the international financial turmoil in the second half: the financial turmoil, entering its second year, was transformed from a liquidity crisis in global markets into a danger of collapse of the international financial system and eventually into a recession in the world economy.

These two external disturbances, following a period of protracted and high economic growth, led the world economy to a downward phase of the business cycle and caused a reversal of the trend of international fuel and other commodity prices.

The **global GDP growth rate**, after having moved at very high levels for four consecutive years, fell significantly in 2008 (to 3.4% from 5.2% in 2007). In **advanced economies** the GDP growth rate slowed in 2008 (1.0% from 2.7% in 2007). In 2008 the euro area, Japan, the United States[5] and the United Kingdom experienced a recession (in technical terms[6]). In the **emerging and developing economies** the GDP growth rate also decelerated in 2008, but remained relatively high (6.3%, from 8.3% in

1 The reported estimates and forecasts for 2008 and 2009 are based on information available until end-January 2009 and stem mainly from the IMF's *World Economic Outlook Update* (28 January 2009) and the European Commission's *Interim Forecasts* (*Interim Forecast*, 19 January 2009). In the cases where more recent information was not available, the data sources used were the IMF's *World Economic Outlook* (Oct. 2008) and the OECD's *Economic Outlook* (Nov.-Dec. 2008).

2 It is noted that in July 2008 estimates of international organisations (e.g. of the IMF) concerning the world economy in 2008 and 2009 were more favourable than those of April 2008, while they became much more unfavourable subsequently.

3 A characteristic which differentiates the current crisis from that of the 1930s is precisely the way it is being dealt with in a spirit of international cooperation instead of competition and isolationism. See Dominique Strauss-Kahn's speech at the Annual Meeting of the IMF and the World Bank, 13 October 2008.

4 A summary of the facts and of the initiatives taken by the governments in order to deal with the turmoil is included in the relevant Appendix 1.A1 of OECD, *Economic Outlook*, No. 84, Prelim. Edition, November 2008.

5 The timely implementation of macroeconomic measures by the United States (aggressive reduction of interest rates and enactment of tax refunds in the first quarter of 2008) boosted the economy mainly in the second quarter of the year and delayed for a while the occurrence of the recession.

6 Reduction of the level of GDP for two or more consecutive quarters.

2007). The economies of China, India, Russia and Brazil, which produce 21% of global output, although they recorded a slowdown, continued to support global economic activity, as their GDP growth rates in 2008 were between 5.8% and 9.0%.

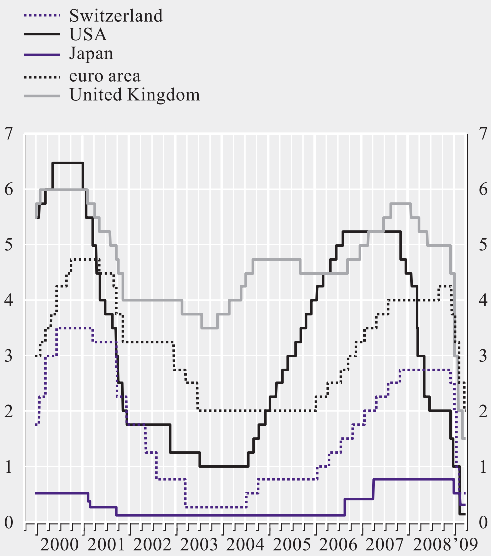
In the **euro area**, the GDP growth rate fell considerably in 2008 to 0.9% (from 2.7% in 2007), as the impact of the international financial turmoil started to become more noticeable, particularly from the second half of the year. The negative GDP change rates in most euro area countries in the last quarters of 2008 are expected to continue at least in the first half of 2009.

The slowdown of GDP growth in advanced economies in 2008 is attributable to the deceleration of the growth rate of both domestic and external demand. The generalised declining confidence and the deteterioration of expectations led to a significant slowdown of private consumption and investment growth. This negative development is attributable to the tightening of credit conditions, the erosion of incomes purchasing power as a result of the rise in inflation, and the decline in households' wealth, due to the extended adjustment of the real estate market in many economies and the large drop in share prices internationally in 2008. In parallel, the slowdown of the rise in the **volume of world trade** (4.1% from 7.2% in 2007), which was accounted for by the considerable decline of global economic activity and international demand, caused a reduction in the net exports of the major export economies with the exception of the United States (the exports of which are favoured by the drop of the dollar exchange rate for a number of years).

Inflation, following its speed-up in the first half, fell significantly in the last months of 2008 in all economic regions, mainly owing to the fast drop of the international prices of fuel and agricultural products. In the euro area, inflation in December was 1.6%, compared with 3.8% in the third quarter, while in the United

Chart II.1 Central bank policy rates (January 2000-January 2009)

(percentages per annum, daily data)



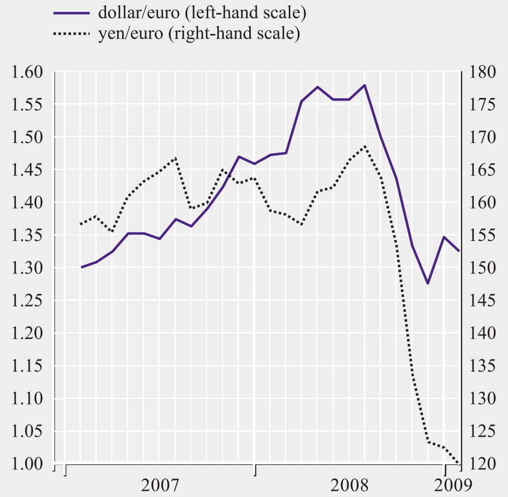
Sources: Euro area: European Central Bank (ECB), interest rate on main refinancing operations. USA: Federal Reserve, federal funds target rate. Japan: Bank of Japan, official discount rate. United Kingdom: Bank of England, repo rate. Switzerland: Swiss National Bank, operational target range for the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

States it dropped even faster and came to 0.1% in December, from 5.3% in the third quarter of 2008. Despite its noticeable drop in the last months of the year, inflation in advanced economies is estimated to have increased, at average levels, to 3.5% in 2008, from 2.1% in 2007. In the emerging and developing economies —many of which continued to expand in 2008 at a rate close to the potential economic growth rate— inflation rose to 9.2% from 6.4% in 2007.[7] The rise in inflation in the euro area and the United Kingdom is also attributable, to a lesser extent, to the faster rise in unit labour costs.

7 It is estimated that in recent years emerging economies, such as China and Brazil, although they are low-production-cost countries, export inflation towards advanced economies because (a) the *rate of increase* in commodity prices but also in the prices of the end-products they export to international markets is high and (b) the strong demand for raw materials (metals, crude oil) by these countries leads to a soaring of the international prices of these products, thus increasing production costs in advanced economies. Consequently, the effect of globalisation on inflation in advanced economies was rather incremental in the 2007-2008 period.

Chart II.2 Exchange rate of the euro against the US dollar and the Japanese yen (January 2007-January 2009)

(monthly data)



Sources: ECB and Bank of Greece.

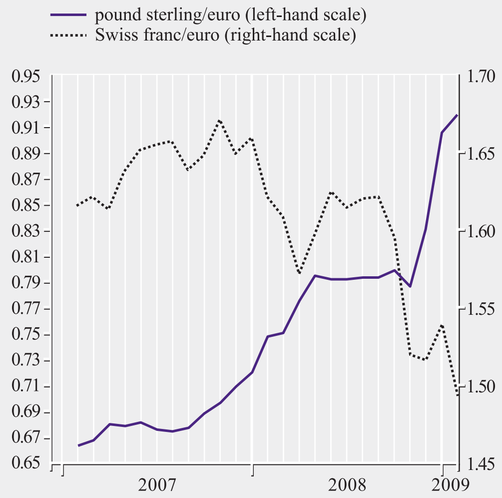
The continuous rise in the prices of internationally tradeable raw materials and the risk of inflation expectations getting entrenched had already led the central banks of many major economies (those of the euro area, the United Kingdom, China and others) to increase their **interest rates** in the period 2006-2007. This policy averted a further rise in inflation in 2008. The rapid drop in commodity prices in the second half of 2008 led to a deceleration of inflation, allowing many central banks to cut their interest rates, a development that contributed to the more effective management of the financial turmoil (in the United States the intervention rates of the Federal Reserve System came almost to zero in December 2008 – see Chart II.1).

The **exchange rates** of the key international currencies presented extraordinarily intense fluctuations in 2008, which were affected by economic developments, the policy measures adopted and market expectations for the economic outlook. The US dollar, after falling to historically low levels vis-à-vis the euro in the first seven months of 2008, subsequently appreciated strongly, to start anew to depreciate as from December (see Chart II.2). The nominal effective exchange rate of the euro, after reaching its highest level in July (an appreciation of 7.5% in comparison with 2007), then started to fall. The pound sterling weakened considerably against the euro in 2008, particularly in the last two months of the year (see Chart II.3), and on 31 December its parity came to 0.9525 per euro, from 0.6843 on average in 2007.

The **global economic outlook for 2009** is generally unfavourable, while all forecasts are surrounded by a high degree of uncertainty. Despite the extensive interventions in the international financial system, financial conditions have not yet returned to normal, as there is lack of confidence and uncertainty as regards the true economic situation of large banking institutions and firms, but also uncertainty about the depth and the duration of the turmoil. International financial organisations' forecasts on the growth rate of **global economic activity** are constantly being revised downwards as from September 2008. The **unemployment rate** in advanced economies, after having fallen to record lows in decades, is already increasing anew globally, owing to the severity of the

Chart II.3 Exchange rate of the euro against the pound sterling and the Swiss franc (January 2007-January 2009)

(monthly data)



Sources: ECB and Bank of Greece.

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

(annual percentage changes)

	2008 (estimates)					2009 (forecasts)				
	IMF 28.1.09	EU 19.1.09**	OECD 25.11.08	Consensus 12.1.09	Eurosystem staff 4.12.08	IMF 28.1.09	EU 19.1.09**	OECD 25.11.08	Consensus 12.1.09	Eurosystem staff 4.12.08
World economy*	3.4	3.3	...	2.3	...	0.5	0.5	...	-0.2	...
United States	1.1	1.2	1.4	1.2	...	-1.6	-1.6	-0.9	-1.8	...
Japan	-0.3	-0.1	0.5	0.0	...	-2.6	-2.4	-0.1	-1.7	...
China	9.0	9.7	9.5	...	...	6.7	7.9	8.0	...	...
United Kingdom	0.7	0.7	0.8	0.8	...	-2.8	-2.8	-1.1	-2.2	...
Euro area	1.0	0.9	1.0	0.9	0.8 - 1.2	-2.0	-1.9	-0.6	-1.4	-1.0 - 0.0

Sources: IMF, *World Economic Outlook Update*, January 2009.
European Commission, *Interim Forecast*, January 2009, and *Economic Forecasts, Autumn 2008*, November 2008.
OECD, *Economic Outlook – Preliminary*, November 2008.
Consensus Economics, *Consensus Forecasts*, January 2009.
ECB, *Monthly Bulletin*, December 2008.

* Calculations based on 2007 purchasing power parities-ppp; for Consensus Economics: based on exchange rates for 2007.

** For China, the most recent available data are those from the European Commission's Autumn Forecasts, 3 November 2008.

impact of the international crisis on business activity and consumer and investor confidence. In the United States, the unemployment rate came to 7.2% in December, the highest rate since 1993, against 5% in December 2007. In the euro area, the unemployment rate at end-2007 (7.2%) had dropped to the lowest levels of the decade, remaining, however, high. As from the second quarter of 2008 though, it started to increase again and in December it came to 8.0%.

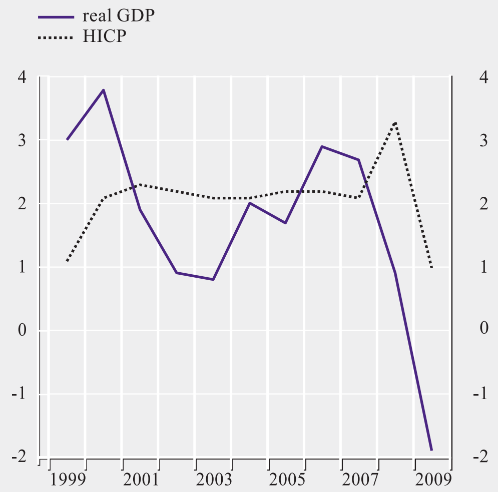
Besides, the International Labour Office[8] forecasts that the global unemployment rate will amount to 6.5% of the labour force in 2009 and —if economic conditions continue to deteriorate— could reach 7.1%, resulting in an increase of 30-50 million in the number of jobless compared with 2007 (when the slowdown of global growth had not yet begun). Furthermore, the number of the working poor[9] may increase by 200 million and reach 1.4 billion, i.e. 45% of the people employed worldwide.

The IMF forecasts that the **global GDP growth rate** will slow down considerably to 0.5% in 2009 from 3.4% in 2008 (see Table II.1), before it rebounds to 3% in 2010. Nevertheless, uncertainty is high. **The IMF deems that, in order for the recovery to be stable and the fiscal stimulus policies pursued to bear fruit, a crucial prerequisite is the restructuring of the financial sector internationally and the restoration of its functionality, so that credit flows return to normal. Advanced economies** will record the worst postwar performance and will experience recession in 2009 (GDP will be reduced by 2.0%, against an increase of 1.0% in 2008). In the United States, GDP is forecast to drop by 1.6% in 2009, mainly owing to the decline of private consumption and investment, and to increase by 1.6% in 2010. In Japan, the GDP growth rate is forecast to be strongly negative (-2.6%) in 2009 and slightly positive (0.6%) in 2010.

In the **euro area** (see Chart II.4), according to the European Commission's "interim" forecasts, the GDP growth rate will be negative (-1.9%) and recovery —as from the fourth quarter of the year— is forecast to be slow, leading to a slightly positive (0.4%) average GDP growth rate in 2010 (the IMF's forecasts are similar).[10] Only five euro area countries are forecast to record positive GDP growth rates: Greece and the four new member-countries, i.e. Cyprus, Malta, Slovakia and Slovenia. As concerns **the EU non-euro area countries**, the reduction of GDP in the United Kingdom is expected to be large (-2.8%), while the Baltic States will register strong negative rates.

Chart II.4 Euro area: real GDP and HICP (1999-2009)

(annual percentage changes)



Source: European Commission (Eurostat and DG ECFIN, *Interim Forecast,* January 2009).
2008: estimates, 2009: forecasts.

Developing economies seem to be less affected by the global crisis and will continue to enjoy relatively high economic growth rates in 2009

8 International Labour Office (ILO), *Global Employment Trends-January 2009*, 28 January 2009.
9 The ILO considers as "the working poor" those whose daily income from work is below $2 per family member ("poverty line").
10 It is noted that the Commission's forecasts have taken into account the favourable impact on economic activity of the fiscal measures taken since August 2008 to address the crisis. The Commission estimates that at an EU level such measures will limit the GDP decrease by about 0.75 percentage point in 2009.

(3.3%, against 6.3% in 2008), but clearly lower than in the period 2004-2007. The IMF forecasts that the **volume of the global trade of goods and services** will decrease by 2.8% in 2009 (2008: 4.1%), before it recovers to 3.2% in 2010.

Inflation is estimated to fall considerably in advanced economies in 2009, to 0.3% from 3.5% in 2008. The possibility of a protracted decline of the general level of prices in certain advanced economies constitutes another challenge for economic policy in 2009, although it is estimated that a generalised appearence of such a phenomenon is unlikely. In the euro area, in 2009 inflation is forecast to amount to 1.0% according to the European Commission's latest forecasts (19 January 2009), against 3.3% in 2008. In January it came to 1.1% (provisional estimates).

Box II.1

INITIATIVES TO ADDRESS THE GLOBAL FINANCIAL AND ECONOMIC CRISIS

In the last eighteen-month period, monetary authorities and international economic organisations have been mobilised at a national, European and international level to stabilise the global and the national financial systems and to mitigate the adverse impact of the financial crisis on economic activity. The major initiatives undertaken in recent months, a period during which the financial and economic crisis became more severe, are mentioned below.

INITIATIVES AT EUROPEAN LEVEL

At euro area and European Union level there was mobilisation at the early stages of the financial crisis, mainly by the provision of the required liquidity by the European Central Bank (see Chapter III.2) and other central banks, as well as later on, when it emerged that the situation was rapidly deteriorating, after the collapse of the Lehman Brothers investment bank in the United States in September 2008. The most important decisions at a political level were taken at informal summits of the euro area countries and the EU Member States, as well as at meetings of the European Council and the ECOFIN Council.

The extraordinary (and informal) summit of the euro area countries on 12 October 2008 in Paris adopted a *coordinated action plan* with a view to:

- securing adequate liquidity conditions in the financial sector,
- facilitating banks in raising funds, besides the provision of short-term liquidity by central banks, in order to ensure the smooth financing of the economy, and
- strengthening, under certain preconditions, the capital base of banks facing difficulties.

The plan also provided for (i) flexibility in the implementation of accounting rules in view of the extraordinary conditions prevailing in the financial markets, (ii) the broadening of cooperation between the European countries and (iii) the creation of a crisis management mechanism.

The European Council of the 15th and the 16th October 2008 embraced the coordinated action plan of the euro area countries and confirmed that all the necessary measures will be taken in order to ensure the stability of the financial system and the smooth financing of the economy, avoid bankruptcies and ensure the protection of savers' deposits. Furthermore, the European Council underscored that, apart from the financial sector, it is determined to take the necessary measures in support of growth and employment and called upon the Commission to formulate appropriate proposals until end-2008.

Indeed, the European Council, which convened on 11 and 12 December 2008 in Brussels, adopted a *European economic recovery plan*, on the basis of a European Commission proposal, worth €200 billion, i.e. an amount equivalent to about 1.5% of the European Union GDP (around 1.2% from national resources and 0.3% from Community resources). This plan constitutes the framework of the efforts embarked upon jointly by Member States and the EU to ensure cohesion and maximise the effectiveness of the intervention. Member States have already taken certain important measures, which correspond to their own situation and the varying room of manoeuvre across EU countries. The European Council pointed out that, due to the size of the crisis, a coordinated effort is required that will be based on the following guidelines:

- The support measures must be taken in time and have a direct effect, must be limited in terms of duration (temporary) and be "targeted", i.e. concern the economic branches and the social groups mostly affected by the crisis, as well as sectors of particular importance in the structure of the economy.

- These measures may take different forms, depending on the situation in each Member State, e.g. increase in public expenditure, a prudent reduction in the tax burden, reduction in social burdens, support of certain categories of enterprises or direct aid to households, particularly the most vulnerable ones.

- The measures will be accompanied by enhanced efforts for the implementation of structural reforms in the context of the Lisbon Strategy.

The European Council stressed that the revised Stability and Growth Pact remains the cornerstone of the EU fiscal framework and offers the elasticity required for the implementation of the recovery plan measures as a whole. The European Commission announced new guidelines for the implementation of competition rules in the cases of support to banking institutions.

The informal summit of the EU Member States on 7 November 2008 in Brussels formulated common principles for the reform of the *international financial system*, in view of the summit of the Group of the 20 major economies (G-20) in Washington. The common principles include the following:

- No financial institution or financial market should operate without adequate regulation and supervision.

- The new global financial system must be governed by transparency and control.

- Risks must be adequately evaluated in order to prevent crises.

- The IMF will play a pivotal role in a more effective "architecture" of the global financial system.

INITIATIVES AT A GLOBAL LEVEL

At a global level, the most important initiative for the management of the financial and economic crisis was the *summit of the G-20* (both advanced and emerging economies) on 15 November 2008 in Washington. The aim of the meeting, which was effected on a European initiative,[1] was to achieve a closer cooperation at a global level for the support of economic growth and the materialisation of the necessary reforms in the global financial system. According to the declaration of the G-20, the immediate steps for the achievement of these objectives, but also for coping with longer-term challenges are the following:

- continuation of strong efforts and the adoption of measures for the stabilisation of the global financial system,

- conduct of an appropriate monetary policy which will take into account domestic conditions, as well as employment of fiscal policy for direct support to domestic demand in a context of sound public finances,

- access of emerging and developing economies to financing and provision of adequate economic means to the IMF, the World Bank and other development supporting organisations, so that they can continue to contribute to the management of the crisis.

The common principles for the reform of the global financial system reflect the European positions formulated at the meeting of 7 November in Brussels and include the enhancement of transparency and the regulatory framework, so as to ensure that all financial markets are subject to rules and are adequately supervised, the strengthening of international cooperation between the supervisory authorities of such markets, as well as the reform of international financial organisations. The new financial architecture provides for a pivotal role of the IMF, as regards the timely detection of problems and the management of crises, in cooperation with the Financial Stability Forum, which will be enlarged to include emerging economies, too. The declaration of the G-20 underlines the commitment to a system of open global economy and includes an Action Plan with a short- and a medium-term horizon, so as to enable the implementation of the above principles. By 31 March 2009 specific measures must have been taken in top priority sectors.

MEASURES IN INDIVIDUAL ECONOMIES

Measures for the management of the crisis and the enhancement of the stability of the financial system and economic activity were also taken at a national level, both in the European Union and in other advanced, developing and emerging economies, while there is general alertness for the adoption of additional measures if need be. Naturally, the measures in each case were proportionate to the implications of the financial crisis for the individual economies.

In the *United States*, wherefrom the financial crisis started, the government and the Federal Reserve System took extensive measures to support the financial sector. These measures include loans, guarantees and capital injections to banks and other financial institutions – which in some cases effectively took the form of nationalisation. The measures to stimulate economic activity focused on the strengthening of the sectors of economy that were strongly affected by the crisis (e.g. car industry). It should also be noted that the new president of the United States submitted to the Parliament and the Senate for adoption a broad plan of public expenditure and tax reliefs for the strengthening of the American economy, amounting to about $820 billion or 5.8% of the

1 See European Council Conclusions of 11 and 12 December 2008.

annual GDP, for the period 2009-2010, while supplementary measures for the support of the financial system are being drawn up. In the individual countries of the *European Union* and the *euro area*, the measures taken – as well as those being elaborated – also reflect the different degree of financial sector exposure to external disturbances, but also the overall economic and fiscal situation of the corresponding countries. The measures for the strengthening of the financial sector in the *United Kingdom* were extensive, as it was ascertained that major financial institutions urgently needed an increase in their liquidity and their capital base, and even to be nationalised in certain cases. Generally, in the majority of the EU Member States the support of the financial sector took the form of strengthening of the capital base, provision of guarantees for raising borrowed funds (short- and medium-term) and provision of liquidity by the ECB and the other central banks. It should also be noted that in several cases the measures for the support of the financial sector are mainly of a pre-emptive character and are aimed at preventing the occurrence of possible difficulties in the future, as well as safeguarding the credibility and competitiveness of financial institutions and markets.[2] (The measures taken by Greece to increase the liquidity of the economy are analysed in Box VI.1.)

As mentioned above, an agreement was reached concerning the coordination of measures for the boosting of economic activity in the EU, so as to achieve the maximum possible result and mitigate the adverse impact of the crisis. Of the measures already announced per country, the following are indicatively mentioned for the three major EU economies:

• In September and November, *Germany* announced a programme of targeted measures for the strengthening of the economy, mainly through investment, which are part of the medium-term planning for the support of the dynamism and the resilience of the economy. The cost of these measures, for the period 2009-2010, will amount to €31 billion. In January 2009 a second programme for the strengthening of the economy was announced, amounting to about €50 billion euro, also for the two-year period 2009-2010.

• The programme for the support of the economy announced by *France* amounts to €26 billion, around 1.3% of GDP, and focuses on the strengthening of investment in infrastructures in the energy and transport sectors. The programme also provides for tax measures for the encouragement of investment, amounting to €11.5 billion.

• In the *United Kingdom,* the measures for the strengthening of the economy amount to 1.1% of GDP for the tax year 2009-2010 and include the temporary reduction of VAT rates from 17.5% to 15% and the increase in public expenditure for investment and other social expenditure.

• In *Japan*, the amount of the programme for the strengthening of the economy, through an increase of public expenditure and tax measures, aimed at addressing the consequences of the crisis will reach about 2% of GDP.

• Finally, *China*, the country with the highest growth rate among the major economies today, is also pursuing a strongly expansionary economic policy, both monetary and fiscal. Indeed, on 9 November 2008, the Chinese government announced an economic activity support programme

2 For the measures for support to financial institutions in the euro area, see "Rescue packages of euro-area Member States" in *Quarterly Report on the Euro Area*, IV 2008, DG ECFIN, European Commission, 19 December 2008. More recent measures for support to financial institutions, e.g. in the United Kingdom in January 2009, are not included in this text.

amounting to 4 trillion yuan (€450-460 billion), mainly for investment in infrastructures in the next two years. The total amount corresponds to about 15% of the annual GDP of China. China is conducting this policy first and foremost to prevent the deterioration of its own economy (the growth rate of China's GDP fell to 6.8% in the fourth quarter of 2008). However, this policy is beneficial also for the economies trading with China.

1.2 COMMODITY PRICES IN THE WORLD MARKETS

For the sixth consecutive year, the **international price of crude oil** (Brent blend) rose steeply in the first half of 2008, reaching new historical highs (in nominal and inflation-adjusted terms) in mid-2008.[11] It then fell sharply in the second half of the year, as the world economic outlook worsened strongly and the US dollar started appreciating. In December, the average price of oil dropped to $43.2 (€32.1) per barrel. The *average annual* price of crude oil in US dollar terms eventually rose by 33.9% in 2008 (against 9.0% in 2007 and 19.7% in 2006), while its cumulative increase against 2002 was 300%. In euro terms, the average annual price of crude oil, which had remained almost unchanged in 2007 (€52.8) due to the considerable appreciation of the euro vis-à-vis the US dollar, rose to €65.9 per barrel in 2008 (+24.8%).[12]

The **world prices of non-energy commodities**, in US dollars, dropped rapidly in the second half of 2008, but their average annual level rose considerably (2008: 9.0%, 2007: 17.3%[13]), particularly as regards agricultural products and food. The higher prices of food resulted from the high and rising world demand, especially by China and India (where rising incomes change the nutrition preferences of households), the robust demand for agricultural commodities for the production of biofuels and the imposition of restrictions on exports from major producer countries. These higher prices led to a considerable increase in inflation, especially in developing economies (where these items weigh more on family budgets). In euro terms, the prices of non-energy commodities, which were increasing at an annual rate of 7.5% in August, recorded a 17.7% annual rate of decrease in December.[14]

2 HEIGHTENED TURMOIL IN WORLD FINANCIAL MARKETS

2.1 INTERVENTIONS TO TACKLE THE CONSEQUENCES OF THE FINANCIAL TURMOIL

The first shocks from the financial market turmoil were already felt at end-February and in March 2007. However, the turmoil intensified after the summer of 2007.

A key event that fed the financial market turmoil (already before mid-September 2008) was the near-collapse[15] of Bear Stearns in the USA in mid-March 2008. In the first nine months of 2008, the weaker financials of government-sponsored enterprises[16] and bond insurers in the USA also fed the tension in financial markets.

On 15 September 2008, because of the default of a large investment bank, Lehman Brothers, the tension reached new heights and the financial turmoil expanded rapidly, also shaking up many emerging economies.

For this reason, in the second half of September 2008, governments, central banks and supervisors judged it was necessary to inter-

11 On 3 July 2008, the price of WTI crude oil peaked at $145.3 per barrel, while that of the UK Brent reached $145 per barrel.
12 ECB, *Monthly Bulletin*, January 2009.
13 Ibid.
14 Ibid.
15 The collapse was averted with the purchase of Bear Stearns by JP Morgan Chase on 17 March 2008.
16 The most important ones are Fannie Mae and Freddie Mac, which buy and securitise mortgage loans and guarantee the value of the securities created on the basis of such loans.

vene in order to save financial enterprises in the USA, the European Union and other countries.[17] Under the threat of collapse, there were many mergers and acquisitions of credit institutions, together with other fundamental changes in the banking system of many countries.[18]

In **the euro area**, apart from the provision of facilities on an ad hoc basis to credit institutions facing serious problems, the consequences of the financial turmoil were initially dealt with through the, unilateral in some countries, support of the national deposit guarantee schemes. However, it was soon to be found that, in order to guarantee the financing flows through the financial system to businesses and households and to secure financial stability without disturbing the operation of the single market, a single approach needed to be adopted by all member countries that would cover the financial system of the euro area as a whole.

Thus, on 12 October 2008, the Heads of State or Government of the euro area countries adopted a "concerted European action plan" to support the financial system.[19] According to the plan, the governments would facilitate the medium-term funding of banks, notably through the purchase of high quality assets or through swaps of government securities, and guarantee new bank senior debt issuance.[20] The **Eurosystem** defined the relevant technical modalities.

The adoption of the concerted action plan in the euro area and the virtually simultaneous[21] adoption of similar policy measures in the **United States** helped the partial easing of tensions in the interbank euro and dollar market after the first ten days of October.[22] In the securities market, the spread between bank and government bonds[23] narrowed. Particularly in the United States, as well as in individual banks in the euro area, the spreads of the credit default swaps (CDS)[24] on bank bonds narrowed, while the spreads of similar swaps on government bonds (in the United States and euro area countries) widened, because of the (expected) fiscal cost entailed by the measures supporting the banking system.

As regards the **euro area**, it has been noted that the beneficial impact of the concerted plan was not exhausted in its announcement but goes on, as the plan is further elaborated and implemented. In greater detail, the various measures needed some time in order to be specified at a national level,[25] to be examined and approved by the European Commission, to be implemented in the member countries and to be comprehended and taken into account by banks in the formulation of their business strategies.

17 After September 2008, the share capital of many banks in the EU and the USA was supported by governments in the context of the plans to back the banking system (see below). However, it should be noted that the US government and the Federal Reserve System considered it necessary to enact, on 23 November 2008, additional measures to support Citigroup. In greater detail, the US Treasury increased its share in the bank's capital and pledged to cover any potential loss – over a certain threshold – on a part of the bank's assets which includes items related to mortgage loans. Similarly, on 16 January 2009, the US Treasury pledged to cover any potential big loss on a part of the assets of the Bank of America that initially belonged to Merrill Lynch, which had been acquired by the Bank of America on 15 September 2008. Furthermore, the US Treasury supported further the bank's capital, through the acquisition of preference shares.

18 See Bank of Greece, *Monetary Policy – Interim Report 2008,* October 2008, Box II.1.

19 The principles outlined in the plan were later endorsed by the European Council on 15-16 October 2008.

20 It should be noted that the American Troubled Assets Relief Program (TARP), which had been drafted in September 2008 by the US Treasury, was later transformed into a programme aimed at supporting the share capital of banks and providing guarantees for securities issued by banks, as envisaged in the Emergency Economic Stabilization Act published on 14 October 2008. Finally, on 12 November 2008, it was announced that the funds approved by the Congress to finance TARP (amounting to $700 billion) would: (a) support the capital base of non-bank financial corporations in the USA, (b) finance, as from February 2009, the acquisition of asset-backed securities by individuals and small enterprises and (c) facilitate the renegotiation of the terms of mortgage loans.

21 The measures were officially specified on 14 October 2008, but had already been anticipated by the markets, given that the Congress had approved, already from 3 October, the Act that described the general framework for the implementation of these measures. Furthermore, on 10 October, the Finance Ministers and central bank governors of the G7 countries had issued a communiqué which gave the broad outlines of the measures aimed at supporting the banking system, which were finally adopted in the euro area and the USA.

22 Developments in the euro area money market are examined in Chapter III.2. Developments in the US money market are examined below.

23 With AAA credit rating.

24 In the context of a credit default swap (CDS), counterparty A undertakes the obligation, usually for a period of 5 years, to remunerate counterparty B in the event the reference entity (company or state) fails to redeem a specific credit instrument (e.g. bonds). The remuneration covers a notional amount of the bonds, which is defined in the contract. In exchange, counterparty B pays a premium to A, which is expressed as a percentage (spread in basis points) of the notional amount.

25 See Deutsche Bundesbank, *Monthly Report*, November 2008.

The implementation of the measures aimed at supporting banks will contribute to the further easing of tensions in the interbank market, *which constitute one of the main manifestations of the turmoil. On the other side, the deceleration of economic growth worldwide will bring about new doubtful debts and losses for credit institutions, thereby maintaining the nervousness in financial markets. It is indeed possible that two-way negative interactions between the financial sector and the real economy will occur.*

2.2 THE INTENSIFICATION OF THE FINANCIAL TURMOIL IN THE MAIN FINANCIAL MARKETS

Foreign exchange markets

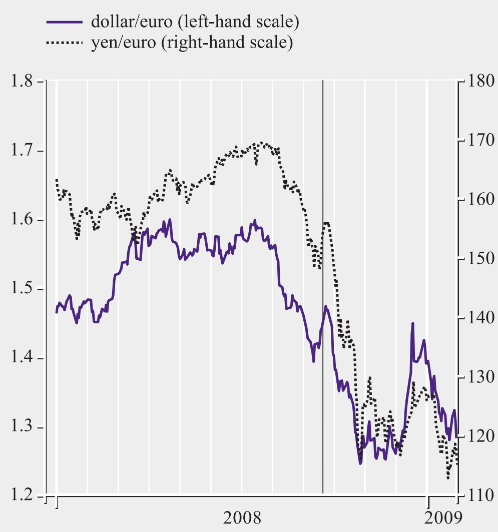
From mid-September 2008, exchange rate volatility regarding the major currencies rose considerably, as did implied volatility, i.e. the uncertainty as for the future course of exchange rates.

A widely used investment strategy includes the sale in the foreign exchange market of a loan product in Japanese yen (a currency with relatively low interest rates) in order to finance investment in currencies with relatively high interest rates.[26] As mentioned above, the intensification of the financial turmoil fuelled expectations that exchange rates would soon change significantly, including the bilateral exchange rates of the Japanese yen. It was indeed expected that these changes would be towards the appreciation of the Japanese currency. As a result, large-scale liquidations of investment in currencies with high interest rates took place, as investors opted to buy Japanese yen in order to repay the initial loan.

Furthermore, investors in the USA liquidated investments abroad (most of which were not expressed in US dollars) because their access to financing had become more difficult and they wanted to reduce their exposure to foreign exchange – and generally financial – risk. The product of the liquidation was repatriated to the USA. Moreover, it seems that many euro area banks bought large amounts of US

Chart II.5 Exchange rate of the euro against the US dollar and the Japanese yen (January 2008-January 2009)

(daily data)



Source: ECB.
* The vertical line indicates the date of 15 September 2008, when the bankruptcy of Lehman Brothers was announced.

dollars from the foreign exchange markets, as the supply of interbank loans in US dollars dropped significantly in the world money markets, while the US dollar liquidity-providing operations had not yet begun.[27]

Thus, soon after the default of Lehman Brothers and for a period of a month, the exchange rate of the euro started depreciating against the Japanese yen and the US dollar, to fall by 25% and 15% respectively at end-October 2008[28] (see Chart II.5). As regards the evolution of the bilat-

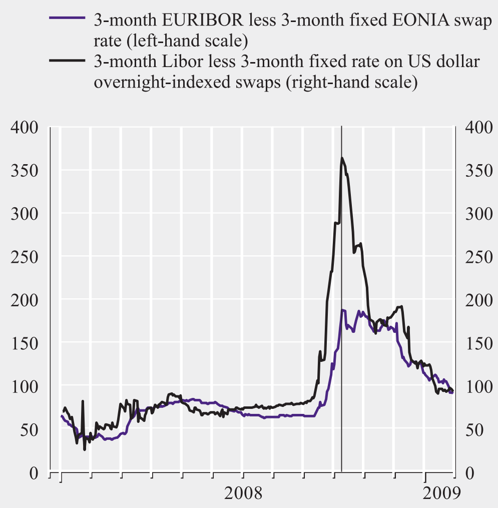
26 This investment strategy, known as "carry-trade", is in principle profitable due to the positive interest rate differential ("carry") between the currency used for the investment and the currency used for the financing. However, it also bears a high risk of loss, if the currency used for the financing appreciates against the currency used for the investment.

27 The fixed-rate liquidity-providing operations in US dollars, conducted by the Eurosystem, were introduced on 20 October 2008. See also Chapter III.2.

28 This depreciation of the euro is calculated between 23 September and 27 October 2008. On 23 September, the temporary appreciation of the euro against the Japanese yen and the US dollar, which had started immediately after the default of Lehman Brothers on 15 September, came to an end. On 27 October the euro registered its lowest value against the Japanese yen and the US dollar for the whole of 2008. Thereafter, the exchange rate of the euro stopped depreciating vis-à-vis the yen and began to fluctuate against the Japanese currency, while against the US dollar it appreciated up to mid-December. Since then, the euro is depreciating against both currencies.

Chart II.6 Spread between the 3-month Euribor and the 3-month fixed rate on euro overnight-indexed swaps and between the 3-month Libor and the 3-month fixed rate on US dollar overnight-indexed swaps
(January 2008-January 2009)

(basis points, daily data)



Sources: ECB, Bloomberg.
The vertical line indicates the date of 10 October 2008, when interest rate spreads reached their highest levels in both the euro area and the USA.

eral exchange rates of the euro against the currencies of the European countries that were affected by the financial crisis, it is worth mentioning the depreciation of the currencies of Iceland (12%), Hungary (9%), Poland (18%), Romania (7%) and Sweden (11%) in the last quarter of 2008. The Danish krone, which participates in ERM II, went under pressure and the central bank of the country raised its intervention rate twice in October 2008, despite the global decrease in interest rates. This development is a reminder of the protection afforded to small open economies by the participation in the euro area, in the case of, mainly, external crises.

Money markets[29]

In mid-September 2008, the world interbank USD market (as well as the interbank euro market) witnessed a shrinking of transactions and a sharp increase in Libor rates on interbank (uncollateralised) loans, together with an increase in the spreads of these rates over the fixed rates on overnight swaps with a maturity equal to that of interbank loans (Overnight Index Swap – OIS, see Chart II.6). These spreads are a measure of tensions in the money market (see Chapter III.2). It should be noted that wide liquidations of money market shares/units took place in the USA, because certain money market mutual funds suffered losses from investment in Lehman Brothers' bonds.[30] For this reason, the money market mutual funds switched away also from investment in bank securities, thus intensifying the lack of liquidity in the interbank USD market. After the first days of October 2008, when these problems were dealt with[31] and measures were planned to support the banking system, interbank rates and the aforementioned spreads started declining.[32] As in the euro area, where the EONIA rate fell below the fixed rate on the main refinancing operations conducted by the Eurosystem in the last quarter of 2008 and in January 2009, the provision of ample liquidity by the Federal Reserve System[33] contributed to

29 Developments in the euro area money market are examined in Chapter III.2.

30 The most significant example being that of the Reserve Primary Fund.

31 These problems were dealt with through (a) the (temporary) provision of guarantees by the US government for investments in money market mutual fund units (this measure was enacted on 19 September 2008) and (b) the provision of financing by the Federal Reserve for the acquisition by banks and various special purpose vehicles of (i) asset-backed commercial paper, (ii) other short-term commercial paper issued by financial corporations and (iii) certificates of deposit from the portfolios of mutual funds. More specifically, the Federal Reserve introduced the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) on 19 September 2008 and the Money Market Investor Funding Facility (MMIFF) on 21 October 2008.

32 See Federal Reserve System, Minutes of the Federal Open Market Committee, 28-29 October 2008.

33 The provision of ample liquidity was achieved through: (a) ad hoc open market operations, (b) the Term Auction Facility – TAF, (c) the Primary Dealer Credit Facility – PDCF, (d) the "discount window" facility, and (e) facilities introduced to finance the purchase of securities included in the portfolios of mutual funds (see footnote 31). Furthermore, the provision of liquidity was achieved through the Commercial Paper Funding Facility – CPFF, which was introduced on 7 October 2008. It should be noted that, as large amounts of short-term commercial paper are issued by banks, this facility directly helps in the provision of additional liquidity to the banking system. Furthermore, with the purchase of securities from non-financial corporations, the Federal Reserve participates directly in the financing of the US real economy. Finally, the supply of liquidity was also realised through the purchase of commercial paper issued by government-sponsored enterprises, such as Fannie Mae and Freddie Mac, as well as of asset-backed securities deriving from mortgage loans guaranteed by these entities. These purchases by the Federal Reserve started after 25 November 2008. All these measures led to an increase in the Federal Reserve assets after mid-September 2008, just as happened with the Eurosystem (see Chapter III.2).

the drop of the effective federal funds rate to levels below the Federal Reserve's target rate. Besides, the latter had been lowered twice in October 2008, by 50 basis points each time. Finally, on 16 December 2008, the Federal Reserve announced that it would aim to keep the federal funds rate between 0% and 0.25%

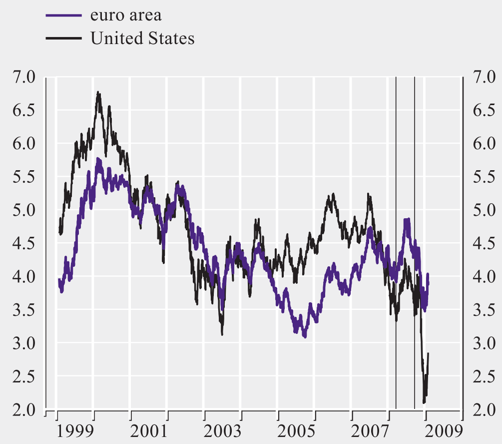
Bond markets

After strong fluctuations during the second half of September and in October 2008, long-term bond yields followed a downward course in November and December. As a result, they reached historical lows as their cumulative decrease from mid-September until the end of the year was close to 1% in the euro area and 1.5% in the USA. In January 2009 long-term bond yields increased (see Chart II.7). The decrease up to the end of the year can be attributed to investors' estimates that the risks entailed by investment in financial instruments other than government bonds had increased considerably, as well as to their increased preference for liquidity. Furthermore, the expected real interest rate[34] decreased due to expectations that the economic slowdown would eventually be much larger than what was expected before the intensification of the financial turmoil. Given that the decrease in commodity prices was already considerable in September 2008, inflation expectations also must have decreased.[35] On the other side, upward pressures on long-term interest rates must be exerted by expectations for an increase in the supply of government paper in order to finance the support to the banking sector or the fiscal expansion in many euro area countries and the USA during the last quarter of 2008 and the beginning of 2009.

In particular in the euro area, the spreads between the yields on long-term German government bonds (which are the lowest in the euro area) and the corresponding yields in other member-countries increased further. This had been also observed, to a lesser extent, in 2007 and in the first eight months of 2008 (excluding the period around mid-March 2008, with the near-failure of Bear Stearns in the USA) and is attributable not only to investors' increased awareness of the fact that the budgetary position differs from one country to another. For instance, while the budgetary outlook of the Netherlands is better than that of Germany, the yield spreads between the respective government bonds are positive and increased after mid-September 2008. The widening of these spreads is also due, to a large extent, to the fact that the sovereign bonds of

Chart II.7 Yields on 10-year euro area and US government bonds (January 1999-January 2009)

(yields in percentages per annum, daily data)



Source: ECB.
The first vertical line from left to right indicates the day (13 March 2008) before the receipt by Bear Stearns of Federal Reserve funding (which was eventually followed by the company's acquisition by JP Morgan on 17 March 2008) and the other the date (15 September 2008) when the bankruptcy of Lehman Brothers was announced.

34 It is rather strange that in the euro area and especially in the United States and other advanced economies real interest rates, as measured by the index-linked government bond yields, rose between September and November 2008. Naturally this development does not reflect an improved economic outlook but (i) shifts of funds from indexed-linked government bonds to fixed-nominal-value government bonds, given that index-linked government bonds are less liquid compared to the ordinary government paper, (ii) liquidations of index-linked bonds by investment funds that aim to repay their obligations (deleveraging), in combination with inadequate demand for index-linked bonds, given the lower inflation expectations; see "Recent increases in real yields and their implications for the analysis of inflation expectations", ECB, *Monthly Bulletin*, November 2008, Box 3, pp. 37-38.

35 Calculated by subtracting the yields on index-linked bonds from the yields on fixed-nominal-value bonds with a comparable maturity, the expected inflation demonstrates a considerable decrease in the September-November 2008 period. To some extent, this reflects the fact that real interest rates are underestimated due to the technical factors explained in footnote 34.

other euro area countries are characterised by a lower degree of liquidity against the German bonds and thus investors refrain from purchasing them in periods of a higher preference for liquidity.[36]

Corporate bond spreads rose steeply in the euro area and the USA after mid-September 2008,[37] reaching historically high levels. This development, apart from the problems that are specific to financial corporations,[38] mainly reflects the generally higher risk of default, due to the slowing of economic growth and the limited availability of credit, hence the limited possibilities of debt refinancing.

Finally, transactions decreased or even ceased in many securities markets, especially those of structured bonds and other asset-backed securities. It is indicative that, according to the Bank Lending Survey regularly conducted by the Eurosystem, the major credit institutions reported that in the last quarter of 2008 it became more difficult to raise funds through either loan issuance or loan securitisation.

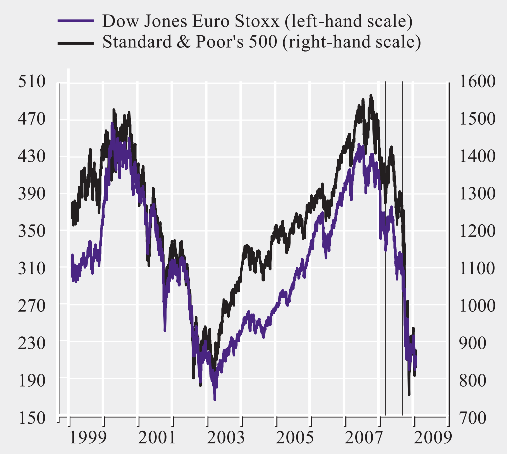
Stock markets

A considerably faster drop of share prices was observed in the euro area and the USA; between the beginning of September 2008[39] and the third week of October, the Dow Jones EURO STOXX 500 dropped by about 38% and the Standard and Poor's by about 42% (see Chart II.8). Share prices of the euro area financial corporations dropped by 50%. The daily volatility of share prices was also considerable.[40] The implied volatility, which measures uncertainty about the future course of share prices, peaked at levels not seen since the 1987 stock market turmoil.

The evolution of share prices can be attributed to the rise in equity risk premia, due to estimates that the risk entailed by this type of investment has increased.[41] Furthermore, the downward revision of expectations regarding corporate profitability (in the short and the long term) had a negative impact on share prices. This revision is mainly due to estimates on the effects of the financial turmoil on economic activity.

Chart II.8 Stock market indices in the euro area and the United States (January 1999-January 2009)

(daily data)



Source: ECB.
The first vertical line from the left to the right indicates the day (13 March 2008) before the receipt by Bear Stearns of Federal Reserve funding (which was eventually followed by the company's acquisition by JP Morgan on 17 March 2008) and the other the date (15 September 2008) when the bankruptcy of Lehman Brothers was announced.

3 SOUTHEASTERN EUROPEAN ECONOMIES[42]

3.1 MACROECONOMIC DEVELOPMENTS

In the period 2000-2008 Southeastern European economies recorded high growth rates, at an annual average of 6%. In the first half of this period, the growth process was mainly

36 See "Recent widening in euro area sovereign bond yield spreads", ECB, *Monthly Bulletin*, November 2008, Box 2, pp. 31-35.
37 In all corporate bond credit rating classes (AAA, AA, A and BBB).
38 These problems are reflected in the larger increase in corporate bond spreads in the financial sector compared with the respective increase regarding non-financial corporations.
39 It was when prices started following again a downward course, after the moderate increase in the period from mid-July to the end of August 2008.
40 See "Abnormal volatility in global stock markets", ECB, *Monthly Bulletin,* November 2008, Box 4, pp. 42-44.
41 This is also suggested by the increase in stock market implied volatility.
42 The analysis for Southeastern European economies concerns Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, the Former Yugoslavian 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 (estimate)	2009 (forecast)
Albania	5.5	6.0	6.1	4.0
Bosnia-Herzegovina	6.7	6.8	6.0	1.5
Bulgaria	6.3	6.2	6.4	1.8
Croatia	4.8	5.6	2.5	0.0
FYROM	3.7	5.1	5.3	3.0
Montenegro	8.6	10.3	7.0	3.0
Romania	7.9	6.0	7.8	1.8
Serbia	5.5	7.5	6.5	2.0
Turkey	6.9	4.6	1.5	-3.0

Sources: European Bank for Reconstruction and Development, IMF, World Economic Outlook Database, and European Commission.

Table II.3 Inflation in Southeastern European countries

(percentages)

Country	2006	2007	2008 (estimate)	2009 (forecast)
Albania	2.4	2.9	4.0	3.3
Bosnia-Herzegovina	6.1	4.9	7.5	4.5
Bulgaria	7.3	8.4	12.6	7.4
Croatia	3.2	2.9	6.5	3.8
FYROM	3.2	2.3	8.4	3.8
Montenegro	3.0	4.2	8.0	5.5
Romania	6.9	4.8	7.2	5.9
Serbia	12.7	6.7	10.5	7.1
Turkey	9.6	8.8	10.3	5.5

Source: European Bank for Reconstruction and Development.

driven by supply, specifically the reintegration of idle manpower into the production process and the increase in productivity that accompanied structural reforms. By contrast, the high growth rates in the past few years were mainly due to the rapid increase in domestic consumer and investment demand and, to a lesser extent, to the rise in exports. Increased domestic demand was underpinned by fast credit expansion and significant foreign capital net inflows.

Despite the adverse international economic environment, the countries of the region maintained strong growth rates on average **in the course of 2008**, mainly because domestic demand continued to grow at high rates in the first half of the year,[43] boosted by the increase in real wages and the high rate of credit expan-

43 Except Croatia and Turkey, the growth rates of which, especially Turkey's, declined in the second quarter of 2008.

Table II.4 General government balance in Southeastern European countries

(annual percentage changes)

Country	2006	2007	2008 (estimate)	2009 (forecast)
Albania	-3.3	-3.4	-5.2	-
Bosnia-Herzegovina	2.6	1.3	-2.3	-
Bulgaria	3.0	3.4	3.7	-
Croatia	-3.0	-2.3	-2.0	-
FYROM	-0.3	0.6	-1.5	-
Montenegro	4.2	6.3	0.9	-
Romania	-2.2	-2.5	-3.3	-3.7
Serbia	-2.6	-2.7	-2.5	-
Turkey	-0.1	-1.2	-1.3	-2.5

Sources: European Bank for Reconstruction and Development and European Commission.

sion. In the second half, however, GDP growth rates declined, affected by the shocks in world economy. **In 2009 it is anticipated that the negative international economic conjuncture will have a more obvious impact on these countries, causing a substantial slowdown in economic growth** (see Table II.2). According to the latest European Commission forecasts (19 January 2009), both in Bulgaria and Romania (EU Member States) the growth rate will slow down to 1.8% this year, from 6.4% and 7.8% in 2008, respectively. Moreover, according to the revised forecasts of the European Bank for Reconstruction and Development (27 January 2009), in the Southeastern European countries (excluding Turkey) the average growth rate will decelerate to 1.5% in 2009, from 7.3% in 2008, while it will *decrease* by 3% in Turkey, having increased by 1.5% in 2008.

The period between the second half of 2007 and August 2008 was characterised by renewed inflationary pressures, due, *inter alia*, to the fast growth of wages and unit labour costs, the increase in the prices of oil and other commodities in the world market and the continuing fast credit expansion. The average annual inflation in 2008 was over 6% in most countries of the region (except Albania), while in Bulgaria, Serbia and Turkey it reached two-digit levels (see Table II.3), despite the decline in the prices of oil and other commodities in the world market after end-August. **Inflation is expected to fall back in 2009 in all the countries of the region, due to the decline in inflation expectations and the further weakening of economic activity.**

At the current conjuncture, a considerable potential source of macroeconomic problems in the Southeastern European countries is mainly the structure of their **balance of payments**. Fiscal constraints put limits to the ability of governments to implement programmes in order to deal with the effects of the international crisis, although the fiscal deficits of these countries (except perhaps Albania) are not sizeable (see Table II.4) and their public debt is not very high.

A common feature of all the economies of the region is the high current account deficits (see Table II.5), which increased further in 2008, making these economies even more vulnerable to global economic shocks. The widening of current account deficits was fuelled by the high (until recently) growth rate of credit and domestic demand and the decline in price competitiveness (as reflected in the appreciation of the real exchange rate). However, it is antici-

Table II.5 Current account balance as a percentage of GDP of Southeastern European countries

Country	2006	2007	2008 (estimate)	2009 (forecast)
Albania	-5.6	-9.2	-10.5	-7.1
Bosnia-Herzegovina	-8.4	-12.7	-15.8	-13.5
Bulgaria	-15.6	-21.4	-24.4	-21.5
Croatia	-7.9	-8.6	-10.1	-10.2
FYROM	-0.9	-3.0	-14.0	-13.8
Montenegro	-24.7	-39.6	-39.6	-36.8
Romania	-10.4	-14.0	-13.8	-13.3
Serbia	-10.0	-15.9	-18.6	-19.3
Turkey	-6.0	-5.7	-6.5	-6.7

Sources: IMF and World Economic Outlook Database.

pated that the decline in domestic demand in 2009 will reduce somewhat the size of external imbalances.

3.2 THE EFFECTS OF THE INTERNATIONAL FINANCIAL CRISIS

The international financial crisis has already affected, albeit to a relatively small extent, the economies of the Southeastern European countries. **Increasing signs of prolongation of the crisis cause serious risks of "abrupt landing" of these economies, with possible effects on their financial stability.** These risks mainly stem from the significant deterioration of conditions in international financial markets, entailing tighter terms of external financing, as well as from the considerable slowdown in the growth rate in EU countries and worldwide. Specifically, these risks are associated, to a large extent, with the following factors:

- The current account deficits and the external debt in SE European countries are growing, entailing increased requirements for external financing. In most countries, net FDI inflows, despite their size, are not sufficient to finance the large current account deficits. In addition, the anticipated decline in capital inflows, due to the crisis, will heighten the problem of financing, raising questions about the sustainability of the deficits.

- In some countries, the short-term external debt is also fairly high (especially in Serbia), accentuating the problem of external financing. Another common feature of these countries is that a significant part of the external debt relates to the private sector. The private external debt is particularly high in Bulgaria and Romania and — to a lesser extent — in Turkey and Serbia. Specifically, the business sector in these countries is burdened with the largest part of the external debt, thereby being more vulnerable to exchange rate changes.

- Credit risk has increased due to the high rates of credit expansion. A more general problem of the banking system of emerging economies is the fact that the increase in bank credit tends to be combined with reduced credit risk control and, therefore, affects negatively the quality of bank portfolios. In addition, a large part of bank credit to the private sector in these countries is denominated in foreign currency, thereby creating significant foreign exchange risk for debtors and, in turn, further accentuating banks' credit risk. Indeed, bank credit in foreign currency as a percentage of total credit to the private sector exceeds 50% in Bulgaria, Croatia and Romania and stands at 45% in Serbia.

The effects of the international financial crisis may not have been very serious in 2008 for the real economy of the Southeastern European countries, **but the declining trend of most financial indicators in these countries is an ominous sign of the course of their economies.** Specifically, since the last upsurge of the crisis, most countries' currencies (except the Bulgarian lev, which is under currency board regime, FYROM's dinar, which is under a de facto fixed exchange rate, and the Albanian lek) have depreciated significantly vis-à-vis the euro.[44] In the same period, stock prices in the region's stock markets dropped significantly. At the same time, market concerns about current account deficits and the ability to refinance the external debt have led to increased credit risk premia (as reflected in credit default swaps—CDS) for these countries.

44 Specifically, from 12 September 2008, i.e. one day before Lehman Brothers filed for bankruptcy, until the end of 2008, the Turkish lira, the Serbian dinar, the Romanian lei and, to a lesser extent, the Croatian kuna depreciated vis-à-vis the euro by 21.5%, 17.6%, 12.1% and 3.4%, respectively.

III THE SINGLE MONETARY POLICY AND THE EUROSYSTEM'S INTERVENTIONS IN THE MONEY MARKET

1 MONETARY POLICY DECISIONS OF THE GOVERNING COUNCIL OF THE ECB[1]

The period of progressive withdrawal of monetary accommodation, which had started in December 2005, lasted until the third quarter of 2008.[2] From October 2008 onwards, encouraged by progressive signs of abating inflationary pressures, the Governing Council of the ECB signs of abating inflationary pressures lowered its interest rate on the main refinancing operations by a cumulative 225 basis points. Thus, this rate[3] has stood at 2% since the second half of January 2009 (see Table III.1 and Chart III.1).

1 The discussion in this chapter is based on the introductory statements of the President of the ECB in the press conference following the first Governing Council meeting in each month – in which monetary policy is discussed – in 2008 and on 15 January and 5 February 2009. Account has also been taken of the announcement of 8 October 2008 on the coordinated reduction in policy rates jointly with other major central banks.
2 During that period, the key interest rates were raised on nine occasions by 25 basis points each time.
3 In the period before the recent varycation of the financial turmoil, with the exception of January 1999, the Eurosystem used to vary the standing facility rates by as much as the rate on the main refinancing operations (whether the latter was specified as a fixed or a minimum bid rate). By contrast, in the last quarter of 2008 the marginal lending facility rate was lowered by 225 basis points overall and the deposit facility rate by 125 basis points, resulting in a temporary narrowing of the interest rate corridor from 200 to 100 basis points. With effect from 21 January 2009, the deposit facility rate was lowered by 100 basis points to 1%, while the marginal lending facility rate remained at 3%, thereby restoring the width of the corridor to 200 basis points (see also Section 2 of this chapter).

Table III.1 Changes in key ECB interest rates

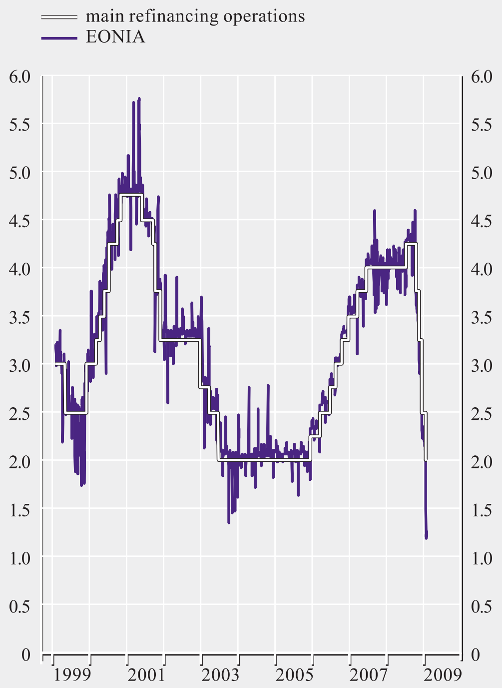
(percentages per annum)

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

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.

Chart III.1 Interest rate on the Eurosystem's main refinancing operations and the euro overnight index average (EONIA)
(January 1999-January 2009)

(percentages per annum, daily data)



Source: ECB.

The Governing Council of the ECB determines the levels of key interest rates with a view to achieving the Eurosystem's primary objective of **price stability in the euro area over the medium term**. During 2008 and in January and February 2009, the Governing Council continued to underline that, in pursuing this primary objective, it sought to keep medium and long-term inflation expectations firmly anchored at levels consistent with price stability. Price stability is defined in the context of the Eurosystem's monetary policy strategy as inflation rates of below, but close to, 2% over the medium term.

Price stability is the best contribution monetary policy can make to sustainable economic growth, given that it fosters an efficient allocation of resources through the market mechanism, safeguards the purchasing power of incomes and savings and keeps medium- and long-term interest rates at low levels (by minimising their inflation risk premium component). Overall, the maintenance of price stability creates favourable conditions for economic growth and job creation and promotes financial stability.

In the first half of 2008, when inflation stood at high levels, the Governing Council of the ECB recognised the existence of significant risks to price stability over the medium term and therefore raised key interest rates by 25 basis points in early July 2008. However, in mid-July the prices of oil and other commodities (**e.g. food, basic** metals) began to decline; this decline continued into the following months and reached a significant extent, which could not have been anticipated beforehand. Meanwhile, economic activity in the euro area was weakening. Nevertheless, in August and early September 2008 upside risks to price stability over the medium term could still be discerned.

In October 2008, the Governing Council of the ECB took the view that the intensification of the international financial turmoil since mid-September and its transmition to an increasing number of countries and markets had led to significantly heightened uncertainty. These conditions were likely to dampen aggregate demand for a protracted period of time, thereby helping to contain inflationary pressures. The ongoing reduction of commodity prices also contributed to weakening inflationary pressures, while there were growing signs of a further significant slowdown of economic activity in the euro area. Certain indicators of inflation expectations (in particular those derived from inflation-linked bond yields[4] and inflation swaps) recorded a substantial decline. Moreover, inflation, which had been on a downward path since August 2008, kept falling. At the same time, M3 growth con-

4 However, the sell-off of inflation-linked bonds in the context of the intensification of the financial turmoil has impaired the reliability of implied forward break-even inflation rates (e.g. five-year forward inflation five years ahead, i.e. in the period 2013-2018) as indicators of market participants' medium to long-term inflation expectations. See ECB, *Monthly Bulletin*, November 2008, Box 3, p. 37.

tinued to weaken leading to a slowdown in the "underlying" pace of monetary expansion[5] – with the growth of credit aggregates (i.e. loans to enterprises and loans to households) also showing further signs of moderation.

Taking into consideration the information available in the context of its regular economic and monetary analysis, the Governing Council of the ECB successively lowered the interest rate on the main refinancing operations by 50 basis points in October (in a concerted move with the Federal Reserve System and four other central banks of developed countries[6]), by 50 basis points in November, by 75 basis points in December 2008 and by 50 basis points in January 2009 (see Table III.1 and Chart III.1).

Specifically, the **economic analysis** of the Governing Council of the ECB indicated that the growth rate of euro area GDP, after having stood at high levels in the first quarter of 2008, turned negative in the subsequent two quarters, while there is evidence of a further decline in the fourth quarter of 2008. The significant deceleration of economic activity in the euro area is attributable to the impact of the intensification of the financial turmoil.

The Governing Council of the ECB has underlined that it is crucial that all parties concerned make their contribution to lay sound foundations for a sustainable recovery in the euro area in the future.[7] In the view of the Governing Council, economic activity will be supported by the rise in real disposable income as a result of falling commodity prices, and by measures to boost the banking system and – in Member States where room for manoeuvre exists according to the Stability and Growth Pact – other fiscal stimulus measures. The Governing Council of the ECB pointed out that, in order to preserve and enhance confidence and achieve economic recovery as early as possible, it is of the utmost importance to maintain discipline and a medium-term perspective in macroeconomic policy-making, pursuing a stability-oriented and sustainable approach. The significant policy measures being implemented by governments to deal with the financial turmoil should help to ensure trust in the financial system and to ease constraints which seem to have been imposed on credit supply to companies and households. These measures must remain targeted and temporary.

Inflation, having peaked at 4% in June and July, dropped markedly to 1.6% by December 2008, mainly due to the sharp fall in commodity prices which more than offset the impact of strong unit labour cost growth during the first nine months of 2008. In January 2009 inflation fell further to 1.1%.

The Governing Council of the ECB anticipates that, owing to substantially lower commodity prices and weakening aggregate demand, the inflation rate should decline further in the coming months and, in the medium term, **it should turn out in line with price stability**, as suggested by available indicators of medium-term inflation expectations. If oil prices remain in the first half of 2009 at levels significantly lower than one year earlier —as anticipated by the relevant futures markets— very low inflation rates are likely to be observed around mid-2009. This development is viewed as only temporary, reflecting a base effect from past energy price developments and inflation rates are expected to increase again in the second half of the year. Hence inflation rates are likely to fluctuate sharply during 2009, but such short-term volatility is not relevant for a monetary policy which has a medium-term perspective. In any event, according to the December 2008 Eurosystem staff projections, annual average inflation should be between 1.1% and 1.7% in 2009 and between 1.5% and 2.1% in 2010.

5 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), although 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 headline growth rate of M3.

6 Namely the Bank of Canada, the Bank of England, the Sveriges Riksbank and the Swiss National Bank . The Bank of Japan did not join in, but expressed its strong support for the coordinated interest rate cut.

7 Probably in 2010, as indicated by the President of the ECB at the press conference following the Governing Council meeting of 15 January 2009.

On the one hand, one cannot rule out that unexpected further declines in commodity prices or a stronger than expected slowdown in the euro area economy put downward pressure on inflation. On the other hand, inflation could turn out higher than projected if the recent fall in commodity prices were to reverse or if domestic price pressures turn out to be stronger than assumed eventualities which cannot be ruled out either. For this reason, the Governing Council of the ECB continues (as it did throughout 2008) to call upon social partners to live up to their responsibilities in relation with wage and price setting.

Between January and August 2008, the **monetary analysis** of the Governing Council pointed out that upside risks to price stability stemmed from monetary and credit developments in the euro area. Nevertheless in September and October it was pointed out that the growth of broad money and credit aggregates was showing signs of moderation. From November 2008 onwards, the Governing Council stressed that the deceleration of the underlying pace of monetary expansion (which, however, has remained strong) confirmed the conclusion of economic analysis that inflationary pressures and risks were diminishing.

Box III.1

THE ENTRY OF SLOVAKIA INTO THE EURO AREA

As from 1 January 2009 Slovakia entered the euro area and became its 16th member. The official decision for the adoption of the euro by Slovakia was made in July 2008 by the ECOFIN Council, which also set the irrevocable conversion rate of the Slovak koruna (30.1260 slovak korunas=1 euro). Following its entry into the Exchange Rate Mechanism II (ERM II) in November 2005, the Slovak koruna underwent pressures in the period April-July 2006, but then it recovered, which led to the upward realignment of its central parity within ERM II by 8.5% in March 2007 and by 17.65% in May 2008.

With the addition of about 5.5 million citizens of Slovakia, the population of the euro area now exceeds 325 million. The GDP of Slovakia accounts for about 0.6% of the total euro area GDP (on the basis of data for 2007). Slovakia is one of the most rapidly growing economies of the European Union, with an average annual increase in real GDP of 7.1% in the past five years (7.1% also in 2008). In 2007 the per capita income of Slovakia was almost equal to 61% of the euro area average in terms of purchasing parity (Malta: 71%, Portugal: 69%). As concerns the structure of the Slovak economy, industry has a larger share in domestic added value than on average in the euro area (37% in Slovakia, compared with 26.7% in the euro area), while services have a smaller share (60.2% in Slovakia, compared with 71.4% in the euro area). Furthermore, the degree of Slovakia's openness to international trade is higher than on average in the euro area (the ratio of average imports and exports to GDP amounts to 86% in Slovakia, against 22% in the euro area). The current account balance of Slovakia recorded a deficit of 6% of GDP in 2008 (average of the five-year period 2003-2007: 5.3%). Inflation in Slovakia averaged 5% in the five-year period 2003-2007, but followed a downward course until 2007 (1.9%), while in 2008 it rose to 4%. Finally, the general government deficit in Slovakia stood at 2.2% of GDP in 2008 and public debt at 28.6% of GDP (European Commission estimates, 19 January 2009).

In December 2008 the Governing Council of the ECB decided, even after this enlargement of the euro area, to continue its current voting regime, which was expected to change with the entry of the 16th member. The rotation system will be introduced only when the number of governors of euro area national central banks exceeds 18.

2 THE INTENSIFICATION OF THE FINANCIAL TURMOIL SINCE MID-SEPTEMBER 2008, THE IMPACT ON THE EURO AREA MONEY MARKET, AND THE INTERVENTIONS OF THE EUROSYSTEM

The intensification of the financial turmoil on an international scale, as the bankruptcy of Lehman Brothers, the investment bank, in the United States in mid-September 2008 triggered serious disruptions in the banking systems of many countries in the European Union and the rest of the world, has caused heightened tensions in the euro area money market. In the course of the three weeks that followed the bankruptcy of Lehman Brothers, the three-month Euribor rose sharply, by nearly 44 basis points.[8] Over the same period, the spread between that rate and the three-month EONIA swap rate[9] widened by 123 basis points (see Chart III.2).[10]

Following the decision made by the Governing Council of the ECB on 8 October 2008 – in coordination with five major central banks – to cut the interest rate on the main refinancing operations by 50 basis points, Euribor rates started on a downward path, supported by further cuts in the key Eurosystem rates during the ensuing months.

A decrease – amid considerable volatility – was also seen in the spread between the three-month Euribor rate and the three-month EONIA swap rate. This development was underpinned by:

- the adoption of a concerted action plan to support the financial system[11] in the euro area;

- the announcement of relevant measures by individual Member States; and

- the provision, through the Eurosystem's open market operations, of financing to credit institutions against eligible collateral, in unlimited amounts and at a fixed interest rate (as detailed below), which minimised liquidity risk in the banking system.

However, the spread between Euribor and the overnight index swap rate persisted at levels much higher than those observed before the intensification of the financial turmoil (see Chart III.2). This spread represents the premium incorporated in Euribor against the following risks:

- the risk that the interbank loan is not repaid;

- the risk that the lending bank, if required to refinance the interbank loan at short notice, can only do so at a high cost or not at all, due

8 The three-month Euribor increased from 4.958% on Friday, 12 September 2008 (just before the bankruptcy of Lehman Brothers was announced on Monday 15 September) to 5.393% on 8 and 9 October 2008.

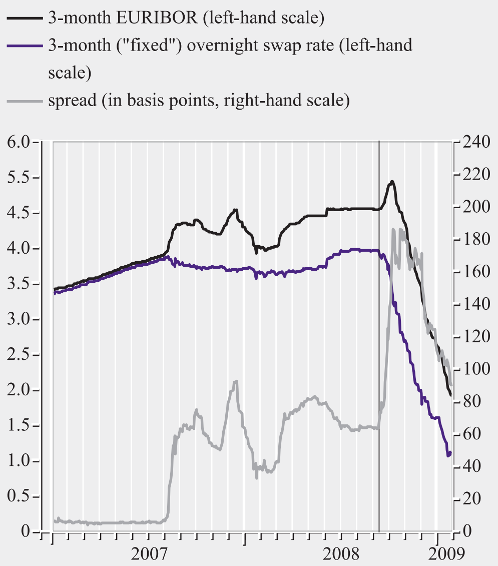
9 In an overnight interest rate swap, an interest rate (EONIA swap rate) is agreed upon, which remains fixed over the maturity of the agreement (e.g. 3 months). On the basis of this rate, one counterparty pays interest on a given amount in exchange for receiving from the other counterparty the interest accrued using the interbank overnight rate (EONIA), compounded daily throughout the agreement (3 months). Interest is usually paid on the maturity date of the agreement – interest payments between the two parties are netted against each other. The interest rate agreed in these contracts ("fixed rate") incorporates expectations about the future path of the overnight rate in the interbank market. If these expectations are revised, a different rate will be agreed in a new swap contract (the "fixed rate" on outstanding swap contracts cannot change). Thus, as shown in Chart III.2, a different rate was often agreed, whenever new overnight interest rate swaps were concluded. However, in the context of a given swap contract, the interest rate on the basis of which a counterparty will pay interest is agreed upon on the trade day and cannot change over the life of the contract. See the article entitled "The Eurosystem's open market operations during the recent period of financial market volatility" in the ECB's *Monthly Bulletin*, May 2008, Box 2, p. 93.

10 The spread was 63.5 basis points on 12 September 2008 and peaked at 186.4 basis points on 10 October.

11 The plan was adopted on 12 October 2008 by the euro area Heads of State or Government and was subsequently endorsed in principle by the European Council on 15-16 October 2008. Similar actions had been agreed by the G-7 on 10 October.

Chart III.2 Spread between the 3-month Euribor and the 3-month "fixed rate" on overnight-indexed swaps (January 2007–January 2009)

(percentages per annum and basis points, daily data)



Sources: ECB and European Banking Federation.
*The vertical line indicates the date of 15 September 2008, when the bankruptcy of Lehman Brothers was announced.

to the situation in the money market or insufficient or inadequate collateral.[12]

Therefore, the persistence of the spread at high levels suggests that interbank market tensions remained for a long time much stronger than before the bankruptcy of Lehman Brothers, although tensions seem to be moderating gradually.

The financial turmoil, by causing disruptions in the interbank market, hampers the smooth operation of the monetary policy transmission mechanism. Specifically, in the past the path of the three-month Euribor was in line with that of the EONIA and the expected future EONIA (as measured by the fixed interest rate on three-month overnight index swaps). However, from early August 2007, when the financial turmoil had spilled over to the money market, to early October 2008, the three-month Euribor followed an almost uninterrupted upward trend, not reflected in similar developments in EONIA and expected EONIA rates. Nevertheless, movements in the three-month Euribor remain closely correlated with those in short-term bank interest rates for loans to enterprises and households.[13]

The monetary policy stance is signalled by the interest rate on the main refinancing operations, which directly influences the EONIA (see Chart III.1). ***Thus, insofar as the Euribor diverges from the EONIA for a protracted period of time but continues to affect bank interest rates (much more strongly than EONIA does), monetary policy decisions fail to have the desired impact on aggregate expenditure in the economy.*** *However, it should be noted that the operation of the monetary policy transmission mechanism seems to be returning back to normal, as the cuts in the interest rate on the main refinancing operations from early October 2008 onwards caused the Euribor to decline as well. Moreover, the Eurosystem has been supplying credit institutions with liquidity without quantitative limits and for longer maturities (of one, three and six months) at the fixed rate of the main refinancing operations.*

Another aspect of the serious dysfunctioning of the interbank market since mid-September 2008 is the fact that the volume of interbank operations has shrunk.[14] *It seems that credit institutions with liquidity surpluses are reluctant to grant interbank loans, largely due to lack of trust in counterparties, and prefer instead to use the Eurosystem's deposit facility, which leads to a significant increase in the amounts deposited under this facility.*

12 Should the need arise, the lending bank would attempt to replenish these funds through recourse to the uncollateralised interbank market or to the repo market, where it would obtain liquidity from another bank against high-quality collateral. See ECB, *Financial Stability Review*, December 2008, Special Feature D: "Liquidity risk premia in money market spreads", p. 144.

13 See Box 5 entitled "The implications of the money market tensions for the pass-through of MFI interest rates", ECB, *Monthly Bulletin*, December 2008, p. 47.

14 This means that developments in the Euribor and the EONIA, as discussed above, do not actually reflect the evolution of the opportunity cost of liquidity in the interbank market.

In such circumstances, credit institutions facing liquidity needs[15] have no other choice but to obtain financing from the Eurosystem, mainly through its open market operations (subject to their ability to provide adequate collateral). Initially, in the second half of September 2008, in order to meet exceptionally high demand for liquidity by solvent credit institutions, the Eurosystem increased the volume of its main refinancing operations[16] and conducted extraordinary, fine-tuning, open market operations for the provision of additional liquidity. In October, however, it became clear that, on a temporary basis and until the smooth functioning of the interbank market is restored, it was necessary:

- to adopt a fixed rate tender procedure with full allotment (which means that all bids are satisfied) for all regular (euro) liquidity-providing open market operations (against eligible collateral);[17]

- to increase the frequency of longer-term refinancing operations, i.e. each month to conduct one operation with a maturity of one month, two with a maturity of three months and one with a maturity of six months;

- to expand[18] the list of eligible collateral and, in the case of fine-tuning operations, to also expand the set of eligible counterparties. This measure followed refinements in the risk control framework for **Eurosystem credit operations**[19] aimed to limit the Eurosystem's exposure to financial risks;

- to reduce the width of the corridor (see Table III.1) between the interest rates of the two standing facilities of the Eurosystem, i.e. the marginal lending and the deposit facility from 200 basis points to 100 basis points.[20] The rate on the main refinancing operations remained at the mid-point between the standing facility rates, thus the narrowing of the corridor served the purpose of containing the fluctuations of the EONIA around the MRO rate.

In addition, the Eurosystem continued to cooperate closely with the Federal Reserve System, enabling euro area credit institutions to obtain US dollar liquidity from the Eurosystem[21] in unlimited amounts and at a fixed interest rate/swap points respectively, against assets eligible for the other Eurosystem credit operations or through foreign exchange swap operations.[22,23] Finally, in cooperation with the Swiss National Bank, the Eurosystem regularly provides Swiss francs to euro area credit institutions through foreign exchange swap operations (against euro).

Through these interventions, intended to prevent the erosion of financial stability and bolster confidence, the Eurosystem assumed the role of an intermediary between banks with liquidity surpluses and banks in need of supple-

15 Over a horizon where it is not possible to attract sufficient deposits from households and enterprises.

16 These operations were conducted as variable-rate tenders. Credit institutions with successful bids raised the requested amount from the Eurosystem and paid the interest rate which they had offered in their bids and which could not be lower than the minimum bid rate. In order to attain the desired allotment volume, the Eurosystem has often rejected bids with interest rates also above the minimum – bids with relatively lower interest rates were rejected first.

17 In other words, the interest rate on the main refinancing operations is no longer defined as a minimum bid rate, but as a fixed rate, applied to all credit institutions obtaining liquidity through the main refinancing operations. For longer-term refinancing operations, no maximum allotment amount is specified and no variable rate tender is conducted.

18 The expansion will remain in force until the end of 2009.

19 In early September 2008.

20 Until 21 January 2009, when the width of the corridor was restored to 200 basis points, with a view to strengthening incentives for banks to channel their liquidity surpluses into the interbank market.

21 Given the tensions in the global market for (wholesale) deposits in US dollars (and other foreign currencies) and the dysfunctioning of the market for foreign exchange swaps in the context of the financial turmoil (see Box 3 entitled "Transmission of US dollar and pound sterling money market tensions to the euro money market", ECB, *Financial Stability Review*, December 2008, p. 29), it became necessary for the Eurosystem to provide US dollar liquidity to euro area credit institutions. Some of the first measures taken by the Eurosystem in cooperation with the US Federal Reserve from mid-September 2008 onwards concerned an increase in such financing to credit institutions.

22 These swap operations continued to be conducted until the end of January 2009.

23 In these foreign exchange swaps, the Eurosystem sells US dollars to credit institutions in exchange for euro. After 7, 28 or 84 days, depending on the specified maturity of the operation, the transaction is reversed and the Eurosystem repurchases the dollars in exchange for euro. Obviously, the dollar repurchase price (expressed as dollars per one euro) paid by the Eurosystem in this reverse operation is different from the purchase price initially paid by the credit institutions. The difference between the two prices is expressed in "swap points" and is determined unilaterally by the Eurosystem – as is also the case with the purchase price initially paid by credit institutions – before such operations are conducted.

mentary liquidity. This development is reflected in the impressive increase in Eurosystem total assets by about 30% since the bankruptcy of Lehman Brothers.[24]

24 Comparison refers to the Eurosystem's total assets between 12 September 2008 and 30 January 2009, according to the relevant balance sheets.

IV MACROECONOMIC DEVELOPMENTS AND PROSPECTS IN GREECE

1 ECONOMIC ACTIVITY: DEVELOPMENTS AND PROSPECTS

The deceleration of the Greek economy's growth, noticeable since mid-2007, continued in 2008. The average annual GDP growth rate was 3.3% in the first nine months of 2008 (see Table IV.1), compared with 4.2% in the corresponding period of 2007. In the third quarter of 2008, GDP grew at an annual rate of 3.1% (compared with 4.1% in the corresponding quarter of 2007). This deceleration reflects a gradual weakening of the factors that had long supported strong growth rates, higher than the economy's sustainable potential productive capacity,[1] as well as the initial impact of the international financial turmoil and declining growth rates worldwide.

The weakened activity in Greece is clearly reflected in the latest available data on activity in individual branches and sectors of the economy, as well as in the results of the surveys that record the estimates and expectations of enterprises and households. The above suggest that **the deceleration of activity continued more intensely in the fourth quarter of 2008.**[2] The Economic Sentiment Indicator[3] was declining throughout the year and recorded a particularly steep fall from October onwards, while in January 2009 it reached a **historically low level**, as was also the case for the euro area as a whole and the EU. The rate of increase in the economic activity coincident indicator, which is compiled by the Bank of Greece and satisfactorily summarises information on activity, started to decline in the first months of 2008, and in November stood at 2.4% (see Chart IV.1).

With respect to **demand** developments, the indicators of **households' consumption expenditure** (see Table IV.2 and Chart IV.2) were steadily declining in the second half of 2008,

1 See *Monetary Policy – Interim Report 2008*, pp. 12 and 22-24.
2 The first NSSG estimates regarding GDP in the fourth quarter of 2008 were announced on 13 February 2009.
3 Compiled by the European Commission, as for all EU countries.

Table IV.1 Demand and gross domestic product: 2006-2008

(constant market prices of 2000; annual percentage changes)

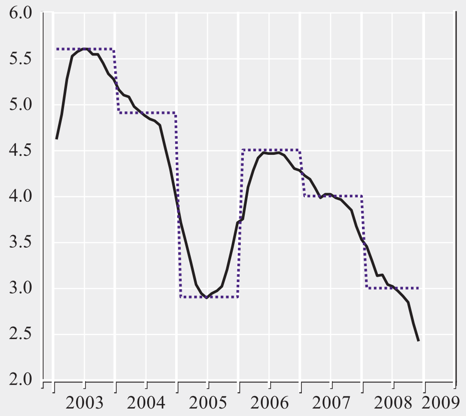
	2006	2007	2008 (Jan.-Sept.)
Private consumption	4.8	3.0	2.6
Public consumption	0.0	7.7	2.6
Gross investment	*8.1*	*9.7*	*1.7*
Gross fixed capital formation:	9.2	4.9	-13.5
Housing	29.1	-6.8	-31.2
Other construction	-22.9	19.1	-0.7
Equipment	14.2	9.1	-6.0
Other	7.8	9.3	0.9
Inventories and statistical discrepancy (% of GDP)	-0.9	0.1	3.5
Final domestic demand	**4.8**	**5.1**	**2.4**
Exports	10.9	3.1	4.3
Exports of goods	20.1	-7.3	-2.5
Exports of services	3.6	12.7	9.1
Imports	9.7	6.7	1.3
Imports of goods	10.3	6.7	-1.4
Imports of services	7.9	6.8	15.5
Gross domestic product at market prices	**4.5**	**4.0**	**3.3**

Sources: For 2006 and 2007: NSSG/National Accounts and Ministry of Economy and Finance, October 2008. For January-September 2008: provisional NSSG data. For Bank of Greece estimates for 2008 see the main text.

Chart IV.1 Economic activity indicators

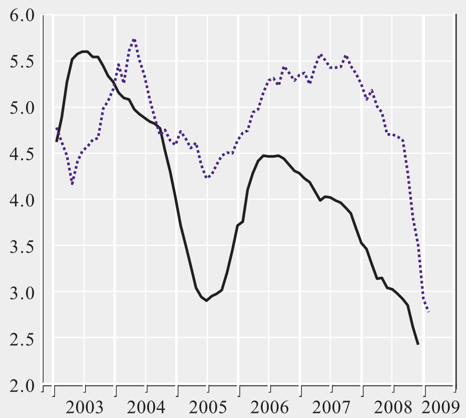
A. The coincident indicator of economic activity compiled by the Bank of Greece
(January 2003 - November 2008)

coincident indicator[1]
GDP[2]



B. The coincident indicator of economic activity compiled by the Bank of Greece and the economic sentiment indicator compiled by the European Commission for Greece
(January 2003 - January 2009)

coincident indicator (left-hand scale)[1]
economic sentiment indicator (right-hand scale)[3]



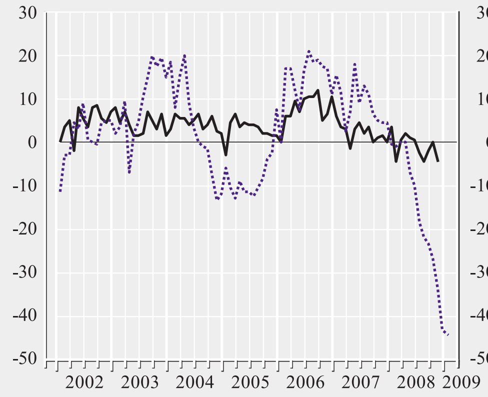
Sources: Bank of Greece (coincident indicator and 2008 GDP), NSSG (2003-2007 GDP) and European Commission (economic sentiment indicator).

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

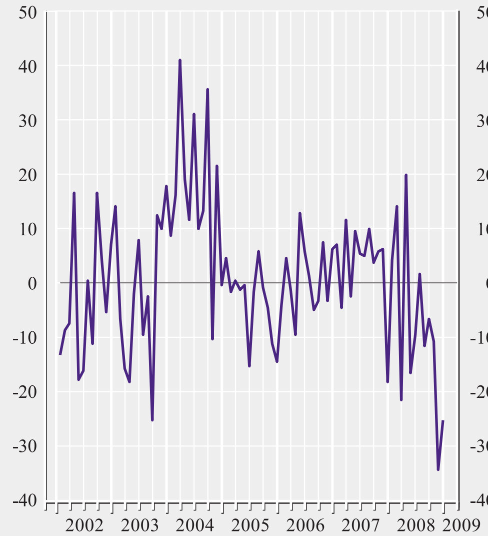
Chart IV.2 Indicators of consumer demand

A. Sales volume and business expectations in retail trade[1]
(January 2002 - January 2009)

retail sales volume - total (2000=100)
business expectations in retail trade (1996-2006=100)



B. New passenger car registrations[1]
(January 2002 - December 2008)



Sources: NSSG (retail sales and cars), IOBE (expectations). The business expectations index 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.

while those of **residential investment** (see Table IV.3 and Chart IV.3) were declining since the start of the year. In the last quarter, the IOBE consumer confidence survey recorded some reluctance on the part of households to proceed to "major purchases" (house purchase/ construction or repair, purchases of cars[4] and

4 The annual rate of change in the number of new passenger car registrations was negative since the beginning of 2008 and in December stood at -25,2%.

Table IV.2 Indicators of consumer demand (2007-2009)

(annual percentage changes)

	2007	2008	2009 (available period)
Volume of retail sales	2.3	-0.7 (Jan.-Nov.)	...
Food-beverages-tobacco[1]	0.9	0.6 (» »)	...
Clothing-footwear	1.1	-4.1 (» »)	...
Furniture-electrical appliances-household equipment	6.7	-3.9 (» »)	...
Books-stationery-other	6.7	0.6 (» »)	...
Revenue from VAT (constant prices)	6.8	1.6 (Jan.-Nov.)	...
Retail trade business expectations index	9.0	-15.3	-44.2 (Jan.)
New passenger car registrations	4.3	-7.0	-40.5 (Jan.)
Tax revenue from mobile telephony (monthly flat fees)[2]	114.2	5.3	...
Outstanding balance of total consumer credit extended by banks[3]	22.4 (Dec.)	16.0 (Dec.)	...

Sources: NSSG (retail sales, cars), Bank of Greece (VAT revenue and consumer credit), IOBE (expectations), Ministry of Economy and Finance (tax revenue from mobile telephony).
1 Including big food stores and specialised food-beverages-tobacco stores.
2 Adjusted rates apply as from 1 November 2006.
3 Taking into account securitised loans and loan write-offs.

Table IV.3 Indicators of investment demand (2007-2009)

(annual percentage changes[1])

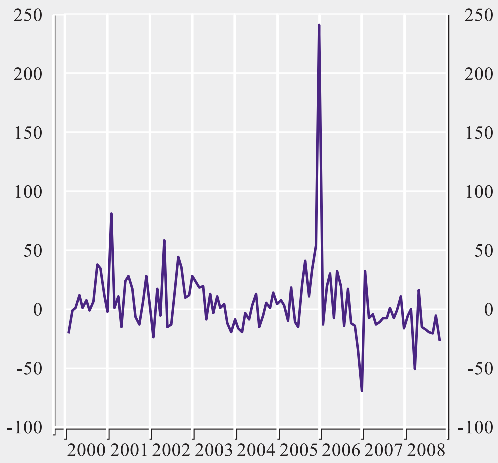
	2007	2008	2009 (available period)
Capital goods output	-2.4	-2.4 (Jan.-Nov.)	...
Capacity utilisation rate in the capital goods industry	(80.4)	(77.5)	(76.6) (Jan.)
Outstanding balance of loans to non-financial corporations with a maturity of over one year[2]	25.7 (Dec.)	21.4 (Dec.)	...
Disbursements under the Public Investment Programme	7.6	9.3	...
Volume of private construction activity (on the basis of permits issued)	-5.0	-16.1 (Jan.-Oct.)	...
Cement production	-9.2	-1.4 (Jan.-Nov.)	...
Construction business expectations index	1.5	3.0	-22.7 (Jan.)
Outstanding balance of total bank credit to housing[3]	21.9 (Dec.)	11.4 (Dec.)	...

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 Adjusted for the amount of loan write-offs.
3 Taking into account securitised loans and loan write-offs.

consumer durables). On a national accounts basis, the average annual rate of increase in private consumption slowed down to 2.6% in the first nine months of 2008, while residential investment fell by 32.8%. Moreover, according to the investment survey conducted by the IOBE in October and November 2008, **industrial enterprises estimate that their investment expenditure decreased considerably in 2008 and will fall further in 2009**. According to the NSSG, on a national accounts basis, **fixed capital formation** decreased at an average

Chart IV.3 Volume of new buildings and extensions on the basis of permits issued (January 2000-October 2008)

(percentage change over same month of previous year)



Source: NSSG.

annual rate of 13.5% in the first nine months of 2008.[5]

The higher **private consumption** in 2008 is associated with the continuing rise in employment (at least up to October, for which the latest data are available – see Section 2 of this chapter), with the rise in employees' average real earnings (see Section 3 of this chapter) and with the fact that consumer credit expansion may have decelerated but remained high (see Chapter VI.2). The market value of households' assets (wealth) rather decreased,[6] but the effect of changes in wealth on consumer demand is estimated to be minor in Greece.[7] The decreased **residential investment** reflects mainly the existence of a large stock of houses for sale,[8] while at the same time the annual rate of housing credit expansion decelerated markedly (see Chapter VI.2). Finally, developments in **business investment** were adversely affected by the worsening of enterprises' expectations and the decrease in their profits (see Section 3 of this chapter), while the fact that the rate of credit expansion to enterprises remained high until end-December reflects, at least partly, their limited options of financing through other sources (see Chapter VI.2).

The change in the **real external balance of goods and services** contributed positively to GDP growth in 2008. **Exports of goods and services** on a national accounts basis increased at an average annual rate of 4.3% in the first nine months of 2008, mainly due to high transport receipts, while growth in exports of goods declined in the course of the year and fell markedly short of the rate at which international demand for Greek products could have increased,[9] reflecting the negative effect of the continuing loss in competitiveness on the Greek exports' market share. Growth in **imports of goods and services** was subdued (with an annual rate of increase of 1.3% on average in the first nine months of 2008), while a decrease of 8.2% on an annual basis was recorded in the third quarter. Developments in imports reflect the decelerated rise in domestic consumer demand and the adverse developments in investment demand. Furthermore, the statistical data on imports of goods have also been affected by the prolonged strikes at the port of Piraeus in the course of 2008.

With respect to developments in **supply**, it is indicatively mentioned that total **industrial** output in the period from January to November 2008 **fell** at an average annual rate of 2.8% (after a rise of 2.2% in 2007). An even larger drop in output was recorded in **manufacturing** over the same period (-3.2%, compared with a 1.8% rise in 2007 – see Chart IV.4). The Purchasing Managers' Index (PMI) in manufac-

5 However, *including changes in inventories*, there was a small increase at an average annual rate of 1.7%, compared with 9.6% in the corresponding period of 2007.

6 The *average annual* level of the prices of houses (which constitute the households' major asset) is estimated to have decreased less than 1%. A clear decrease in average annual terms was recorded in the market prices of government paper and mutual fund units/shares. Finally, there was a much larger average annual drop in the Athex composite share price index, but equities represent a relatively small part of households' assets.

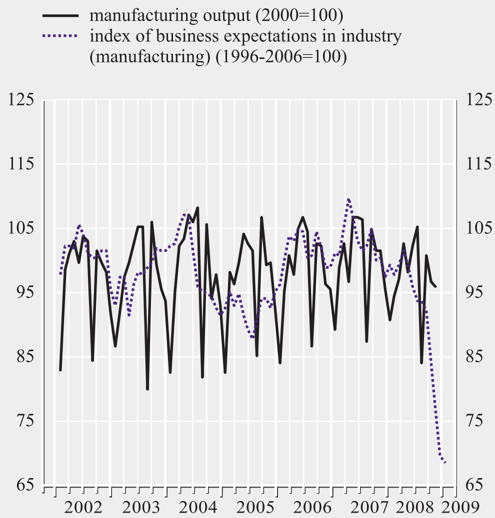
7 Changes in the value of households' property are estimated to have a small effect on private consumption in the euro area as well. See "Housing wealth and private consumption in the euro area", ECB, *Monthly Bulletin*, January 2009.

8 See *Monetary Policy – Interim Report 2008*, pp. 58-59.

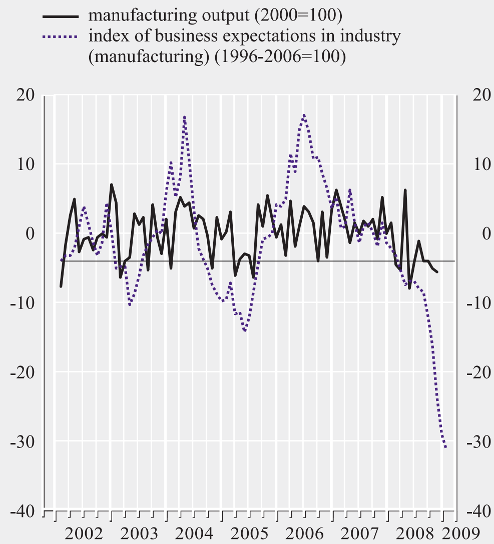
9 This rate is calculated taking into consideration (i) the estimated total increase of imports in the *current* period in each country to which Greek products are exported, and (ii) the share of Greek exports in the imports of each country *in the past*. However, the final increase in international demand for Greek products will depend on developments in competitiveness, which affect the Greek export shares in foreign markets.

Chart IV.4 Output and business expectations in manufacturing
(January 2002 - January 2009)

A. Indices



B. Percentage changes over same month of previous year

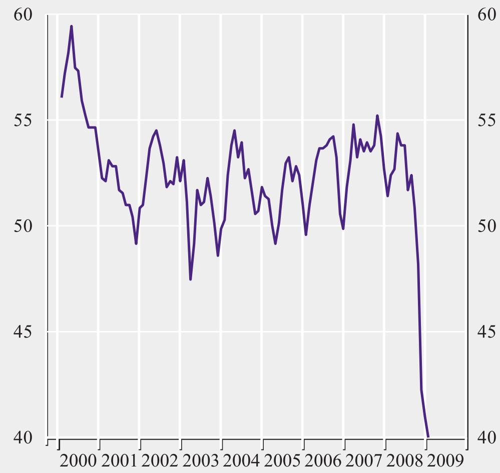


Sources: NSSG (output) and IOBE (expectations). The index of business expectations is based on business firms' estimates of total demand and stocks and on output forecasts for the next 3-4 months.

turing (see Chart IV.5) for the first nine months of 2008 implied a continuance of output expansion, but it declined markedly from October onwards, and in January 2009 stood at the **lowest level since 1999**, implying a drop in output.

Chart IV.5 Purchasing Managers' Index (PMI) for manufacturing
(January 2000-January 2009)

(seasonally adjusted index; positive deviations from the value of 50 indicate an expansion of economic activity)



Sources: Markit Economics and Hellenic Purchasing Institute.

Furthermore, the annual rate of change in industrial turnover turned negative from October onwards, while the index of new orders recorded a negative annual rate after July. In contrast, turnover in certain branches of the **services sector** (telecommunications-postal services, transport, wholesale trade, tourism) showed an increase, albeit small, in the first nine months of 2008 (see Table IV.4). Nevertheless, as the IOBE surveys indicate, enterprises' estimates in the sectors of industry, retail trade, other services and construction worsened in the last quarter of 2008 and in January 2009.

In light of the above, the Bank of Greece estimates that the rate of GDP growth for 2008 as a whole stood at around 3%, compared with 4% in 2007.

In **2009** it is expected that the impact of the global financial and economic crisis on the Greek economy's macroeconomic aggregates will be stronger. More specifically, **it is estimated that average annual growth will record a further and much more considerable deceleration and will stand at around 0.5%**, i.e. the lowest level observed since 1994 (in 1993, GDP

Table IV.4 Indicators of activity in the services sector (2007-2009)

(annual percentage changes)

	2007	2008	2009 (available period)
Services turnover indicators			
Car retail sales	6.8	1.9 (Jan.-Sept.)	...
Wholesale trade	11.4	11.2 (» »)	...
Telecommunications and post	1.2	1.4 (» »)	...
Information technology	9.9	3.5 (» »)	...
Land transport	18.2	5.5 (» »)	...
Sea transport	8.1	12.9 (» »)	...
Air transport	7.0	6.9 (» »)	...
Supporting and transport activities, including travel agencies	12.6	11.4 (» »)	...
Tourism (hotels and restaurants)	6.5	4.6 (» »)	...
Other business activities[1]	18.3	7.4 (» »)	...
Passengers			
Passenger-kilometres of Olympic Airlines	2.7	-8.0 (Jan.-Nov.)	...
Passenger-kilometres of Aegean Airlines[2]	25.5	18.7 (Jan.-Sept.)	...
Piraeus Port passenger traffic	2.0	1.4 (Jan.-Oct.)	...
Index of business expectations in services	**2.8**	**-8.3**	**-41.2 (Jan.)**

Sources: NSSG (services turnover indicators), Olympic Airlines, Aegean Airlines, Piraeus Port Authority and IOBE (expectations).
1 Including mainly architects and engineers, legal services and advertisement.
2 Including charter flights.

had decreased).[10] It should be recalled that the forecast for the euro area as a whole involves a decrease of 1.9% in GDP (see Chapter II.1).

The **financial crisis** affects (or may affect) economic activity in Greece in several ways:

- Through the application of stricter criteria by banks in granting credit to enterprises and households, which narrows **loan supply**, and the considerable decline in business expectations and consumer confidence, which entails a reduced propensity to consume and to invest in houses as well as limited business risk appetite, so that **demand for credit** is also limited. The deceleration of credit expansion to households and enterprises is estimated to adversely affect **private consumption** (the rate of increase of which will further decelerate considerably), **residential investment** (which will continue to decrease) and **business investment** (which will remain almost stagnant). In addition, as regards **residential investment**, uncertainties remain with respect to the pace at which the stock of —mainly newly-built, but also older— houses will be absorbed, while the adjustment currently underway in the property market (via a stabilisation or even reduction of prices) discourages any direct investment initiatives. The financing adversities and the drop in returns on commercial or business real estate may unfavourably affect other **construction investment** as well. Developments in **business investment** in 2009 are expected to be negatively affected also by the deterioration of demand (reflected in the reduced orders in the last months), as well as by the aforementioned decline of profitability in 2008.

10 In 1993, GDP at constant prices had declined by 1.6%. Since then, annual GDP growth rates have been in general well above 2%.

• Through any large drop and volatility in equity and real estate prices, which may lead to a reduced propensity to consume and entail difficulties for the enterprises in raising funds through the stock market. In Greece, the impact of developments in equity and real estate prices on consumer demand was rather minor in 2008, as mentioned above, but may be somewhat greater in the current year. Furthermore, the funds raised by enterprises through the Athex decreased dramatically in 2008 (see Chapter VI.5) and it is possible that they will not increase this year.

With respect to **public investment**, the 2009 Budget provides for a cut of 8.8% at current prices in the Public Investment Programme, as a result of the efforts to reduce the deficit.

Moreover, the impact of the **global economic crisis** will be direct. The anticipated strong deceleration of world GDP growth in 2009 (see Chapter II) relies on forecasts of a recession in the EU, the US and other advanced economies, as well as in Russia, and of performances in Southeastern Europe and the emerging economies of Asia considerably lower than in 2008. At the same time, world trade volume is expected to decrease. If things evolve according to these estimates, it is obvious that both Greek exports of goods (which are directed mainly to the EU and non-EU Balkan countries) and exports of services will be adversely affected. In more detail, travel receipts (visitors) from Western Europe, the US, but also Southeastern European countries and Russia are likely to decrease. Also, it is almost certain that transport (shipping) receipts will decrease, due to lower freights and the reduced world trade volume. Already, the annual rate of change in such receipts, which was positive up to end-October, turned negative thereafter.

On the other hand, a number of factors alleviate the above adverse consequences:

• On account of the Greek economy's relatively high "oil intensity",[11] the steep fall in world crude oil prices contributes to a **considerable decline of inflation** (see Section 3 of this chapter), higher real disposable income and increased consumer demand, as well as reduced production costs, which can limit the slowdown in output growth and at the same time strengthen the economy's medium-term potential growth. The lower inflation neither had nor is expected to have any destabilising effects on inflation expectations, which could otherwise lead to a sustained decline in the general level of consumer prices (deflation).

• For most employees in the economy's *business sector*, wage increases in the current year have been determined by the biannual collective agreements signed in 2008. In the whole economy, average gross earnings are expected to rise by 5.6%. Even on the assumption that the current conditions will have an adverse effect on actual earnings (which differ from the contractual ones) and thus will contribute to a reduction or even elimination of overtime in the *non-bank private sector*, it is estimated that the increase of average gross earnings will be in the order of 4.5%. Therefore, given that average annual inflation is forecast to decline to 1.8% or lower (see Section 3 of this chapter), **average real earnings will increase by 2.6-3.7%.** The rise in real earnings higher than what was anticipated before the rapid drop of inflation will offset, at least partly, the fact that there will be no (or very limited) expansionary effects on demand from higher employment, since employment is expected to remain unchanged (see Section 2 of this chapter), or from increased public expenditure, as —due to fiscal restrictions— there is no room for a fiscal stimulus to the economy (see Chapter V).

• The impact of the financial crisis on the Greek banking system was much lower than on the banking systems of other countries, as the exposure of Greek banks to assets directly or indirectly linked to the original causes of the crisis was only marginal. **Furthermore, the implementation of the Greek plan for strengthening liquidity** (see Box VI.1) **is estimated to**

11 See *Monetary Policy – Interim Report 2008*, pp. 93-96.

support — under certain conditions — an annual rate of credit expansion to households and enterprises of around 10% in 2009 (see Chapter VI.2). This rate, although considerably lower than in 2008 (16.4% in December), is enough to support the continuance of GDP growth.

- With respect to **public investment**, its budgeted cut for 2009 may be reduced or even avoided, if it becomes feasible to sufficiently finance public investment expenditure (e.g. through cuts in other public expenditure and faster absorption of the National Strategic Reference Framework funds, as is also provided for by the European Recovery Plan – see Section 4 of this chapter). Furthermore, with respect to **business investment**, much will depend on the pace of execution of the already approved projects of public-private partnerships, which have a budgeted expenditure of €5.7 billion, as well as of the projects recently included in the relevant development law and not yet completed. These factors, as well as the possibility of sizeable investment in the energy sector, can avert a decrease of total business investment in 2009.

- Finally, total domestic demand (i.e. consumption and investment) will grow considerably slower and stand at a very low level, but domestic output (GDP) will grow at a somewhat higher rate, given that — due to the **anticipated decrease of imports** (mainly consumer durables and capital goods) — demand for domestically produced goods will rise relatively more than total domestic demand (for domestically produced and for imported goods.

- Moreover, developments in the Greek property market are not as harsh as in some other advanced economies.

The forecast regarding the Greek economy's performance in 2009 is surrounded by considerable uncertainty, and developments may eventually be better or worse. It is judged, however, that the rate of GDP growth is more likely to turn out lower than what was anticipated, mainly because this is the most probable scenario in the international organisations' forecasts for global economic activity, which of course directly affects the Greek economy.

Crucial for this forecast is the assumption of a successful and effective implementation of the plans for strengthening the economy's liquidity by supporting banks, not only in Greece but also worldwide. More specifically, it has been assumed that the operation of financial markets will gradually return to normal, the banks' cost of borrowing will be reduced and confidence will be progressively restored. Any deviations form the key targets or failure to fully implement the liquidity-strengthening measures would slow down the normalisation of the economy's financing, with negative consequences for economic growth.

Finally, it should be pointed out that the **"procyclicality"** of the financial system (i.e. its potential ability to augment the fluctuations of the macroeconomic cycle), as well as of some aspects of the prudential supervision rules, may have an impact on activity (through the reduction of credit), which will be more serious than what has been assumed.

2 EMPLOYMENT AND UNEMPLOYMENT: DEVELOPMENTS AND PROSPECTS

On the basis of the data of the Labour Force Survey conducted by the NSSG, the **average annual rate of increase in the total number of persons employed** in the first ten months of 2008 **stood at 1.2%**, same as in the corresponding period of 2007 (see Chart IV.6).

Despite the steady annual rate of increase in total employment, the first nine months of 2008 — for which detailed data are available — saw a slight deceleration in employment growth in both the **non-agricultural private sector** (1.8% in 2008 from 2.0% in 2007) and the public sector (0.4% in 2008 from 1.4% in 2007). This deceleration was offset by the fact that employment in the agricultural sector

Chart IV.6 Employment (1999-2008)

(percentage changes over corresponding quarter of previous year)

Source: NSSG, Labour Force Surveys (LFS). New revised data for 1998-2003, published in January 2005. No changes are shown for 2004, since data are not fully comparable, due to a change in the survey sample.
• Other employed persons = Self-employed with staff (employers) + Self-employed without staff + assistants in family businesses.

declined less than in 2007 (first nine months of 2008: -0.8%; of 2007:-2.6%).[12]

The increases in the numbers of the employees and the self-employed accounted for the rise in employment in the non-agricultural private sector (by 1.6 and 0.4 percentage points respectively). In contrast, the number of assistants in family businesses fell, lowering (by 0.2 percentage point) the rise in total employment in the non-agricultural private sector.

The **hours worked per employee** (regular and overtime) in the non-agricultural private sector in the first nine months of 2008 were 0.2% less than in the corresponding period of 2007.[13]

The last few years have seen a decline in hours worked per employee. This trend reflects the reduction of hours worked owing to financial or technical reasons and the increased share of persons whose typical weekly working hours are well below 40.

The data for the first nine months of 2008 also show a **rise in the share of employees who are not Greek citizens**. This development may be attributable to the legalisation of the employment of such people and not necessarily to higher participation on their part in the labour market.

The rise in employment in the first ten months of 2008 at an annual rate of 1.2%, which was higher than the rate of increase in the **labour force** (0.5%), pushed the **unemployment rate** down to 7.5% in the first ten months of 2008, from 8.3% in the corresponding period of 2007 (see Chart IV.7). A decline in unemployment is also indicated by the Manpower Employment Organisation (OAED) data on the number of registered unemployed persons in the same period. This fall of the unemployment rate was observed in all age groups of both genders, except men aged 20-24 where this rate shows an increase.

The available detailed data of the Labour Force Survey for the first nine months of 2008 indicate that the main determinant of the reduction in unemployment compared with the corresponding period of 2007 was the lower job loss probability for those already in employment. At the same time, however, the probability of finding work for those who are unemployed also decreased.[14]

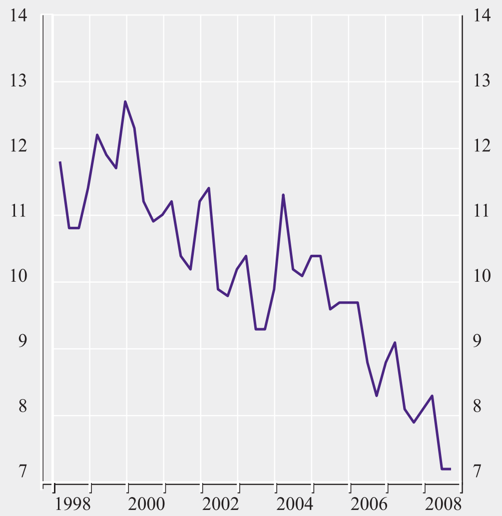
12 Due to the adoption (since the first quarter of 2008) of a new statistical classification (STAKOD-08), comparisons between the number of employees in 2008 and in 2007 have become harder at branch level, although not greatly affected at sectoral level (agricultural, secondary and tertiary sector). Currently, information at branch level based on the new classification *is* available for the first nine months of 2008, but comparison with 2007 is feasible *only* with respect to the first six months, for which data are available based on both the new and the former classification. These comparisons show that in the first half of 2008 employment rose in trade and services, but decreased in manufacturing, construction, and hotels and restaurants. These developments in the number of employees in retail trade (rise) and in manufacturing (drop) are confirmed for the first nine months of 2008 as well by the data of the special NSSG survey conducted among retail trade firms and by the employment sub-index of the PMI, respectively.

13 This calculation does not take into account employees whose working hours were affected by holidays or strikes during the survey's reference week.

14 This estimate relies on the sample subset of persons surveyed repeatedly over 6 consecutive quarters for the purposes of the Labour Force Survey, which shows that the probability of being unemployed in the third quarter of 2008 for those employed a year earlier is lower than the corresponding probability in the third quarter of 2007. On the other hand, the probability for someone to be in employment in the third quarter of 2008 if he/she were unemployed a year earlier also appears lower than the corresponding probability in the third quarter of 2007.

Chart IV.7 Total unemployment rate (1998-2008)

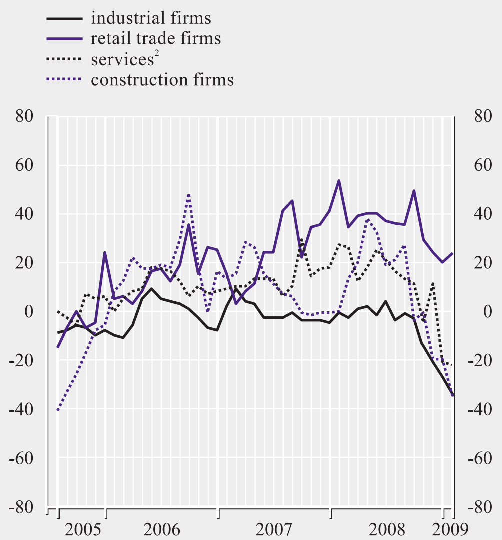
(percentage points)



Source: NSSG, Labour Force Surveys.

Chart IV.8 Business expectations[1] for employment (July 2005-January 2009)

(percentage balances)



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

In January 2009 the enterprises' estimates regarding **short-term prospects** for the number of employees, as recorded in the IOBE surveys (see Chart IV.8), were positive only in retail trade. Expectations were exceptionally negative in manufacturing, where they reached a ten-year low. Particularly negative and much lower than their average in 1998-2008 were the expectations concerning employment in construction and services. A decline in recruitments in the coming period can be expected based also on the data on job vacancies declared by enterprises.

On the basis of the available indications regarding the labour market and of the forecasts about developments in activity (see Section 1 of this chapter), **it is estimated that in 2009 the upward trend of employment recorded in the last few years will come to a halt.** In fact, in some individual branches (e.g. **manufacturing export enterprises, import trade enterprises, construction companies, tourist enterprises, financial enterprises**) or categories of employees (such as the **temporarily employed** or the **immigrant workers**) employment may fall. The total number of persons employed should remain unchanged, while average working hours in the non-agricultural private sector are expected to decrease. However, **the unemployment rate may not increase considerably**, given that the annual rate of increase in the labour force has slowed down to 0.6% in the last four years, from over 1% in the 1998-2004 period.

3 INFLATION: DEVELOPMENTS AND PROSPECTS

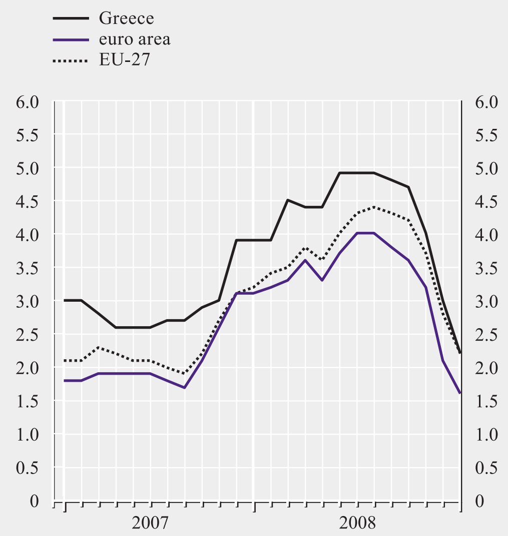
3.1 SUMMARY OF DEVELOPMENTS IN 2008 AND OF PROSPECTS FOR 2009

On account of the steep fall in world oil and other commodity prices, **the annual inflation rate (based on the Harmonised Index of Consumer Prices – HICP) declined rapidly – and much more than what was anticipated – in the last months of 2008, and in December stood at 2.2%** (see Chart IV.9),[15] i.e. at its lowest level

15 At 2.0% based on the CPI (see Chart IV.10).

Chart IV.9 Harmonised index of consumer prices in Greece, the euro area and the European Union (January 2007 - December 2008)

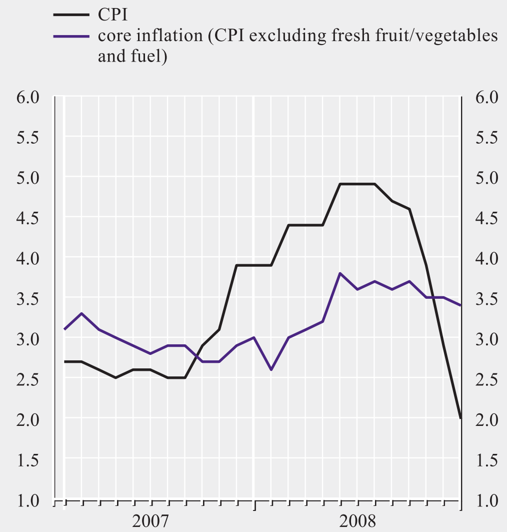
(percentage changes over same month of previous year)



Sources: NSSG and Eurostat.

Chart IV.10 Consumer price index and core inflation in Greece (January 2007 - December 2008)

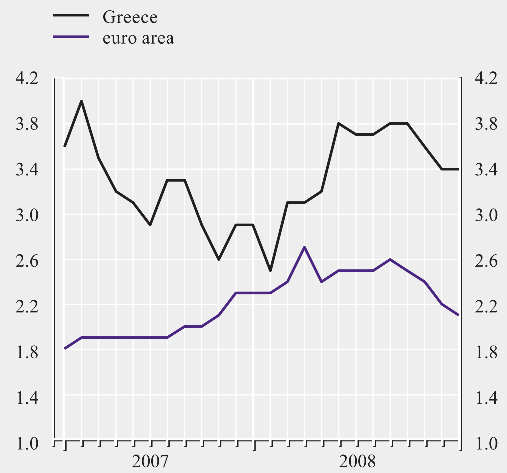
(percentage changes over same month of previous year)



Source: Calculations based on NSSG data (national data).

Chart IV.11 Core inflation in Greece and the euro area on the basis of the HICP excluding energy and unprocessed food (January 2007 - December 2008)

(percentage changes over same month of previous year)



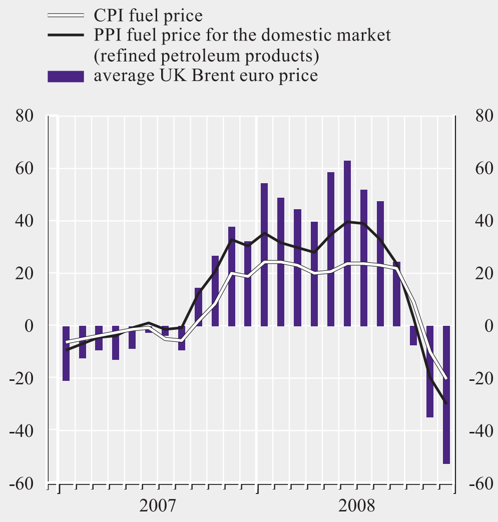
Sources: NSSG and Eurostat.

since June 2000. In the first seven months of 2008, however, as world oil prices kept rising, inflation reached very high levels (4.9% in May, June and July). As a result of these developments, the average annual inflation in 2008 stood at a level considerably higher than in 2007 (4.2% compared with 3.0%). Yet, **core inflation** (which does not include energy and unprocessed food prices) appeared much less volatile, as it was affected by two counteracting major determinants. On the **demand** side inflationary pressures were reduced (mainly in the second half of the year), while on the **supply** side the rate of increase in unit labour costs accelerated. Thus, core inflation remained high (reached 3.8% in the third quarter and stood at 3.4% in December – see Chart IV.11), while its average annual level rose slightly to 3.4%, from 3.2% in 2007.

The annual rate of inflation is expected to continue to decline until mid-2009, when it may stand at around 1%, while it will accelerate again thereafter. This fluctuation mainly reflects the forecasts regarding the path of world oil prices in each month of 2009, compared with their corresponding levels in 2008. **It is estimated that the average annual level of HICP inflation may fall to 1.8% or lower in 2009** (from 4.2% in

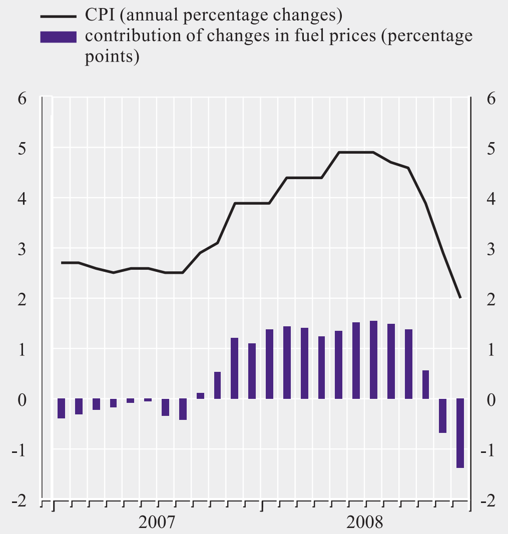
Chart IV.12 Evolution of CPI/PPI fuel prices and of the euro price of Brent crude oil (January 2007-December 2008)

(percentage changes over same month of previous year)



Source: Calculations based on NSSG data and, for crude oil prices (UK Brent), on US Department of energy data.

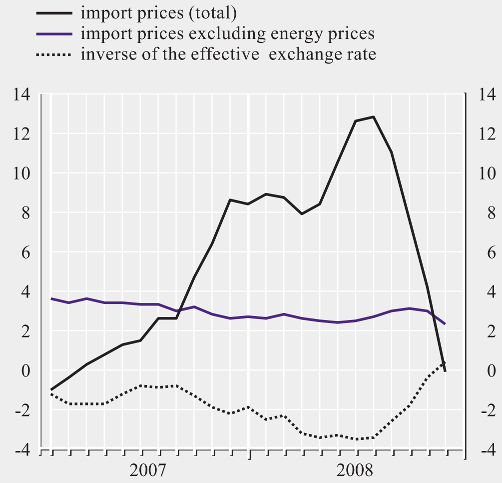
Chart IV.13 Inflationary contribution of changes in fuel prices (January 2007 - December 2008)



Source: Calculations based on NSSG data.

Chart IV.14 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 2007 - November 2008)

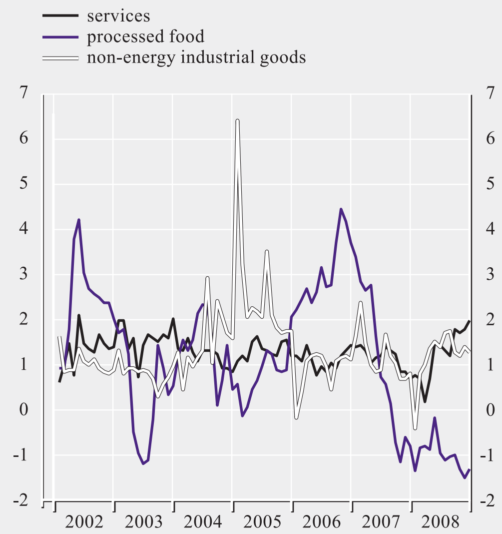
(percentage changes over same month of previous year)



Sources: NSSG and Bank of Greece.

Chart IV.15 Annual inflation differentials between Greece and the euro area (2002-2008)

(selected indices, differentials in percentage points)



Source: Calculations based on Eurostat and ECB data.

2008), but **core inflation** is expected to decline markedly less, remaining relatively high, at 3.0-3.1% (from 3.4% in 2008). This decline will mainly come as a result of the fact that **the conditions of excess demand, already weakened in 2008, are reversing this year**, while the drop in profit margins recorded in 2008 is expected to continue. Also, the inflationary effect of the anticipated high level of unit labour cost growth will lessen, as the relevant rate is likely to decelerate somewhat but remain high.

Of course, these forecasts involve a high degree of uncertainty, with reference to developments in the current year as much in world commodity prices and exchange rates as in —at domestic level— demand and productivity, which affects developments in unit labour costs.

3.2 MAIN DETERMINANTS OF INFLATION IN 2008 AND 2009

• External factors

World Brent **crude oil** prices in US dollars were constantly on the rise up to July 2008, but then fell by 68% by December, thus recording an average annual increase of 33.9% in 2008, although in December 2008 they were 52.8% lower than in December 2007. At the same time, however, the exchange rate of the euro vis-à-vis the US dollar was increasing up to July, but then started to decrease, which led it to a 7.7% fall between December 2007 and December 2008, while its average annual level rose by 7.3%. Consequently, the drop in oil prices in euro between December 2007 and December 2008 was 48.9%, while their average annual level rose by 24.8%. The above developments had a proportionate effect on the prices of imported and of domestically sold fuel (see Charts IV.12, IV.13 and IV.14).[16]

As regards 2009, it is expected that the average annual level of world oil prices in US dollars will fall by about 45%, according to the latest assumptions included in the European Commission's report published in January this year.[17]

Taking at the same time into consideration that the "oil intensity" of the domestic production of goods and services remains higher than the respective figure for the euro area as a whole,[18] it is obvious that the anti-inflationary effect of the continuing decline of oil prices is in Greece greater than in the euro area on average (exactly as the inflationary impact of the rise in oil prices in the first seven months of 2008 was greater). For this reason, the positive inflation differential (see Table IV.5 and Chart IV.15) between Greece and the euro area narrowed slightly between December 2007 and December 2008 (to 0.6 from 0.8 percentage point). In contrast, the positive core inflation differential widened in the same period (to 1.3 from 0.6 percentage points), implying that the more permanent domestic factors widening this differential and worsening the economy's international competitiveness have, overall, not weakened (see below).

• Domestic factors

Unit labour cost growth in the whole economy[19] is estimated to have accelerated in 2008 to 5.7%, from 4.0% in 2007. In the business sector (which includes public and private enterprises and banks) it is estimated that unit labour costs rose by 5.3%, compared with 4.8% in 2007. The accelerated growth of labour costs is mainly attributable to the faster increase in average nominal pre-tax earnings (see Table IV.6), while productivity growth was slightly lower than in 2007.

In 2009, it is estimated that unit labour cost growth will remain strong and stand between 4.1% and 5.4% in the whole economy and

16 In Greece, according to the Import Price Index in Industry (compiled by the NSSG), the prices of imported energy raw materials (crude oil and natural gas) increased at an average annual rate of 29.5% in the first eleven months of 2008 and the prices of imported fuel final products at an average annual rate of 21.8%, but in November these prices were respectively 6.4% and 18.1% *lower* than in November 2007. 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 rose at an average annual rate of 19.1% in 2008, but *decreased* at an average annual rate of 19.8% in November and 30.1% in December. The *retail prices of fuel included in the CPI* rose in 2008 at an average annual rate of 14.7% (December 2008/December 2007: -20.3%).

17 European Commission, *Interim Forecast*, 19 January 2009.

18 See *Monetary Policy – Interim Report*, October 2008, Appendix 2 to Chapter V.

19 This rate of increase, as calculated by the Bank of Greece, satisfactorily proxies the rate of increase in unit labour costs in the economy's non-agricultural sector (see *Monetary Policy – Interim Report*, October 2008, pp. 80-81).

Table IV.5 Harmonised index of consumer prices: Greece and the EU (2007-2008)

(annual percentage changes)

Country	2007 (year average)	December 2007	2008 (year average)	December 2008
Austria	2.2	3.5	3.2	1.5
Belgium	1.8	3.1	4.5	2.7
Bulgaria	7.6	11.6	12.0	7.2
Cyprus	2.2	3.7	4.4	1.8
Czech Republic	3.0	5.5	6.3	3.3
Denmark	1.7	2.4	3.6	2.4
Estonia	6.7	9.7	10.6	7.5
Finland	1.6	1.9	3.9	3.4
France	1.6	2.8	3.2	1.2
Germany	2.3	3.1	2.8	1.1
Greece	**3.0**	**3.9**	**4.2**	**2.2**
Hungary	7.9	7.4	6.0	3.4
Ireland	2.9	3.2	3.1	1.3
Italy	2.0	2.8	3.5	2.4
Latvia	10.1	14.0	15.3	10.4
Lithuania	5.8	8.2	11.1	8.5
Luxembourg	2.7	4.3	4.1	0.7
Malta	0.7	3.1	4.7	5.0
Netherlands	1.6	1.6	2.2	1.7
Poland	2.6	4.2	4.2	3.3
Portugal	2.4	2.7	2.7	0.8
Romania	4.9	6.7	7.9	6.4
Slovakia	1.9	2.5	3.9	3.5
Slovenia	3.8	5.7	5.5	1.8
Spain	2.8	4.3	4.1	1.5
Sweden	1.7	2.5	3.3	2.1
United Kingdom	2.3	2.1	3.6	3.1
European Union - 27	2.3	3.2	3.7	2.2
Euro area	**2.1**	**3.1**	**3.3**	**1.6**

Source: Eurostat.

between 2.7% and 4.6% in the business sector. More specifically, the increase in average pre-tax earnings in the whole economy is estimated to be between 4.4% and 5.6% in 2009, compared with 6.8% in 2008.[20] Productivity will grow by 0.5% or slightly more. This estimation of the possible range of the **rise in average earnings in the whole economy** takes into consideration the following:

- In **central government**, according to the Budget forecasts, the wage bill will increase this year by 6.3% and the wage bill plus pension expenditure by 7.6%, while the number of employees is expected to remain practically unchanged.

- In the **non-bank private sector** (see Table IV.6), the biannual National General Collective Labour Agreement signed last year provides for an average annual increase in minimum wages of 5.7% in 2009 (compared with 6.2% in 2008). Moreover, the also biannual collective agreements concluded at branch and occupational level entail an average annual increase of *contractual* earnings of 5.8% in 2009 (compared with 6.1% in 2008), which could lead to a somewhat smaller increase in average *actual* earnings (of 5.4%), provided

20 Compensation per employee including employers' social security contributions (and civil servants' pensions) is estimated to increase by 4.8%-6% (compared with 7.1% in 2008).

Table IV.6 Earnings and labour costs (2002-2009)

(annual percentage changes)

	2002	2003	2004	2005	2006	2007	2008	2009 (forecasts)
Greece								
Average gross earnings (nominal):								
– whole economy	6.6	5.6	7.2	4.4	5.7	5.2	6.8	4.4-5.6
– central government[1]	7.3	5.9	9.7	2.3	3.1	4.5	9.0	6.2
– public utilities	10.6	10.9	9.9	7.6	7.0	7.1	8.2	7.7
– banks	2.9[2]	3.1[2]	8.0	1.5[2]	10.8	8.9	3.3	6.2
– non-bank private sector	6.5	5.8	5.8	5.6	6.8	6.1	6.5	3.1-5.4
Minimum earnings	**5.4**	**5.1**	**4.8**	**4.9**	**6.2**	**5.4**	**6.2**	**5.7**
Average gross earnings (real)	**2.9**	**2.0**	**4.2**	**0.9**	**2.4**	**2.2**	**2.5**	
Net[3] income of an employee with average earnings								
– nominal	6.3[4]	6.3[5]	5.3	3.6	4.3	5.5	,,,	,,,
– real	2.6[4]	2.7[5]	2.3	0.1	1.1	2.5	,,,	,,,
Total compensation of employees	**9.1[6]**	**8.3[5]**	**8.9**	**5.8**	**7.8**	**8.2**	**8.9**	**4.6-5.9**
Compensation per employee	**5.9**	**5.5**	**7.6**	**3.9**	**5.9**	**5.7**	**7.1**	**4.8-6.0**
GDP[7]	**3.9**	**5.0**	**4.6**	**3.8**	**4.2**	**4.0**	**3.3**	
Unit labour costs:								
– whole economy	5.0[6]	3.1[5]	4.2	1.9	3.5	4.0	5.7	4.1-5.4
– business sector[8]	4.4[6]	3.5[5]	2.8	2.2	4.1	4.8	5.3	2.7-4.6

Sources: NSSG/Ministry of Economy and Finance (GDP 2002-2007), Bank of Greece estimates (for the 2008-2009 GDP and the other annual aggregates in 2002-2009).
1 Compensation per employee.
2 The relatively low growth rate of bank employees' average earnings mainly reflects changes in workforce composition.
3 Gross earnings less employees' social security contributions and income tax.
4 Including the abolition (as from 1 January 2002) of stamp duties (0.6% of gross earnings) paid by employees.
5 Taking into account the increase (of 0.1% of gross earnings) in employees' and employers' contributions to the Workers' Fund.
6 Including the abolition (as from 1 January 2002) of stamp duties (0.6% of earnings) paid by business sector employers.
7 For 2001-2007: NSSG/Ministry of Economy and Finance. For 2008-2009: Bank of Greece estimates.
8 It comprises private and public enterprises and banks.

that the impact of the adverse economic conditions is very limited. However, if certain more unfavourable assumptions come to materialise,[21] it is indicatively calculated that the increase in average *actual* earnings in the non-bank private sector may shrink to 3.1%.

• As regards **banks**, the arbitration award issued last September applied only with respect to 2008,[22] but entails a "charge carried forward" of 4.7% for 2009[23] and thus it is assumed that *actual* earnings will increase by about 6%.

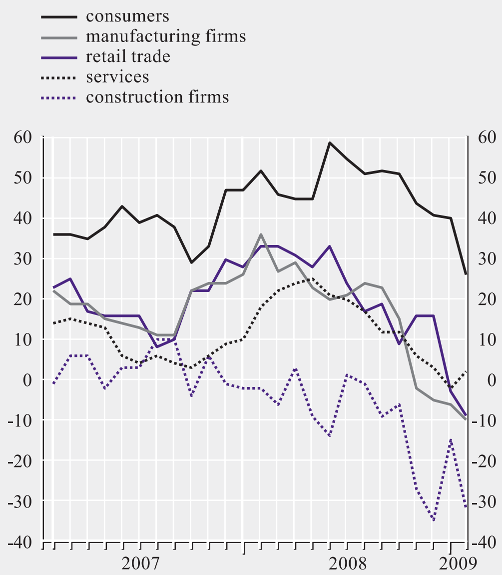
• Finally, the biannual collective agreements signed last year for certain **public utilities** entail an average annual increase of 6.2% in *contractual* earnings this year (compared with 6.7% in 2008), and thus it is assumed that *actual* earnings will increase (due to "seniority") by about 7.5%.

It is noted that the rise in fuel prices and in inflation in the last months of 2007 had affected the inflation expectations of both employees

21 Specifically, the assumptions made are: (i) only for 40% of the persons employed in the non-bank private sector the increase in their actual earnings will include the increase in contractual earnings and a small positive "seniority" effect; (ii) for 50% of the persons employed in this same sector the final increase in actual earnings will be much less than the one in contractual earnings, as average weekly working hours will be reduced by 4% due to overtime elimination; and (iii) 10% of the persons employed will accept a temporary (for 2009) cut in their earnings, in the order of 10%.
22 Specifically, it provided for increases of 3.5% as of 3 June 2008, 2.5% as of 1 September 2008 and 2% as of 1 December 2008.
23 In other words, the average annual increase in basic salaries in 2009 will be 4.7% even if no increase is granted in the course of 2009.

Chart IV.16 Inflation expectations[1] of consumers and business firms (January 2007-January 2009)

(percentage balances)



Sources: IOBE and European Commission, *Business and consumer survey results.*

1 The responses of business firms concern the prospect, in the next 3-4 months, of price increases for the goods they produce, while consumers' responses concern the prospect of a faster increase in consumer prices in the next 12 months. The data for consumers are seasonally adjusted.

and enterprises (see Chart IV.16) and —through them— the wage increases granted this year (according to the biannual collective agreements signed last year) to employees in the business sector. Meanwhile, the macroeconomic environment has changed substantially and inflation is expected to stand at a considerably lower level than what was anticipated when these wage agreements were concluded.

The forecast increase in average nominal earnings leads to a **considerable improvement of average real earnings this year, by 2.6-3.7%**, which helps strengthen domestic demand (see Section 1 of this chapter). On the other hand, of course, higher nominal earnings combined with limited productivity growth lead, as mentioned, to strong —albeit decelerating— unit labour cost growth, which will continue to exceed the respective aggregate for the euro area as a whole (see Table IV.7). This means that Greece's international cost and price competitiveness will continue to decline (see Table IV.8 in Section 4 below).[24]

As was also noted in the previous Bank of Greece report (*Monetary Policy – Interim*

24 In the first three quarters of 2008, the average annual rate of increase in unit labour costs in the euro area was 3.1% (rise of average earnings: 3.3%, rise in productivity: 0.2%), while in 2009 it may slow down to 2.8% (on the assumptions that productivity will fall by 0.3% as forecast by the European Commission and average earnings growth will decelerate to 2.5% from 3.3% in 2008).

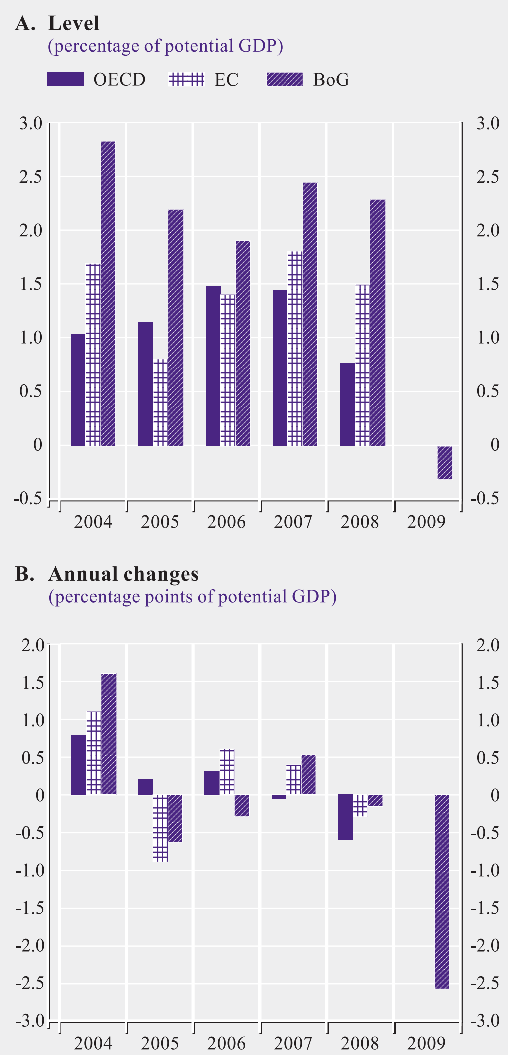
Table IV.7 Average earnings and unit labour costs in the whole economy: Greece and the euro area (2001-2009)

(annual percentage changes)

	Average earnings		Unit labour costs	
Year	Greece	Euro area	Greece	Euro area
2001	4.7	2.8	3.6	2.4
2002	6.6	2.7	5.0	2.5
2003	5.6	2.9	3.1	2.2
2004	7.2	2.6	4.2	0.9
2005	4.4	2.2	1.9	1.3
2006	5.7	2.5	3.5	1.1
2007	5.2	2.6	4.0	1.7
2008	6.8	3.6	5.7	3.3
2009 (forecast)	4.4-5.6	2.5	4.1-5.4	2.8

Sources: For Greece, Bank of Greece estimates. For the euro area: European Commission, *Economic Forecasts, Autumn 2008*, and *Statistical Annex of European Economy, Autumn* 2008 (for 2009: Bank of Greece forecast).

Chart IV.17 The output gap of the Greek economy (2004-2009)



Sources: OECD, *Economic Outlook,* No. 84, December 2008, European Commission (EC), *Autumn 2008 Economic Forecasts,* Bank of Greece (BoG), Economic Research Department estimates.

Report 2008), the relatively high rates of labour cost growth observed in recent years were due to more permanent factors (conditions of excess demand, conditions of imperfect competition in significant product markets, rigidities in the labour market, insufficient adjustment of the social partners to the operating conditions of the Economic and Monetary Union).[25]

However, as mentioned above, **conditions of excess demand weakened in 2008, while they are estimated to be reversing this year**. Thus, inflationary pressures on the demand side decreased in 2008, but this development did not suffice to counterbalance the higher inflationary effect of production costs and thus core inflation was slightly higher. But this year, this further considerable deceleration of the rise in demand means —according to the available estimates (see also Chart IV.17)— that the Greek economy's "output gap"[26] will be negative, after having been positive for many years. The negative output gap and the potential relatively small deceleration of unit labour cost growth will contribute to a decline of core inflation, which however is likely to be limited due to the conditions of imperfect competition in the economy.[27]

The weakened conditions of excess demand in 2008 contributed to a narrowing of profit margins, which appears likely to continue this year as well. Indicatively, according to the data on a sample of 237 non-financial corporations listed on the Athex,[28] sales (turnover) rose by 18.5% in the nine months from January to September 2008, but gross profits increased only by 5.1% and net pre-tax profits fell by 18.1% compared with the corresponding period of 2007. It should be noted that, excluding from the sample the two oil refineries (the sales and profits of which were considerably affected by the highly volatile oil prices in 2008), the remaining corporations' gross profits appear increased by 7.3% and their net profits reduced by 13.6%, while the rise in sales is limited to

25 See *Monetary Policy – Interim Report*, October 2008, pp. 71-72.

26 The "output gap" is defined as the difference between the *level* of current output (GDP) and the country's productive capacity (*level* of potential GDP) expressed as a percentage of the level of potential GDP. Not directly measurable, it is estimated using various alternative methods. The estimates regarding potential GDP and the "output gap" involve a high degree of uncertainty. These factors should be taken into account in assessing the conclusions of relevant analyses. A perhaps more reliable indicator is the *change* in the "output gap", measured in GDP percentage points.

27 See also *Monetary Policy – Interim Report*, October 2008, Appendix 1 to Chapter V.

28 Account has been taken of the parent companies' data only, not of the consolidated data of the respective groups. The Public Power Corporation (DEH) and the Hellenic Telecommunications Organisation (OTE) are not included in the sample.

8.1%.[29] Developments in profitability in 2008 reflect the decelerated rise of total demand and the accelerated rise of production costs, as well as the inclusion in the results of extraordinary *income* in 2007 and extraordinary *expenses* in 2008.

4 EXTERNAL BALANCE

4.1 CURRENT AND CAPITAL ACCOUNTS: OVERVIEW OF DEVELOPMENTS AND PROSPECTS

During the January-November 2008 period, the current account deficit rose by €4.4 billion year-on-year to €31.8 billion (or 12.9% of the annual GDP) (see Table 7 in the Statistical Appendix). In the same period, the combined current and capital account deficit, which reflects the economy's external financing requirements (i.e. net inflows from borrowing and from portfolio and direct investment), came to €27.9 billion (or 11.3% of GDP).

The rate of increase in the current account deficit fell to 16.0% during the reviewed period (from 31.6% in the same period of 2007), reflecting a widening of, mainly, the trade deficit and, secondarily, the income account deficit, which was only partly offset by a rise in the surpluses of the services and the current transfers balances. Specifically:

- The €3.7 billion increase in the **trade deficit** is attributable to hikes of €3.5 billion and €0.6 billion in the net oil import bill and the trade deficit excluding oil and ships, respectively, while net payments for purchases of ships fell by €0.4 billion. In particular with respect to the trade balance excluding oil and ships, export receipts grew considerably (by €1.8 billion or 16.1%), while the import bill rose by €2.4 billion or 6.7%.[30] The trade deficit continued to expand, despite a notable increase in exports, as the import bill still exceeds export receipts almost by a factor of three. The growth of the trade deficit reflects the **continued decline in international price competitiveness** (see Table IV.8) and —in general in recent years— **the inability of domestic supply to match the composition of, and rate of increase in, domestic and external demand**. Although international oil prices dropped considerably in the last months of 2008, their average annual level rose, pushing up the net oil import bill. However, the recorded sizeable increase in export receipts excluding oil and ships at a time of slowing total external demand growth is mainly associated with the **trade penetration of Greek products into Southeastern European countries**,[31] which continued to show relatively high growth rates in 2008 (see also Chapter II.3).

- The surplus of the **services balance** grew by €0.6 billion. This development is largely attributable to a €0.8 billion rise in net transport receipts. It should be noted that, despite a decline in freight rates in the third quarter of 2008,[32] gross transport receipts (mainly from merchant shipping) increased considerably (by €2.4 billion or 15.8%), as throughout this period receipts on a monthly basis were higher year-on-year, with the exception of November, when they were lower. Higher receipts are explained by the fact that the current long-term charterparties had been concluded at a time of higher freight rates and by the appreciation of the US dollar vis-à-vis the euro since August

29 These estimates are in line with those reported in Chapter VI.5, according to which in January-September 2008 net profits (at consolidated level) of all non-financial corporations listed on the Athex recorded a drop of approximately 20% compared with the corresponding period of 2007.

30 According to available provisional NSSG data for the January-November 2008 period, export value excluding oil and ships rose by 3.3%, in comparison with 3.9% for the corresponding import value. Moreover, total export value increased by 1.5%, while total import value (excluding ships) dropped by 3.1%. It should be recalled that discrepancies between the Bank of Greece and the NSSG data on trade transactions are largely attributable to the fact that the Bank of Greece data concern receipts and payments mainly through the domestic banking system, while the NSSG data are based on the one hand on customs data on transactions with non-EU countries and, on the other hand, on tax data (INTRASTAT) on intra-EU transactions.

31 According to available provisional NSSG data (on the first half of 2008), non-oil exports to the Southeastern European countries grew by 21%, mainly due to exports of food-beverages-tobacco and manufacturing products classified by raw material.

32 The decline in freight rates is a result of weaker demand for sea transport services and the continued increase in the world fleet's transport capacity. Specifically, the BDI for dry bulk freight rates fell by 92.2% in November 2008 and 92.5% in December 2008 year-on-year, while the BDTI for oil tanker freight rates fell by 4.1% in November and 33.8% in December. However, the average annual level of the BDI dropped by 10%, while that of the BDTI rose by 34%.

Table IV.8 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 the whole economy
2001	1.1	1.0	0.4
2002	1.9	2.8	3.8
2003	4.5	5.3	4.8
2004	1.4	1.9	4.3
2005	-0.7	0.3	-0.6
2006	0.1	1.0	2.2
2007	1.4	1.9	3.2
2008[2]	2.3	2.8	4.6
Cumulative percentage change in 2001-2008	12.4	18.3	25.0

Sources: Exchange rates: ECB, euro reference exchange rates. CPI: ECB. Harmonised Index of Consumer Prices where available. Unit labour costs in the whole economy: for Greece: Bank of Greece estimates, for the other countries: ECB.
1 The revised indices (compiled by the Bank of Greece) comprise Greece's 28 major trading partners (including the other euro area countries, with the exception of Malta). Weights are based on trade in manufacturing goods (SITC categories 5-8) for 1999-2001, taking into account competition in third markets.
2 Provisional data and estimates.

2008, as charterparties are usually priced in US dollars. By contrast, net travel receipts grew by a mere €0.2 billion year-on-year, as gross receipts (i.e. travel spending by non-residents in Greece) showed a limited increase (of €0.3 billion or 3.0%), while gross payments (i.e. travel spending by residents abroad) grew by €0.2 billion (or 8.2%). The underperformance of travel receipts reflects weaknesses in the existing infrastructure, which have an adverse impact on quality competitiveness, as well as the decline in price competitiveness. Finally, net payments for other services grew by €0.3 billion.

- The **income account** deficit widened by €1.8 billion, mainly as a result of higher net interest, dividend and profit payments. This development is largely associated with an increase in non-residents' public debt holdings. At the same time, the high gross external debt of both the public and the private sector, which exceeded 140% of GDP at the end of the third quarter of 2008, is fed by the current account deficits.[33]

- Finally, underlying a €0.4 billion hike in the surplus of the **current transfers balance** is an increase of €0.5 billion in EU payments to general government, as well as a €0.2 billion decrease in general government payments to the EU.[34] These developments more than offset a €0.2 billion rise in net transfers by the other sectors.

The higher surplus of the **capital transfers balance** is attributable to the positive course of the implementation of CSF III.[35] From the start of the implementation of CSF III to end-November 2008, the Structural Funds disbursed €20.7 billion, i.e. 91% of the envisaged Community financing, while this percentage is estimated to

33 Almost 3/5 of the gross external debt has been incurred by general government, while the rest mainly by the business sector (financial and non-financial corporations).
34 Current transfers from the EU to general government mainly include direct financial assistance and subsidies in the context of the Common Agricultural Policy, 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.
35 Capital transfers from the EU mainly include receipts from the Structural Funds – except for the European Social Fund – and the Cohesion Fund under the Community Support Frameworks.

have reached 95% by end-December. Total net EU transfers (current transfers plus capital transfers less payments to the Community Budget) came to €5.6 billion on a cash basis in the January-November 2008 period and are estimated to have reached €6.0 billion or 2.4% of GDP for 2008 as a whole.

For **2008 as a whole**, the current account deficit grew at a slower pace than in the January-November 2008 period, mainly because in December 2008 (a) oil import prices were considerably lower year-on-year; and (b) Greece's payments to the Community Budget (which are included in the current transfers balance) were much lower than in December 2007, when Greece had paid a retrospective contribution of €1.1 billion due to the upward revision of its GDP.[36] Against this background, **it is estimated that the current account deficit rose by about 0.5 percentage point of GDP in 2008 and stood at 14.7% of GDP**, compared with 14.1% in 2007. It is also estimated that the combined current and capital account deficit, which, as already mentioned, reflects the economy's external financing requirements (i.e. net inflows from borrowing and from portfolio and direct investment), came to 13% of GDP in 2008, from 12.2% in 2007.

In **2009**, the current account balance will be considerably affected by the deterioration in the international and the domestic economic environment. Specifically:

- In the **trade balance (excluding oil and ships)**, goods exports will be adversely affected by the strong slowdown in the growth of, or the decline in, external demand (as the impact from the worsening of market conditions in the Balkans and the other Southeastern European countries will weigh more heavily), while imports will be unfavourably affected by a deceleration in domestic demand growth. Given the larger relative share of imports, **the trade deficit will probably narrow**. At the same time, the net oil import bill is expected to drop, because the average annual level of oil import prices will be lower in 2009 than in 2008 and the slowdown in economic activity will affect oil demand (in volume terms).

- In the **services balance**, international market developments are expected to impact unfavourably on travel receipts. Transport receipts will be adversely affected by the expected drop in world trade volumes and the fall in freight rates that has already been recorded.

- Besides, with respect to the **capital transfers balance**, it should be pointed out that the European Economic Recovery Plan for tackling the financial crisis gives Member States an option to extend by six months the absorption of the remaining resources of CSF III.[37] Regarding disbursements under the National Strategic Reference Framework (NSRF) 2007-2013 (CSF IV), the European Commission approved the payment of an additional advance of 2.5% of the Structural Funds' total contribution.[38] For Greece, this amount is equal to €409 million; as a result, total advances will come to around €500 million in 2009. At the same time, the Commission has proposed concrete changes in the regulations and procedures of implementation of operational plans, with a view to speeding up disbursements and more effectively supporting the sectors hit by the crisis.[39]

Accordingly, **it is expected that the current account deficit will decline as a percentage of GDP in 2009. However, the deficit is still high**

36 According to provisional data, net EU current transfers rose to €1.9 billion in 2008, from €0.5 billion in 2007.

37 It should be recalled that, although the implementation of CSF III will be completed by 31 December 2008 according to the well-known "n+2" rule, the European Commission has already granted Greece an extension until the end of 2009 for projects in fire-stricken areas (press release of the Ministry of Economy and Finance, 2 January 2009).

38 According to the basic regulations of the European Union (EU), during the period 2007-2013 the European Commission will pay to Greece and the other EU-15 Member States 5% of the Structural Funds' total contribution (2% in 2007 and 3% in 2008) and 7.5% of the Cohesion Fund's contribution (2% in 2007, 3% in 2008 and 2.5% in 2009). In the years 2007-2008, Greece has already received advances of around €1 billion.

39 See European Commission, *A European Economic Recovery Plan*, COM (2008) 800, 26 November 2008, and speech by Commissioner Ms Hübner in the informal meeting of the EU ministers, "Cohesion Policy Response to the Financial Crisis", Marseilles, 26 November 2008.

and may widen again once the economy recovers. *Therefore, there is still a pressing need to implement policy measures over the medium to the long term in order to tackle the major macroeconomic imbalances and structural weaknesses that have led to high current account deficits, such as the shortfall of total savings relative to domestic investment consumption (mainly because private savings as a percentage of GDP are very low and public savings are negative), the continued decline in the cost and price competitiveness of the Greek economy and low structural competitiveness.*[40]

4.2 FINANCIAL ACCOUNT

During the reviewed eleven-month period, the three categories of financial investment, i.e. direct, portfolio and "other" investment, showed positive net inflows of €1.3 billion, €15.8 billion and €10.3 billion respectively. Thus, total financial investment recorded a net inflow of €27.4 billion, compared with €24.1 billion during the same period of 2007.

The acquisition of 19.99% of the capital of the Hellenic Telecommunications Organisation – OTE (€2.5 billion) in May and 3.03% (€0.4 billion) in November by the German Deutsche Telekom was the most important inflow of funds by non-residents in Greece, which totalled €3.3 billion (compared with €1.0 billion in the same period of 2007).[41] It should be recalled that the relatively low level of foreign direct investment in Greece is largely attributable to, *inter alia*, rigidities in the product and labour markets, weaknesses in infrastructures and red tape.[42] Outflows of residents' funds for investment abroad came to €2.0 billion (in comparison with €3.4 billion in the same period of 2007) and mainly concerned banks' investment activity in the Balkan countries.[43]

The uncertainty prevailing in the international capital market has affected portfolio investment flows. Specifically, this period saw net sales of shares of Greek firms worth €3.3 billion by non-residents, compared with net purchases of €7.7 billion in the January-November 2007 period. Non-residents' fund inflows for purchasing Greek government bonds and Treasury bills also dropped, by €0.9 billion year-on-year to €23.5 billion, while residents' fund outflows for purchasing foreign bonds and Treasury bills fell to €6.6 billion, from €17.3 billion in the same period of 2007.

"Other" investment recorded a net inflow of €10.3 billion, which is mainly attributable to the fact that non-residents' fund inflows to deposits and repos in Greece (€33.4 billion) more than offset an increase in domestic credit institutions' and institutional investors' corresponding holdings abroad (€21.6 billion).

Finally, at end-November 2008, Greece's reserve assets stood at €2.5 billion.

40 For a more detailed discussion of the permanent and conjunctural determinants of the current account deficit, see Bank of Greece, *Monetary Policy – Interim Report 2008*, October 2008, Chapter VI.3.

41 In addition, the most important investments by non-residents in Greece during this period were inflows of: €50 million for the participation of Alapis Farma (Cyprus) in the capital of its parent company Alapis S.A.; €22 million for the participation of Xanatech Ltd. (Cyprus) in the capital increase of Channel Nine S.A.; €103 million for the participation of Emirates International Telecommunications LLC in the capital increase of Forthnet; €30 million for the acquisition of the classified ads newspaper "Chrysi Efkairia" by Southeastern Europe Fund (Cyprus); €26 million representing part of the price for the acquisition of Alpha Channel by the German RTL; and €46 million concerning the increase in the stake of Crédit Agricole in the capital of Emporiki Bank from 68.2% to 77.5%. At the same time, there were outflows of €70 million due to the sale of the supermarket chain Plus Hellas by the German Tengelmann KKG to AB Vasilopoulos S.A.; €150 million due to the sale to Alapis of Boxwood's stake (49%) in the company Gerolymatos S.A.; and €30 million – first instalment out of six – due to the sale to Wind Hellas of the stake of Wind PPC Holding in Tellas S.A.

42 See also Bank of Greece, *Monetary Policy – Interim Report*, October 2006, Box IV.1, pp. 128-134.

43 During the reviewed period, the most important investments by residents abroad concerned outflows of (a) €80 million for a capital injection to the Polish EFG Spolka AK by Eurobank; (b) €26 million and €24 million for the increase in the stake of Piraeus Bank in the capital of its subsidiary Atlas Bank (Serbia); (c) €17 million for the increase in Eurobank's stake in the capital of its subsidiary Eurobank Serbia (Serbia); (d) €47 million for covering the participation of the National Bank of Greece in the capital increase of Romaneaska Bank (Romania); (e) €260 million for the partial acquisition of the Norwegian company Ocean Rig ASA by the Ikonomou Group; (f) €49 million for the participation of Alpha Bank in the capital increase of its subsidiary Alpha Bank Srbjja AD; (g) €492 million by Forthnet for the acquisition of companies holding the Nova subscriber TV platform; and (h) €160 million by Titan Cement Atlantic S.A. for its participation in the capital increases of, on the one hand, Titan America LLC in the United States (€132 million) and, on the other hand, Columbus Properties in the Netherlands (€28 million). Moreover, a €104 million net inflow (disinvestment) was recorded for the sale of Antenna's investment in a television channel in Bulgaria.

V FISCAL DEVELOPMENTS AND OUTLOOK

1 FISCAL DEVELOPMENTS IN THE FIRST THREE QUARTERS OF 2008 BASED ON ADMINISTRATIVE DATA

According to provisional data from the General Accounting Office, the state budget (SB) deficit increased to 4.7% of GDP during the first three quarters of 2008, from 4.2% during the corresponding period of 2007. It is to be noted that the annual target had been to reduce the deficit to 3.4% of GDP, from 4.6% in 2007. In the meantime, the SB primary deficit also widened to 0.6% of GDP, from 0.3% during the first three quarters of 2007 (see Table V.1).

The widening of the SB deficit during the first three quarters stemmed exclusively from the Ordinary Budget (OB), as a result of a shortfall in revenue and an overrun in expenditure,[1] relative to 2008 budget targets. In contrast, the Public Investment Budget (PIB) deficit was lower than in the corresponding period of 2007. This can be attributed both to the favourable course of PIB revenue and to the fact that PIB expenditure remained close to the nominal levels of the corresponding period of 2007 (see Table V.1).

According to provisional detailed data for the first ten months of 2008, OB revenue rose by 6.0%, compared with a targeted annual increase of 12.2%. According to available data, the revenue collected in the last two months of the year from the Single Real Estate Tax (ETAK), the equalisation of tax rates on heating and diesel oils, as well as from the settlement of pending tax cases and tax arrears turned out to be much less than expected. As a result, revenue growth remained close to 6.0% for the year as a whole. The budget revenue items with the most serious shortfalls were ETAK and heating oil tax receipts, while the smallest shortfall was recorded in pending tax case and tax arrear settlement (considering that most of the revenue was to be collected in 2009). These developments have led to a shortfall of more than €2.3 billion in revenue receipts[2] relative to the budgeted amount, which is only to a small extent associated with the unfolding financial crisis and economic slowdown and stems mainly from the abovementioned tax revenue items, as well as from other categories of revenue. As detailed below, shortfalls were registered in:

- ETAK revenue, on account of delays in implementing the new measure,

- receipts from the special consumption tax on fuel, due to delays in raising the heating oil tax rate to the level of the diesel oil tax rate, but also due to the mild weather conditions in the autumn of 2008,

- VAT revenue, partly on account of the downturn in economic activity and the increase in tax evasion,

- revenue from car registration fees, due to the drop in car sales,

- receipts from the tax on stock exchange transactions and from the real estate transfer tax, owing to the respective drop in trading volumes and stock prices and in real estate transactions, and

- corporate tax receipts.

There were, however, cases where the global financial crisis had a favourable impact on revenue, such as in receipts from deposit interest tax, which exceeded the relevant budget projection as a result of the notable increase in time deposits and the rise in corresponding interest rates. In addition, the high levels of retail prices for fuel during most of 2008 favourably affected the receipts from VAT on fuels, given, *inter alia*, the inelasticity of the fuel demand.

1 According to estimates from the Introductory Report on the 2009 Budget, the shortfall in revenue was the main reason for the widening of the 2008 deficit.

2 This shortfall was recorded in spite of the fact that some €450 million in extraordinary revenue, which had not initially been counted in the budget, were collected in November 2008, when the "special accounts" were incorporated into the SB. The revenue from the September 2008 measures had similarly not been anticipated in the 2008 budget.

Table V.1 State budget balance

(million euro)

	January-September			Percentage changes		Annual data						Percentage changes				
	2006	2007	2008*	2007/06	2008*/07	2005	2006	2007	Budget 2008	Estimated outcomes[8] 2008	Budget 2009[9]	2005/04	2006/05	2007/06	Budget 2008/07	Budget 2009 / estimates 2008
I. Revenue[1]	**37,390**	**40,192**	**42,713**	**7.5**	**6.3**	**47,446**	**52,460**	**56,647**	**62,602**	**62,470**	**69,272**	**5.6**	**10.6**	**8.0**	**10.5**	**10.9**
1. Ordinary budget	34,976	37,061	39,170	6.0	5.7	44,760	48,685	51,775	58,070	57,340	65,572	6.4	8.8	6.3	12.2	14.4
(of which: extraordinary revenue)	482	421[3]				0	773[5]	437[6]		450	1,372[9]					
2. Public investment budget	2,414	3,131	3,543	29.7	13.2	2,686	3,775	4,872	4,532	5,130	3,700	-7.2	40.5	29.1	-7.0	-27.9
– Own revenue	...	...	...			63	212	...	240	330	200	-24.1	236.5	...	...	-39.4
– Revenue from the EU	...	...	...			2,623	3,563	...	4,292	4,800	3,500	-6.7	35.8	...	...	-27.1
II. Expenditure[1]	**43,667**	**49,875**	**54,352**	**14.2**	**9.0**	**58,763**	**60,692**	**67,168[7]**	**70,908**	**73,306**	**78,078**	**1.6**	**3.3**	**10.7**	**5.6**	**6.5**
1. Ordinary budget	39,103	43,347	47,802	10.9	10.3	51,239[4]	52,508	58,365[7]	61,608	63,656	69,278	6.1	2.5	11.2	5.6	8.8
– Interest payments[2]	8,509	8,887	10,134	4.4	14.0	9,774	9,589	9,791	10,500	11,300	12,000	3.3	-1.9	2.1	7.2	6.2
– Ordinary budget primary expenditure	30,594	34,460	37,668	12.6	9.3	41,465[4]	42,919	48,574	51,108	52,356	57,278[10]	6.8	3.5	13.2	5.2	9.4
(of which: tax refunds)	1,724	2,114	2,782	22.6	31.6	2,554	2,392	2,623	2,550	3,200	3,300	-8.8	-6.3	9.7	-2.8	3.1
2. Public investment budget	4,564	6,528	6,550	43.0	0.3	7,524	8,184	8,803	9,300	9,650	8,800	-21.0	8.8	7.6	5.6	-8.8
III. State budget balance	**-6,277**	**-9,683**	**-11,639**			**-11,318**	**-8,232**	**-10,521**	**-8,306**	**-10,836**	**-8,806**					
% of GDP	**-2.9**	**-4.2**	**-4.7**			**-5.7**	**-3.9**	**-4.6**	**-3.4**	**-4.4**	**-3.4**					
1. Ordinary budget	-4,127	-6,286	-8,632			-6,479	-3,823	-6,590	-3,538	-6,316	-3,706					
2. Public investment budget	-2,150	-3,397	-3,007			-4,838	-4,409	-3,931	-4,768	-4,520	-5,100					
IV. State budget primary surplus	**2,232**	**-796**	**-1,505**			**-1,544**	**1,357**	**-730**	**2,194**	**464**	**3,194**					
% of GDP	**1.0**	**-0.3**	**-0.6**			**-0.8**	**0.6**	**-0.3**	**0.9**	**0.2**	**1.2**					
V. General government deficit																
% of GDP (on a national accounts basis)	-	-	-			**5.1**	**2.8**	**3.5**	**1.6**	**2.5**	**2.0**					
Amortisation payments[2]	16,099	21,009	24,883	30.5	18.4	21,752	16,954	22,544	26,211	26,278	29,158	6.9	-22.1	33.0	16.3	11.0
Ministry of National Defence programmes for the procurement of military equipment[2]	725	845	1,291	16.6	52.8	1,394	2,076	2,129	1,800	2,596	2,200	-22.2	48.9	2.6	-15.5	-15.3
GDP (current prices)	213,207	228,180	245,815	7.0	7.7	197,645	213,207	228,180	245,374	245,815	260,248	6.7	7.9	7.0	7.5	5.9

Source: Ministry of Economy and Finance, 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 Economy and Finance in recent years.
2 From 2003 onwards, interest and amortisation payments effected by the Ministry of National Defence are recorded in the off-budget item “Ministry of National Defence programmes for the procurement of military equipment”.
3 Receipts from the Olympic Airlines.
4 Including a grant of €330 million to the OTE’s personnel insurance fund (TAP-OTE) and repayment of debt (€345 million) to the Agricultural Bank of Greece. These expenditure amounts were not included in the estimates of the Ministry of Economy and Finance for 2005, as published in the Introductory Report on the 2006 Budget, but were included in the Introductory Report on the 2007 Budget.
5 Including 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.
6 Including “notional” revenue of €437 million arising from the settlement of positions *vis-à-vis* the Olympic Airlines.
7 Including “notional” expenditure of €840 million arising from the settlement of positions *vis-à-vis* the Olympic Airlines, as well as additional contributions to the Community Budget (€1,108 million) due to the upward revision of past GDP figures.
8 Introductory Report on the 2009 Budget.
9 Including revenue from special accounts (now abolished), amounting to €972 million, as well as revenue from the liquidity-support package, amounting to €400 million.
10 Including payments out of special accounts (now abolished), amounting to €882 million, as well as expenditure of €790 million for the Intergeneration Solidarity Fund.

During the first three quarters of 2008, OB expenditure (including tax refunds) rose by 10.3%, compared with a targeted annual increase of 5.6%. Primary expenditure increased by 9.3% (compared with a target of 5.2%) and interest payments by 14.0% (compared with an annual target of 7.2% – see Table V.1). As early as from the drawing up of the budget, the ceilings on certain categories of expenditure were considered to be extremely low,[3] and it was likely that significant discrepancies would arise during budget implementation.

According to the data available for the first three quarters and the estimates for 2008 contained in the Introductory Report on the 2009 Budget, there will be a considerable overrun in expenditure in 2008 on an annual basis, in the order of 0.8% of GDP. This overrun concerns both primary expenditure and interest payments and stems mainly from the following categories:

- the expenditure for tax refunds, where the overrun amounts to some €650 million,

- the subsidies to social security funds (mainly the Farmers' Insurance Fund – OGA, the Seamen's Pension Fund – NAT, the Freelance Professionals' Social Security Fund – OAEE),

- the expenditure for civil servants' pensions (due to the large number of civil servants who retired in 2008), and

- interest payments, which will exceed the relevant forecast by €700-800 million.

It should be noted that on 7 September 2008 the Ministry of Economy and Finance announced a €500 million cutback in primary expenditure for 2008. However, the latest available data do not seem to indicate that such a cutback was achieved.

Turning to the PIB, its deficit in the first three quarters of 2008 was reduced to €3,007 million, from €3,397 million during the same period of 2007 (see Table V.1). This was due to the fact that receipts grew faster than payments for public works (13.2% versus 0.3%, respectively). In the rest of 2008, however, and in spite of the additional €500 million received from the EU Funds, the deficit widened as project execution picked up.

2 FISCAL DEVELOPMENTS IN 2008 ON A CASH BASIS

Cash data for the year as a whole confirm the picture given by the administrative data for the first three quarters. More specifically, the central government cash deficit came to 7.0% of GDP in 2008, from 6.0% of GDP in 2007 (see Table V.2).

This widening of the cash deficit stemmed mainly from the OB deficit, which increased relative to 2007 by 1.4 percentage points of GDP and, to a much lesser extent, from the PIB (deficit increase of 0.2 percentage point). The limited widening of the PIB deficit was due to the inflow of €500 million from the EU Funds, in excess of the budget target. However, PIB expenditure also exceeded the respective target by some €300 million, due to an acceleration in project execution.

Finally, the central government cash deficit was contained thanks to the significantly larger balance of the Special Agricultural Products Guarantee Account (ELEGEP), managed by the Payment and Control Agency for Guidance and Guarantee Community Aid (OPEKEPE) and held with the Agricultural Bank of Greece. Excluding this account, the SB cash deficit[4] comes to 7.1% of GDP in 2008, from 5.4% in 2007 (see Table V.2).

3 The 2008 budget provided for considerable increases in wages (salary adjustments for armed forces officers and back payments to judges), in subsidies to social security funds (to cover the increases in pensions from OGA and in the Social Solidarity Allowance for Pensioners–EKAS), in pensions (pension adjustments for armed force and security force personnel), as well as in welfare benefits (extension of the eligibility for large family benefits to families with three children, increase in the unemployment benefit). In contrast, the ceiling on all the other expenditure items was exceptionally low. It should be noted, for instance, that against a budgeted decrease of 2.8% in tax refunds in 2008, an increase of 31.6% was recorded in the first three quarters alone.

4 It is conceptually close to the SB deficit in administrative terms.

Table V.2 Net borrowing requirement of central government on a cash basis[1]

(million euro)

	2006	2007	2008*
1. State budget	**11,500**	**12,432**	**17,361**
Percentage of GDP	5.4	5.4	7.1
– Ordinary budget[2]	7,020[4]	8,512[5]	12,585[6,7]
– Public investment budget	4,480	3,920	4,776
2. ELEGEP – OPEKEPE[3]	**-1,033**	**1,160**	**-254**
3. Central government (1+2)	**10,467**	**13,592**	**17,107**
Percentage of GDP	4.9	6.0	7.0

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 Organisation for the Payment and Control of Guidance and Guarantee Community Aid. It replaced DIDAGEP (Agricultural Markets Management Service) on 3 September 2001.
4 Including 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 (ATE) and €290 million from additional dividends of the Deposits and Loans Fund. Also including revenue from privatisations (€323 million from the sale of ATE shares, €597,4 million from the sale of Postal Savings Bank shares, €364.4 million from the sale of Emporiki Bank shares) and expenditure of €422.9 million for a grant to the Farmers' Insurance Fund (OGA).
5 Including receipts 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 €264.9 million for aid to the fire-stricken and of €465.7 million for a grant to OGA.
6 Including receipts of €430.8 million from the sale of OTE shares, as well as expenditure for a grant of €570.8 million to OGA.
7 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 7.1% to 7.2% of GDP and the net borrowing requirement of central government from 7.0% to 7.1% of GDP.

3 THE 2009 BUDGET AND THE REVISION OF ITS FORECASTS

According to the 2009 budget, the SB deficit was expected to fall from 4.4% of GDP in 2008 to 3.4% in 2009, with its primary surplus increasing from 0.2% of GDP in 2008 to 1.2% in 2009 (administrative data – see Table V.1). In contrast, the 2009 surplus of social security organisations, local authorities and other entities in public law was projected to be slightly smaller than in 2008. The general government deficit (on a national accounts basis) was also expected to drop considerably from 2.5% of GDP in 2008 to 2.0% in 2009.

However, as stated by the Economy and Finance Minister in his presentation of the Stability and Growth Programme Update for 2008-2011 (on 30.1.2009), based on the latest available data, the general government deficit came to 3.7% of GDP in 2008, owing chiefly to a shortfall in revenue and — to a lesser extent — to an excess in outlays. The deficit-to-GDP ratio is projected to remain unchanged in 2009 and to fall to 3.2% in 2010 and to 2.6% in 2011.

As stated by the Economy and Finance Minister, the government revised its 2009 revenue projections downwards, to reflect the poorer outcome in 2008 and the anticipated slowdown in the growth rate this year. More specifically, receipts are expected to fall some €2.5 billion short of the target set in the 2009 budget. This figure can be broken down as follows:

- Some €600 million in direct tax receipts (mainly from corporate taxation, due to lower profits in 2008);

- €1.6 billion in indirect tax receipts, due to the slowdown in growth;

- €220 million from the settlement of pending tax cases and the collection of tax arrears, owing to reduced liquidity;

- Tax refunds will be some €400 million higher, in order to ensure sufficient market liquidity (faster VAT refunds).

On the other hand, receipts will increase in 2009 (relative to budget projections) from such sources as the Single Real Estate Tax (ETAK), first imposed on households *in 2008* (but to be collected in 2009), the part of the receipts from the settlement of pending tax cases and tax arrears that was also pushed back to 2009, and receipts from tax arrangements passed by Parliament in September 2008.

4 THE IMPACT OF THE CRISIS ON THE PUBLIC SECTOR

The unfolding **global financial crisis**, which has led to a reassessment of credit risks, has clearly exposed the structural weaknesses and the macroeconomic imbalances of the Greek economy. The **considerable widening of the yield spread between Greek and German bonds** (across the maturity spectrum) reflects market concerns related to Greece's very high public debt (the second highest in the EU) and its ability to rein in its fiscal deficits and achieve sustainable fiscal adjustment. This widening is also a sign of the markets' concern about the exceptionally large current account deficit (connected, in part, with the fiscal deficit[5]) and of their disappointment about the insufficiency of the structural measures taken so far. Finally, international organisations have repeatedly underlined the problems caused by Greece's frequent revision of its statistical data (especially fiscal variables) and by the fact that certain significant government liabilities (for instance, those related to public hospitals) have yet to be properly recorded.

The upward revision of the 2007 general government deficit ratio to 3.5% (disclosed on 22 October 2008), the possibility of the 2008 deficit reaching quite more than 3.0% of GDP and the optimistic projections of the 2009 budget were negatively received by the global markets in the last three months. The prevailing view is that the present fiscal position is unsustainable, especially in the light of the already high level of the public debt, the liabilities of the social security system and the large balance of payments deficit.

These market assessments caused the credit rating agency "Standard and Poor's", at first, to put Greece (along with Ireland, Spain and Portugal) on negative credit watch and then, on 14 January 2009, to downgrade Greece's key sovereign credit rating (and later that of Spain and Portugal). Greece's new five-year bond issue on 20 January reflects these developments. The issue was oversubscribed, but, with its yield of 5.6%, the differential with the comparable German security came to 325 basis points. Five-year Greek government bonds had again been issued on 23 September, at a yield to maturity of 4.8%. Also, the average yield of 2.48% on Greek Treasury bills auctioned on 13 January 2009 was considerably higher than the rate at which Italy (1.7%) and France (1.48%) succeeded in borrowing one day earlier, even though Italy's public debt-to-GDP ratio is the highest in the euro area. This issue of Treasury bills, *too*, was oversubscribed.

Nonetheless, the yield to maturity (2.48%) at which the Treasury bills were auctioned was roughly half the respective yield (5.09%) at which comparable Treasury bills had been issued at the end of September 2008. This development reflects the series of interest rate cuts by the European Central Bank that started in early October and continue to this day, as well as the shift in investor preference towards government securities issued by euro area countries with a better credit rating (see also Chapter VI.4). **Therefore, the significant widening, for the most part from September 2008 to January 2009, in the spread between Greek and comparable German bond yields took place during a period of substantial cuts in all interest rates (especially in German bond yields). This has, so far, contained the increase in the cost of new government borrowing[6] relative to 2008 to about one percentage point. However, the *supply* of government (and corporate) securities on the global market is**

5 See also Chapter I.
6 The widening of the spread between Greek and German bond yields in the secondary market does not automatically lead to a commensurate increase in new government borrowing rates, given that the yield on German securities also declines.

expected to rise significantly in the next few months, making it likely that bond market prices will fall, while yields will generally increase; thus, the increase in the cost of new borrowing for the Greek government will be even greater. This increase, combined with the significant decline in the growth rate, would negatively affect the "debt dynamics".[7] As is well known, debt accumulation, as a percentage of GDP, is driven by primary deficits and interest payments and, conversely, can be reduced by achieving strong growth rates.

It should be pointed out that the widening of the yield spread keeps Greece from taking advantage of the global drop in interest rates. For a country with such a high public debt, the cut in interest rates could have entailed substantially lower interest payments.

Furthermore, the widening of the yield spread, by leading to a higher cost of government borrowing, is passed on to the whole economy, given that Greece's banks and non-financial corporations are not usually able to raise funds from the global markets at better terms than the government is. Therefore, if adequate measures are not adopted, the Greek economy will not be able to take advantage of the substantial drop in global interest rates, with negative implications for economic growth, employment, the tax burden and the debt dynamics.

The shift towards short-term borrowing (which offers lower interest rates), though helping to moderate the negative impact from the widening of the yield differential, exposes the government to a greater risk, in the event of abrupt changes in short-term interest rates.

The latest developments leave no room for a relaxation of fiscal policy as a means of containing the impact of the financial crisis on the real economy. Quite the contrary: appropriate measures and a disciplined fiscal policy must be promptly adopted, as global markets await substantial fiscal consolidation measures. Fiscal adjustment could be very beneficial to Greece's economy.

Against this background, **fiscal adjustment measures** should be taken and implemented as soon as possible, aimed at keeping the deficit-to-GDP ratio below 3% in 2009 and at further reducing it, by about 1% of GDP per annum over the next three years, thereby eliminating it by 2012. Fiscal adjustment should be based, first and foremost, **on cutting excessive expenditure and increasing expenditure efficiency** and, secondly, on increasing revenue by **curbing tax evasion.** To improve the effectiveness of this effort, the measures must be detailed and both content- and target-specific and be implemented within a clearly defined time schedule. Implementation should also be monitored through regular briefings and transparency checks.

Meanwhile, **structural measures for fiscal adjustment with a medium-term horizon must be drawn up** to achieve a steady decrease in general government debt over the next decade (see Chapter I and Box I.1).

In this way, Greece will improve its fiscal position and boost investor confidence in the sustainability of the fiscal policy pursued.

7 The debt dynamics denote the possibility of an increase in the debt-to-GDP ratio (*even in the absence of primary deficits*) due to the large expenditure for interest payments.

VI MONEY, CREDIT AND CAPITAL MARKETS

1 THE DEVELOPMENT OF MONETARY AGGREGATES IN GREECE

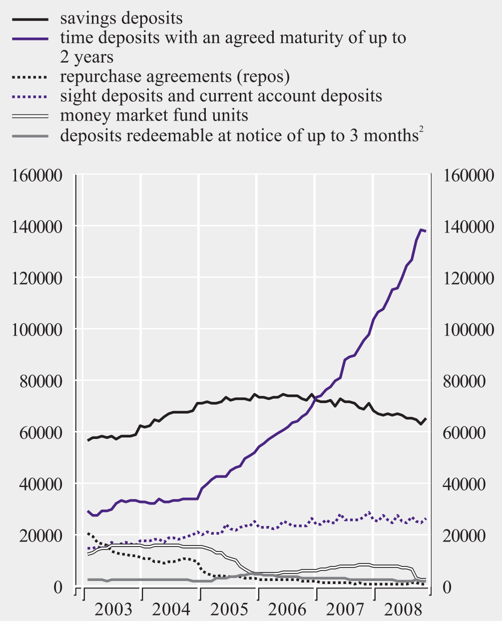
1.1 MONETARY DEVELOPMENTS

The annual growth rate of the monetary aggregate M3,[1] after accelerating in the ten-month period January-October 2008, slowed down to 12.3% in December 2008 (October 2008: 15.2%, fourth quarter of 2008: 14.4%, fourth quarter of 2007: 14.7%, see Table VI.1), still standing at levels higher than the euro area M3 (December 2008: 6.6%). The increase in short-term deposit rates and the negative yields of mutual funds as a whole in the period under review supported investors' preference for more liquid and safer assets with relatively higher yields. This investment behaviour contributed to the shift from non-M3[2] to M3 assets (especially deposits with agreed maturity of up to two years). The recent deceleration in the rate of change in M3 is connected with the slowdown of economic growth and with tighter MFI financing conditions.

The annual growth rate of total deposits included in M3 slowed down slightly in the period under review (fourth quarter of 2008: 15.3%, fourth quarter of 2007: 15.9%), reflecting the deceleration of the time deposits' growth rate and the sharper decrease in overnight deposits (see Table VI.1). In particular, the differential between the time deposit rate and the overnight rate widened further, contributing to the shift of funds within M3 from overnight deposits to time deposits.[3] Among the other components of M3, both repo holdings and holdings of money market fund units decreased in the period under review (see Table VI.1 and Chart VI.1).

Chart VI.1 Deposits, repurchase agreements and money market fund units in Greece[1] (January 2003-December 2008)

(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.

1.2 BANK DEPOSIT RATES

During 2008, the interest rate on new time deposits rose considerably, while the overnight deposit rate remained virtually unchanged. These developments took place despite the fact that the ECB reduced its key interest rates[4] in the last quarter of 2008, by 175 basis points cumulatively.

The rise in the time deposit rate reflected the uncertainty that followed the collapse of major financial corporations and was, in particular, the result of the fact that banks, propelled by the limited liquidity conditions in the interbank market and by their expected continuation, sought to increase their deposit base offering attractive terms. The rate on such deposits (which are the most significant category of deposits[5]) increased by 84 basis points and stood at 5.36% in Decem-

1 This aggregate comprises the Greek contribution to the euro area M3 (excluding currency in circulation).
2 Mainly from bond-type mutual funds and funds of funds. During the January-December 2008 period there were recorded net outflows of €2,209 million from bond-type mutual funds and €1,019 million from funds of funds.
3 Let it be noted that the interest rate differential between time deposits with agreed maturity of up to one year and overnight deposits widened (in favour of time deposits), reaching 4.12 percentage points at end-2008, from 3.29 percentage points at end-2007. Thus, the percentage share of overnight deposits in M3 was reduced to 38.6% at end-2008 (December 2007: 48.1%), whereas the share of time deposits grew further to 58.5% (December 2007: 47.4%).
4 For the changes in the ECB standing facilities corridor, see Chapter III.1.
5 See fn. 3 above.

Table VI.1 Greek contribution to the main monetary aggregates of the euro area

(non-seasonally-adjusted data)

	Outstanding balances on 31.12.08 (million euro)	Annual percentage changes[1]										
		2003	2004	2005	2006	2007		2008				
		Q4[2]	Q4[2]	Q4[2]	Q4[2]	Q4[2]	Dec.[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	Dec.[3]
1. Overnight deposits	90,798.9	6.8	16.8	9.3	0.7	-0.9	-1.2	-2.8	-4.4	-6.3	-7.0	-8.4
1.1 Sight deposits and current account deposits	25,916.3	17.7	19.1	20.2	1.8	10.3	8.4	6.2	2.6	-1.3	-3.6	-8.3
1.2 Savings deposits	64,882.6	4.1	16.1	6.3	0.2	-4.6	-4.7	-5.8	-6.8	-8.1	-7.9	-8.4
2. Time deposits with agreed maturity of up to 2 years	137,639.1	29.3	5.3	45.2	37.5	42.2	41.0	42.1	43.0	38.3	39.1	37.1
3. Deposits redeemable at notice up to 3 months[4]	1,883.0	1.5	2.8	105.2	-24.4	-20.3	-20.1	-20.0	-18.0	-22.9	-24.1	-23.2
4. Total deposits (1+2+3)	**230,321.0**	**12.6**	**13.1**	**20.7**	**12.1**	**15.9**	**15.4**	**16.0**	**16.5**	**14.3**	**15.3**	**13.8**
5. Repurchase agreements (repos)	377.4	-47.7	-12.6	-72.8	-35.7	-54.3	-55.0	-55.7	-50.9	-39.3	-11.4	-46.2
6. Money market fund shares/units	2,263.6	68.0	-1.9	-51.8	-2.5	40.5	36.3	28.1	9.3	-11.2	-58.8	-71.4
7. Debt securities issued with a maturity of up to 2 years[5]	2,126.1	268.6	-0.3	-42.2	24.2	-	-	-	-	-	-	-
8. M3 excluding currency in circulation (4+5+6+7)	**235,088.1**	**6.4**	**9.2**	**6.9**	**10.6**	**14.7**	**14.3**	**15.2**	**16.2**	**15.0**	**14.4**	**12.3**

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.

Table VI.2A Bank interest rates on new deposits by households in the euro area and Greece

(percentages per annum)

	December 2007	November 2008	Change Nov. 2008/ Dec. 2007 (percentage points)	December 2008[3]	Change Dec. 2008/ Dec. 2007 (percentage points)
Overnight[1]					
Weighted average interest rate in the euro area	1.18	1.29	0.11	...	...
Maximum interest rate	2.58	2.52	-0.06	...	...
Minimum interest rate	0.19	0.17	-0.02	...	...
Interest rate in Greece	1.24	1.27	0.03	1.24	0.00
Interest rate differential between Greece and the euro area	0.06	-0.02	-0.08	...	...
With an agreed maturity of up to one year[2]					
Weighted average interest rate in the euro area	4.28	4.27	-0.01	...	...
Maximum interest rate	4.68	5.22	0.54	...	...
Minimum interest rate	2.94	3.46	0.52	...	...
Interest rate in Greece	4.52	5.22	0.70	5.36	0.84
Interest rate differential between Greece and the euro area	0.24	0.95	0.71	...	...

Sources: ECB and euro area NCBs.
1 End-of-month rate.
2 Monthly average rate.
3 Euro area bank rates for December 2008 were not available on the date of publication of this Report.

Table VI.2B Bank interest rates on new deposits by households in euro area countries[1]

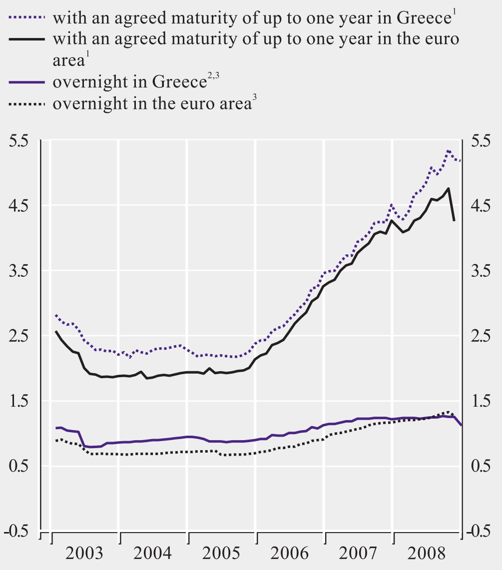
	Overnight[2]		With an agreed maturity of up to 1 year[3]	
	December 2007	November 2008	December 2007	November 2008
Austria	1.93	2.07	4.28	4.46
Belgium	1.16	0.95	4.21	3.73
Finland	1.09	1.30	4.68	4.20
France	0.19	0.17	4.18	4.20
Germany	1.83	2.02	4.22	3.89
Greece	**1.24**	**1.27**	**4.52**	**5.22**
Ireland	1.40	1.28	4.08[4]	3.85[4]
Italy	1.28	1.43	2.94	3.79
Luxembourg	2.58	2.52	4.07	3.46
Netherlands	0.80	0.76	4.25	4.39
Portugal	0.20	0.31	4.16	4.28
Slovenia	0.40	0.52	4.04	4.56
Spain	0.70	0.73	4.49	4.60

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 regulatory and fiscal arrangements (see ECB, "Differences in MFI interest rates across euro area countries", September 2006).
2 End-of-month rate.
3 Monthly average rate.
4 The interest rate applies to all time deposits irrespective of maturity.

ber. The said interest rate was in November (for which comparable data are available) **the highest among euro area countries** (see Tables VI.2A, 2B and Chart VI.2). The interest rate on overnight deposits remained virtually unchanged to 1.24% in December.

Chart VI.2 Bank interest rates on new deposits by households in Greece and the euro area (January 2003-December 2008)

(percentages per annum)



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

During the eleven months January-November 2008, the rise (of 23 basis points) in the average interest rate on euro area total new deposits (November 2008: 2.81%) amounted to almost 1/3 of the increase (67 basis points) in the corresponding Greek rate (November 2008: 3.20%). As a result, the differential between the two rates, which was negative in December 2007, turned positive in favour of the Greek interest rates in November 2008.

2 THE FINANCING OF THE ECONOMY – BANK FINANCING OF ENTERPRISES AND HOUSEHOLDS

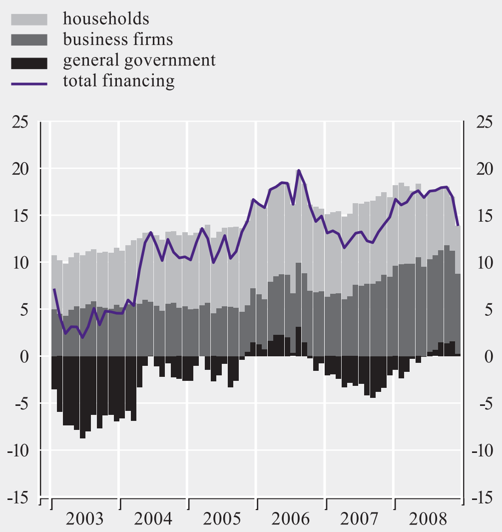
2.1 THE FINANCING OF THE ECONOMY

The annual growth rate of the outstanding total financing of the economy by domestic MFIs[6] stood at high levels in the course of 2008, following a generally upward trend until October, but slowing down in the last two months (December 2008: 13.9%, October 2008: 18.0%, fourth quarter of 2007: 13.5%, see Table VI.3 and Chart VI.3). In more detail, the rate of change in the outstanding balance of private sector total financing (to enterprises and households) followed a downward path from the beginning of 2008, remaining however at high levels. By contrast, the rate of change in the outstanding balance of general government financing was on the rise, having a positive sign in July 2008 for the first time since September 2006. This rate remained positive in the months that followed, reflecting the domestic MFIs' increased holdings of govern-

6 The financing of the economy by domestic MFIs comprises loans to enterprises, households and general government, total government debt securities and corporate bonds held by MFIs, as well as the balance of securitised loans and corporate bonds. In calculating the rate of change in total financing, account is taken of (i) foreign exchange differences arising from the valuation in euro of loans denominated in foreign currency and (ii) total write-offs by banks during the reference period.

Chart VI.3 Greece: Total financing of the economy by domestic MFIs and its sectoral breakdown (January 2003-December 2008)

(annual percentage changes, shares in percentage points)



Source: Bank of Greece.
Note: Including MFI loans to business firms, households and general government, as well as total MFI holdings of government securities and corporate bonds. Also including the amounts of securitised loans and corporate bonds, loan write-offs carried out by banks during the reference period and foreign exchange valuation differences arising when calculating the euro value of foreign currency loans.

Table VI.3 Total financing[1] of the economy by domestic MFIs

(annual percentage changes)

	2005	2006	2007	2008						
	Q4[2]	Q4[2]	Q4[2]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	October[3]	November[3]	December[3]
1. Total financing by MFIs	13.8	15.6	13.5	16.1	17.4	17.5	16.9	18.0	16.9	13.9
2. Financing of general government	-0.6	-1.8	-16.1	-9.4	-3.2	3.8	8.1	8.8	10.0	1.3
3. Financing of enterprises and households	19.8	21.7	21.7	22.6	22.1	20.3	18.6	19.7	18.2	16.4
3.1 Enterprises	12.3	17.3	20.1	23.1	24.2	22.9	22.5	24.1	22.2	19.8
3.2 Households	30.3	26.9	23.6	22.0	19.9	17.6	14.5	15.1	14.0	12.8
of which:										
3.2.1 Housing loans	31.1	28.4	23.3	21.0	18.5	16.2	13.1	13.7	12.3	11.4
3.2.2 Consumer loans	30.3	23.7	22.6	23.3	22.1	21.0	18.4	19.1	17.8	16.0

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.
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.

ment paper (fourth quarter of 2008: 8.1%, fourth quarter of 2007: -16.1%). These holdings are also connected with the higher borrowing requirement of central government in 2008 compared with 2007.[7]

2.2 BANK CREDIT TO ENTERPRISES AND HOUSEHOLDS

The annual rate of change in the outstanding balance of private sector financing decelerated, especially in the second half of 2008, but remained high (December 2008: 16.4%, fourth quarter of 2008: 18.6%, fourth quarter of 2007: 21.7%, see Table VI.3). The maintenance of this rate at high levels is connected with the ability of domestic MFIs to respond to the high demand for credit, especially by enterprises, by making use primarily of their deposit base and, to a lesser extent, of the possibility of refinancing through the Eurosystem in the period under review. In more detail, the growth rate of the outstanding balance of corporate financing slowed down marginally, while that regarding households slowed considerably. The deceleration of credit expansion to the private sector is attributed to the decreased demand for housing loans by households as well as to the tighter financing terms and criteria applied by banks, as evidenced by the results of the Bank Lending Survey.[8]

Based on the above trends and other factors expected to affect credit supply and demand (see also Chapter IV.1), **the growth rate of the outstanding balance of private sector financing is expected to fall in 2009. However, the implementation of the Greek plan for enhancing liquidity (Law 3723/2008, described in more detail in Box VI.1) is estimated to support an annual rate of credit expansion to households and enterprises of around 10% in 2009. In turn, this rate will suffice to prop up GDP growth**. The main preconditions for a credit expansion rate of around 10% are:

• **First**, that banks take advantage of the arrangements of the plan for liquidity enhancement (€28 billion in total). Greek banks have already started to benefit from this plan so as to strengthen their capital base through the issuance of preference shares and to enhance their liquidity through special Greek government bonds and through the provision of state guarantees for interbank loan agreements to be concluded by credit institutions with the aim of financing enterprises and households.

• **Second**, that the economic growth rate comes close to the level forecast by the Bank of Greece (see Chapter IV.1); in this way disposable income will be kept to a level leading to a satisfactory rate of increase in deposits.

• **Third**, that private deposits with banks (and, indirectly, credit expansion to enterprises and households) are affected only mildly by the government's shift to the issuance of securities with competitive interest rates, which are available lately in the domestic retail market.

• Finally, a **crucial parameter** is considered to be the adoption by banks of a realistic provisioning policy and a similar policy for the increase in their capital base, in line with experience from former banking crises, which show a significant increase in non-performing loans.

The annual growth rate of the outstanding balance of corporate financing —which followed a generally upward course from the beginning of 2008— decelerated in the last two months of 2008 to 19.8% in December (fourth quarter of 2008: 22.5%, fourth quarter of 2007: 20.1%, see Table VI.3). The maintenance of this rate at high levels is connected with the increased corporate requirements for working capital,[9] as well as with business expectations for tighter

7 Regarding demand, it is observed that the growth rate of domestic MFI holdings in government paper was high in the last months of 2008, given that the level of the said holdings was particularly low in 2007, especially in the second half (preceded by a period of sizeable sales of government paper). Regarding the supply of government paper, in 2008 government paper issues increased compared with 2007, as the net borrowing requirement of central government on a cash basis was 25.9% higher in 2008 than in 2007.

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

9 Corporate requirements for working capital have increased, especially in the last months of 2008. This resulted in a shorter average maturity of bank loans to enterprises.

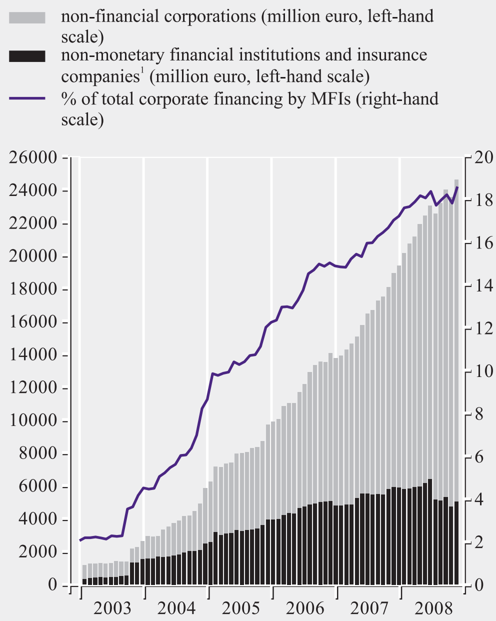
lending terms and criteria in the future,[10] which urged enterprises to expedite fund-raising from credit institutions. Moreover, the limited possibility of raising funds through the capital market (see Section 5 of this chapter) has strengthened the role of the banking system as a source of corporate financing.

It is noted however that the *net flow of new bank loans*[11] declined significantly in November-December 2008 (by around 62.7% compared with the corresponding two months of 2007). This contributed to the slowdown of the annual rate of change in the outstanding balance of corporate financing in the last months of the year. It is possible that this slowdown will continue. On the side of loan supply, indications that lending criteria will become tighter persist, bolstered by the reasonable adjustment of banks to the current environment of heightened risk. At the same time, it is expected that the demand for credit will decrease, as implied by the deterioration of business expectations (as recorded in the continued decline in the economic sentiment indicator for Greece).[12]

As credit expansion to enterprises remained high in the period under review, total MFI loans to enterprises (including corporate bonds, securitised loans and securitised bonds) rose to 54.3% of GDP in December 2008 (December 2007: 48.8%). If only bank loans are taken into account, corporate financing stands at 42.4% of GDP in December 2008 (December 2007: 39.3%) and the difference from the corresponding euro area aggregate as a whole is reduced to 9.7 percentage points (December 2007: 9.9 percentage points). A considerable part of total credit expansion was covered by the issuance of corporate bonds, thus increasing the share of this type of financing in total bank credit to enterprises to 18.6% in December (December 2007: 17.0%, see Chart VI.4).[13]

The breakdown of credit expansion by sector of economic activity shows that the annual growth rate of the outstanding balance of financing to most sectors in December 2008

Chart VI.4 MFI funds raised by enterprises through bond issuance (January 2003-December 2008)



Source: Bank of Greece.
1 The share of insurance companies does not exceed 1%.

was lower than in December 2007, with the exception of trade, industry, constructions and agriculture (see Table VI.4).

It is worth noting that the *net flow of new bank loans* to commercial firms in November-December 2008 was reduced by 33.4% compared with the corresponding two months of 2007. It is estimated that corporate activity and hence corporate borrowing in the necessities retailing sector (e.g. food), which is not

10 These business expectations were corroborated by the results of the Bank Lending Surveys of July and October 2008, which point to a tightening of the terms and criteria on corporate loans.
11 The net flow of bank loans includes the change in the balance of financing (loans, corporate bonds, securitised loans and securitised corporate bonds). It also includes foreign exchange differences from the valuation in euro of loans in foreign currency, as well as total write-offs of bank loans during the period under review.
12 See Chapter IV.1.
13 It is noted that in 2008 enterprises raised from MFIs, through the issuance of corporate bonds, net funds worth €5,681 million (2007: €4,875 million). As mentioned in previous reports, this practice has been quite popular in the last few years, especially because of the tax advantages (Law 3156/2003) connected with bond issuance. These securities are absorbed by banks and they are not traded in a regulated secondary market.

Table VI.4 Loans[1] to domestic firms and households from domestic MFIs

	Outstanding balances on 31.12.08 (million euro)	Annual percentage changes								
		2006	2007	2008						
		Q4[2]	Q4[2]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	October[3]	November[3]	December[3]
A. Enterprises[4]	**132,458**	**17.3**	**20.1**	**23.1**	**24.2**	**22.9**	**22.5**	**24.1**	**22.2**	**19.8**
1. Trade	32,985	9.9	17.9	19.7	21.6	22.9	23.0	23.3	24.3	20.7
2. Industry[5]	24,873	9.5	11.0	14.0	16.2	18.1	18.2	18.5	18.8	17.0
3. Construction	11,257	28.9	28.5	33.7	36.6	36.1	38.5	40.2	37.2	36.6
4. Shipping	10,228	17.8	25.3	25.3	25.2	24.7	23.8	25.3	25.1	16.7
5. Non-monetary financial institutions	8,326	35.1	14.7	18.6	16.9	7.9	-1.8	7.1	-6.3	-8.3
6. Tourism	7,032	11.0	21.0	24.1	25.8	27.7	25.1	26.3	23.9	20.8
7. Transport and communications (excluding shipping)	4,642	51.9	39.6	60.1	60.6	30.3	36.5	42.8	30.4	27.9
8. Agriculture	3,856	11.0	10.7	15.0	22.9	20.0	21.3	20.8	22,2	22.2
9. Electricity - gas - water supply	3,518	3.0	40.2	39.5	20.4	27.0	37.4	42.6	35.8	30.9
10. Other sectors	25,742	28.8	27.4	28.9	29.5	25.7	24.8	25.2	24.7	24.8
B. Households	**117,203**	**26.9**	**23.6**	**22.0**	**19.9**	**17.6**	**14.5**	**15.1**	**14.0**	**12.8**
1. Housing loans	77,700	28.4	23.3	21.0	18.5	16.2	13.1	13.7	12.3	11.4
2. Consumer loans	36,435	23.7	22.6	23.3	22.1	21.0	18.4	19.1	17.8	16.0
– Credit cards	10,044	5.7	6.3	11.2	13.5	13.9	12.4	13.0	12.2	10.0
– Other consumer loans[6]	26,391	35.4	30.9	29.1	25.9	23.9	20.9	21.6	20.1	18.4
3. Other loans	3,068	30.6	42.2	34.1	30.7	13.8	7.5	5.5	10.8	9.5
Total	**249,661**	**21.7**	**21.7**	**22.6**	**22.1**	**20.3**	**18.6**	**19.7**	**18.2**	**16.4**

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.
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 All sectors except "other sectors" are presented in descending order of their shares in total loans.
5 Comprising manufacturing and mining/quarrying.
6 Comprising personal loans and loans against supporting documents.

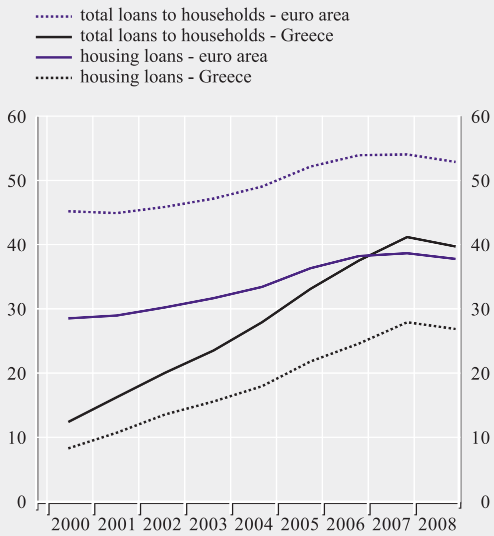
subject to cyclical fluctuations, will not be significantly affected in the future. By contrast, forecasts on the activity of trade firms, e.g. car sale enterprises, where income elasticity of demand is larger, are unfavourable. Moreover, the *net flow of new loans* to industrial firms in the last two months of 2008 halved compared with the corresponding 2007 period, a development in line with the drop in the industrial production index. The slowdown in the annual rate of credit expansion to industry in December 2008 (17.0%) compared with November (18.8%) is expected to go on, as new orders for industrial products are continuously decreasing since August and business expectations are further deteriorating, which foreshadows a fall in the demand for loans by industrial firms in the very near future. Finally, in the same period the annual growth rate of the outstanding balance of financing to construction firms picked up (December 2008: 36.6%, fourth quarter of 2007: 28.5%), in spite of the fall in construction activity (according to NSSG national accounts estimates). However, the expectations index for construction firms is constantly falling in the last months (see Chapter IV.1).

The annual growth rate of MFI credit to households, which has been following a downward path since February 2006, decelerated further to 12.8% in December 2008 (fourth quarter of 2008: 14.5%, fourth quarter of 2007: 23.6%, see Table VI.3 and Chart VI.3). The deceleration of credit expansion to households was very fast after September 2008, whereas the *net flow of new loans* in the November-December 2008 period was half that in the corresponding two months of 2007.

Total MFI borrowing (including securitised loans) of households amounted to 48.0% of GDP in December 2008, i.e. it increased by 2.4 percentage points compared with December 2007. If securitisations were not taken into consideration, household borrowing would amount to 39.7% of GDP in December 2008, compared with 52.9% in the euro area (see Chart VI.5).

Chart VI.5 Bank loans[1] to households in Greece and the euro area (2000-2008)

(percentage of GDP[2])



Sources: Bank of Greece and ECB for outstanding loans, Eurostat for GDP.
1 Excluding securitised loans.
2 Estimates for the 2008 GDP.

The observed slowdown of credit expansion to households mainly reflects the rapid deceleration in the growth rate of housing loans (which account for 66% of total loans to households). The development of housing loans is associated with the adoption of tighter criteria and terms of financing by MFIs and also, in part, with the increase in the corresponding lending rates (until October). It is mainly connected, however, with the enhanced cautiousness of households as regards purchasing or building a house, on account of the heightened uncertainty about the economic outlook and, by extension, their future incomes.[14]

In more detail, the annual rate of increase in the outstanding balance of housing loans

14 See IOBE, Business Survey results, October 2008 and January 2009 (which included ad hoc questions to consumers on these issues). Furthermore, the results of the Bank Lending Survey point to a containment of the supply and a decline in the demand for housing loans in the first three quarters of 2008. It has been observed that, as regards the euro area, statistical data on credit expansion confirm the results of the Bank Lending Survey with a time lag of three or four quarters (see ECB, *Monthly Bulletin*, December 2008).

decelerated significantly in the period under review, to 11.4% in December 2008 (fourth quarter of 2008: 13.1%, fourth quarter of 2007: 23.3%). The *net flow of new housing loans* in the last two months of 2008 decreased considerably (by 52.5%) compared with the corresponding 2007 period. The outstanding balance of housing loans and housing loan securitisations amounted to 31.8% of GDP in December 2008 (December 2007: 30.4%). If securitisations are not taken into account, the outstanding balance of housing loans drops to 26.8% of GDP in December 2008 (December 2007: 27.9%). The corresponding euro area ratio also fell (December 2008: 37.8%, December 2007: 38.6%, see Chart VI.5).

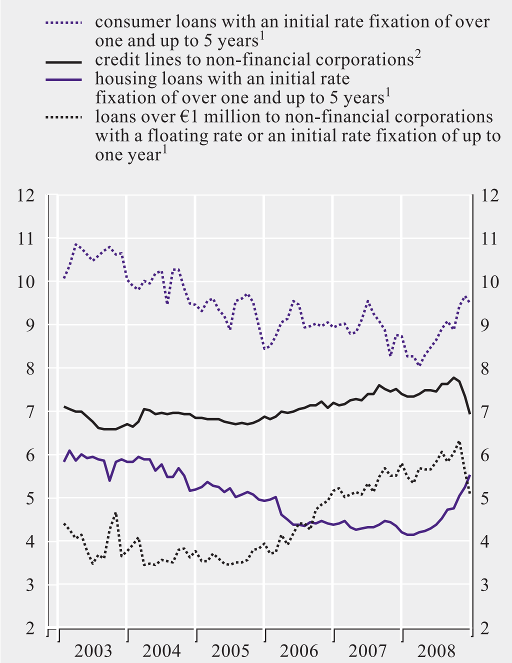
The annual rate of increase in the outstanding balance of consumer loans slowed down in 2008, remaining high nonetheless, to 16.0% in December (fourth quarter of 2008: 18.4%, fourth quarter of 2007: 22.6%). This slowdown reflects the tighter criteria applied to MFI financing[15] and is further supported by the sharp fall in consumer confidence (recorded in the latest IOBE survey). This development became more marked in the last two months of 2008, as implied by the 68% decrease in the *net flow of new consumer loans* compared with the corresponding 2007 period.

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

In 2008 developments in Greek bank lending rates varied (see Chart VI.6). More specifically, the interest rates of (consumer and housing) loans to households were recording up until October a rise, on account of the increased risk premium, which is connected, *inter alia*, with the increase in non-performing loans in this particular loan category. The interest rate increase was sharper for consumer loans with agreed maturity and for housing loans. **However, in the last two months of the year, interest rates on loans to households declined somewhat**, remaining nonetheless higher than in December 2007. **Interest rates on loans to non-financial corporations were rising moderately until end-October, but in the last two months fell sharply and stood at levels lower than in December 2007**, reflecting the fact that the cuts in ECB key interest rates had an increased bearing in the last quarter of 2008 (cut by 175 basis points in total). The decrease in corporate loan rates is also connected with the shortening of their average maturity. This decrease was more marked in loans with a defined amount and maturity. It is noted that banks, in order to obtain liquidity and because of the difficulties in fund-raising from the interbank market, offered high interest rates for time deposits (see also Section 1.1 of this chapter), which also kept loan rates at high levels.

Chart VI.6 Bank interest rates on new loans in Greece (January 2003-December 2008)

(percentages per annum)



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

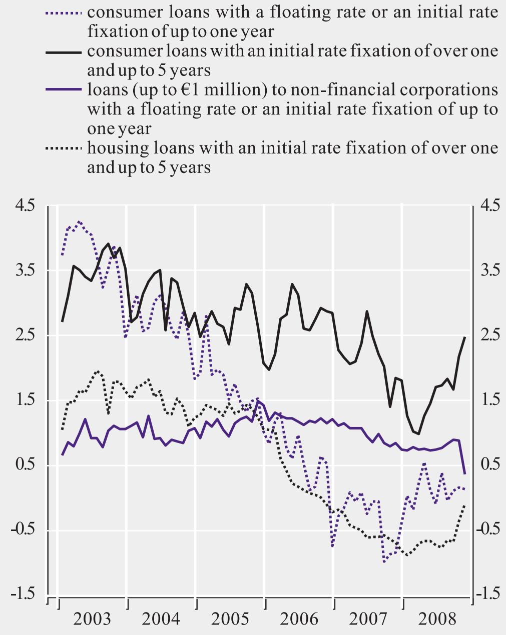
15 According to the results of the Bank Lending Survey, domestic MFIs adopted tighter rules and criteria on consumer loans from the beginning of 2008 onwards, while non-performing consumer loans increased (see Box VI.1).

In the eleven-month period January-November 2008 (for which comparable data are available), increases in the interest rates on loans to households in Greece were generally larger than those in the euro area, thus widening the positive differential between the respective consumer loan rates and limiting the negative differential regarding housing loan rates. By contrast, the positive differential between interest rates on business loans without agreed maturity narrowed, as interest rates in Greece declined more than the corresponding euro area ones. In general, lending rates in Greece were standing (until November) at levels higher than the euro area average, except housing loan rates, which were among the lowest in the euro area (see Tables VI.5A-B and Chart VI.7).

More specifically, the average interest rate on new consumer loans increased by 37 basis points during 2008 and came to 11.29% in December. This development is attributed to the increase in the interest rate both on loans with agreed maturity (of 109 basis points, to 9.46% in December) and on loans without agreed maturity (of 36 basis points, to 14.83% in December). The increase in the interest rate on loans with agreed maturity mainly reflects the significant rise[16] (of 115 basis points) in the interest rate on loans with a floating rate or an initial rate fixation of up to one year (which account for about 1/4 of the above loan category,[17] see Table VI.5A). The interest rate on loans without agreed maturity is high, because, as mentioned in previous reports, this loan category mainly consists of loans through credit cards. Due to the high administrative costs and the increased credit risk, the interest rate on loans through credit cards is high (December 2008: 15.72%) and in the period under review it increased further, by 41 basis points. Furthermore, as concerns consumer loans, the positive interest rate differential between Greece and the euro area generally widened: for loans with a floating rate or an initial rate fixation of up to one year, the negative differential narrowed, while the largest deviation (444 basis points) appeared in loans without agreed maturity (according to November data).

Chart VI.7 Bank interest rates on new loans: differentials between Greece and the euro area (January 2003-November 2008)

(percentage points)



Sources: Bank of Greece and ECB.

Housing loan rates also rose significantly. The average interest rate of this loan category increased by 76 basis points in 2008 and came to 5.21% in December. The interest rate of the most significant housing loan category (loans with an initial rate fixation of over one and up to five years) increased by 132 basis points, while the interest rate of the second most sig-

16 This was also the result, to some extent, of the fact that this loan category includes loans with a floating rate, for the majority of which the interbank market rate (EURIBOR) is used as the reference rate. (The EURIBOR remained high until October 2008.) Moreover, the increased credit risk inherent in consumer loans due to the high percentage of non-performing or bad loans (consumer loans have less collateral) contributed to the increase in the interest rates of this bank loan category. For the development of non-performing loans see Box VI.1.

17 It is noteworthy that in 2007 this loan category was the most significant among consumer loans with agreed maturity. In 2008, however, its share in the total of consumer loans with agreed maturity decreased, while the share of loans with an initial rate fixation between 1 and 5 years increased, same as that of loans with an initial rate fixation of over 5 years (which have the largest share, about 42%).

Table VI.5A Bank interest rates on new loans in the euro area and Greece

(percentages per annum)

	December 2007	November 2008	Change Nov. 2008/ Dec. 2007 (percentage points)	December 2008[2]	Change Dec. 2008/ Dec. 2007 (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	6.08	6.04	-0.04	...	...
Maximum interest rate	7.25	7.97	0.72	...	...
Minimum interest rate	5.51	5.30	-0.21	...	...
Interest rate in Greece	6.83	6.41	-0.42	6.18	-0.65
Interest rate differential between Greece and the euro area	0.75	0.36	-0.39	...	...
A.2 Loans of more than €1 million to non-financial corporations					
Weighted average interest rate in the euro area	5.35	4.87	-0.48	...	...
Maximum interest rate	6.53	6.58	0.05	...	...
Minimum interest rate	4.89	4.40	-0.49	...	...
Interest rate in Greece	5.79	5.59	-0.20	5.07	-0.72
Interest rate differential between Greece and the euro area	0.44	0.73	0.29	...	...
A.3 Housing loans					
Weighted average interest rate in the euro area	5.32	5.62	0.30	...	...
Maximum interest rate	6.45	7.05	0.60	...	...
Minimum interest rate	4.76	4.69	-0.07	...	...
Interest rate in Greece	4.76	5.35	0.59	4.92	0.16
Interest rate differential between Greece and the euro area	-0.56	-0.27	0.29	...	...
A.4 Consumer loans					
Weighted average interest rate in the euro area	8.05	9.00	0.95	...	...
Maximum interest rate	11.30	12.89	1.59	...	...
Minimum interest rate	5.51	5.43	-0.08	...	...
Interest rate in Greece	7.61	8.88	1.27	8.76	1.15
Interest rate differential between Greece and the euro area	-0.44	-0.12	0.32	...	...
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	5.03	5.33	0.30	...	...
Maximum interest rate	6.30	7.25	0.95	...	...
Minimum interest rate	4.21	4.36	0.15	...	...
Interest rate in Greece	4.21	5.24	1.03	5.53	1.32
Interest rate differential between Greece and the euro area	-0.82	-0.09	0.73	...	...
B.2 Consumer loans					
Weighted average interest rate in the euro area	6.93	7.17	0.24	...	...
Maximum interest rate	11.79	12.78	0.99	...	...
Minimum interest rate	5.46	5.66	0.20	...	...
Interest rate in Greece	8.71	9.51	0.80	9.49	0.78
Interest rate differential between Greece and the euro area	1.78	2.34	0.56	...	...

Sources: ECB and euro area NCBs.
1 Monthly average rates.
2 Euro area bank rates for December 2008 were not available on the date of publication of this Report.

Table VI.5B 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		Housing loans		Consumer loans	
	Dec. 2007	Nov. 2008	Dec. 2007	Nov. 2008	Dec. 2007	Nov. 2008	Dec. 2007	Nov. 2008	Dec. 2007	Nov. 2008	Dec. 2007	Nov. 2008
Austria	5.54	5.42	5.10	4.86	5.73	5.99	6.57	6.83	4.26	4.84	6.50	6.38
Belgium	5.89	5.44	5.20	4.80	5.26	5.62	6.98	6.70	5.18	5.43	7.52	8.22
Finland	5.73	5.30	4.89	4.67	4.92	4.98	5.85	5.72	5.03	4.36	6.14	6.49
France	5.82	5.57	5.00	4.78	5.01	5.39	8.03	8.68	4.77	5.23	6.93	7.20
Germany	6.55	5.95	5.47	4.91	5.97	6.07	5.51	5.43	5.33	5.20	5.46	5.66
Greece	6.83	6.41	5.79	5.59	4.76	5.35	7.61	8.88	4.21	5.24	8.71	9.51
Ireland	6.75	6.78	6.53	5.74	5.07	4.88	6.81	6.55	...[4]	...[4]	...[4]	...[4]
Italy	5.98	5.96	5.21	4.74	5.48	5.46	11.30	11.61	4.99	5.50	7.91	8.73
Luxembourg	...[3]	5.42	...[3]	4.40	4.83	4.69	...[3]	...[3]	...[3]	...[3]	6.29	6.40
Netherlands	5.51	5.41	5.22	4.49	5.41	5.83	9.09	12.89	5.19	5.57	...[3]	...[3]
Portugal	7.25	7.97	5.72	6.16	5.18	5.58	7.82	8.84	...[4]	...[4]	11.79	12.78
Slovenia	6.40	6.98	5.96	6.58	6.45	7.05	7.23	7.57	6.30	7.25	7.62	8.27
Spain	5.96	6.15	5.33	5.02	5.35	5.99	10.24	11.41	5.65	6.21	8.86	9.67

Sources: ECB and euro area NCBs.

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 regulatory and fiscal arrangements (e.g. see ECB, “Differences in MFI interest rates across euro area countries”, September 2006, Table 2, showing that consumer loans without agreed maturity, which include credit cards, represent a much higher share – 53% – in Greece compared with the euro area average of 15%).

2 Monthly average rate.

3 In these interest rate categories, the volume of loans is very small.

4 These countries do not publish data on the respective interest rates.

Table VI.6 Interest rate spread in Greece and the euro area

(percentages per annum)

	Average interest rate on new loans in Greece[1]	Average interest rate on new deposits in Greece[1]	Interest rate spread in Greece (percentage points)	Interest rate spread in Greece with euro area weighting (percentage points)	Interest rate spread in the euro area (percentage points)
Dec. 1998	15.27	8.96	6.31	...	...
Dec. 1999	13.60	7.74	5.86	...	...
Dec. 2000	9.45	4.06	5.39	...	...
Dec. 2001	7.28	2.04	5.24	...	...
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
Nov. 2008	7.04	3.20	3.84	3.49	2.85
Dec. 2008[2]	6.72	3.27	3.45	...	...

Sources: Bank of Greece and ECB.
1 As this is dependent on both the interest rates applicable to the different types of loans (deposits) and on each category's share in total loans (deposits), a change in either of these elements could alter its level. To mitigate the effects of sharp movements in the shares of individual categories, twelve-month averages of shares are used in the calculations.
2 Euro area bank rates for December 2008 were not available on the date of publication of this Report.

nificant housing loan category (loans with a floating rate or an initial rate fixation of up to one year) increased less (by 16 basis points). The above interest rates remained (until November) lower than the corresponding euro area average rates, although the differential narrowed (they are by 9 basis points lower for housing loans as a whole and for the most significant housing loan category and by 27 basis points for the second most important housing loan category). The fact that housing loan interest rates remain generally low in Greece can be partly attributed to the relatively low risk that banks are faced with, since the collaterals associated with these loans are relatively higher than the euro area average.[18]

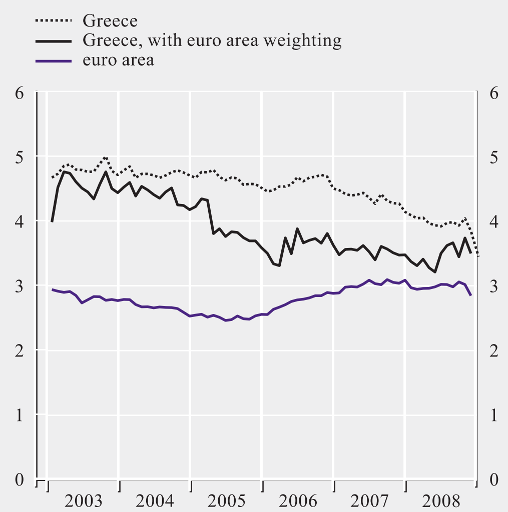
In 2008 the average interest rate on loans to non-financial corporations decreased by 55 basis points to 6.14% in December. Interest rates on loans with agreed maturity declined (by 65 and 72 basis points for the two most significant loan categories), while interest rates on loans without agreed maturity, which account for 37% of total business loans,[19] fell by 43 basis points.[20] In the eleven-month period January-November 2008, these lending rates changed in the euro area less than they did in Greece, thus narrowing the positive differential, with the exception of loans of over €1 million with a maturity of up to one year, where this differential widened.

The differential between the average weighted interest rate on new bank loans and the corresponding interest rate on new deposits (interest rate margin) declined by 30 basis points in Greece and 24 basis points in the euro area during the eleven months January-November 2008, due to the larger increase in the deposit rate over the lending rate. (**In Greece the said margin narrowed by 70 basis points in the course**

18 See "Housing wealth and private consumption in the euro area", ECB, *Monthly Bulletin*, January 2009.
19 Credit lines constitute the bulk of this loan category (see Chart VI.6).
20 It should be noted that the positive differential between Greece and the euro area average as regards the interest rate of this particular business loan category is the highest (83 basis points) among all loan categories.

Chart VI.8 Average interest rate spread between new loans and new deposits in Greece and the euro area (January 2003-December 2008)

(percentages)



Sources: Bank of Greece and ECB.

of the entire year.) In spite of the speedier narrowing of the margin in Greece, it remains at a higher level than the euro area average margin (see Table VI.6 and Chart VI.8).[21] Thus, in November 2008 this margin was 385 basis points in Greece and 285[22] basis points in the euro area. The reasons for the observed deviations of interest rate margins among different euro area countries have been presented in detail in previous reports.[23] As regards Greece, one of the most important factors is the difference in the breakdown[24] of both deposits and loans. The margin would be lower by 35 basis points in November if the breakdown of deposits and loans in Greece were the same as in the euro area.

4 THE GOVERNMENT BOND MARKET

The adverse impact of the international financial crisis on the real economy, which became sharper at the end of 2008, and the consequent significantly heightened uncertainty led to a flight to safety, which caused the market prices of safer securities to rise and euro area (especially Germany's) government bond yields to decline in the last quarter of the year. By contrast, in the same period, Greek bond yields recorded a small increase.

In the first half of 2008, Greek government bond yields in the secondary market, keeping track of the developments in the yields of the corresponding euro area securities, followed an upward path, due to the increase in inflationary pressures over the same period and to expectations for a rise in ECB key interest rates (see Chart VI.9). In the three-month period July-September, however, estimates of a slowdown of economic activity in the euro area, along with the gradual easing of inflationary pressures, had a downward effect on bond yields. From October and up until the end of the year, government bond yields in the Greek secondary market fluctuated strongly[25,26] and increased slightly on average, showing a decoupling from the significant decline in, mainly, German bond yields.[27] This development is connected with the investors' strong shift to safety, i.e. to the euro area bonds with the best credit rating.

Due to these developments, **the yield spread between Greek securities and the corresponding**

21 It should be noted that from December 1998 until November 2008 the interest rate margin in Greece declined by 246 basis points.

22 According to Bank of Greece calculations. For ECB calculations, see "Differences in MFI interest rates across euro area countries", ECB, September 2006.

23 In more detail, the reasons why the interest rate margin is higher in Greece relate to the features of the domestic banking system, e.g. the higher operating costs of banks, the relatively large number of small depositors and borrowers, the higher borrowing costs for banks in the interbank market, the higher ratio of non-performing loans to total loans and the longer time required for the realisation of collateral.

24 In Greece, the share of household overnight deposits is relatively larger than in the euro area. As regards loans, the share of loans through credit cards is larger in Greece: in the euro area, this loan category is not important.

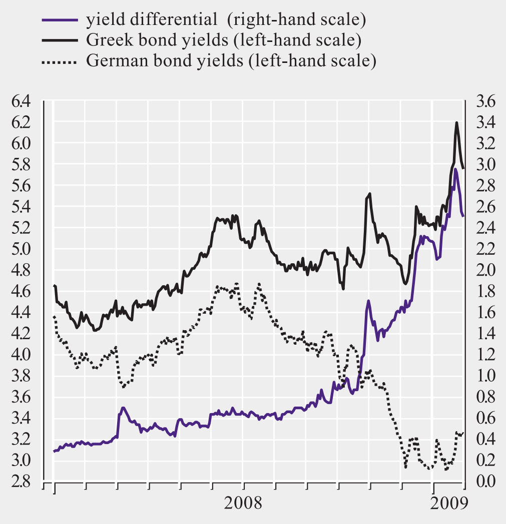
25 The volatility of yields in the secondary market for Greek government securities (standard deviation of the daily yield on the 10-year reference bond), which is a measure of investor uncertainty, was in 2008 almost double the previous six years' average. Volatility increased significantly in the euro area bond markets as well.

26 A positive effect was exerted in this period by the cut in key ECB interest rates and the concerted government measures for the support of the financial system that were announced in the euro area. By contrast, the publication of data and estimates of a prolonged recession in advanced economies had a negative impact.

27 At the end of 2008 the German 10-year bond yield reached the historical low of 2.95%. This yield is considerably lower than the dividend return of shares listed on euro area stock markets at the end of 2008, something observed for the first time in the last five years.

Chart VI.9 Yields on the 10-year Greek and German government bonds (January 2008-January 2009)

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



Source: Bank of Greece.

German ones widened considerably throughout the maturity spectrum, reaching the highest levels since Greece's entry to the Economic and Monetary Union.[28] However, a significant widening of this spread, albeit to a smaller degree, was also observed in relation to other euro area bonds, e.g. the Italian, Belgian, Portuguese and Spanish ones,[29] a fact that reflects a change in investors' attitude as to government securities, based on credit and liquidity risks. This change stems from investors' concerns about the impact of the financial turmoil on countries with a high public debt, high servicing costs and a large current account deficit. The significant fall in secondary market transactions also had a negative contribution. In more detail, the yield spread between the Greek 10-year bond and its German counterpart widened substantially from end-October onwards[30] and at end-December 2008 stood at 228 basis points,[31] against a mere 29 basis points at end-December 2007 (see Chart VI.9). At the beginning of 2009, this spread grew to 295 basis points,[32] showing a tendency to decline afterwards, and stood at 250 basis points at the end of January.

The yield curve of Greek securities shifted upwards at end-December and its slope became more positive (see Chart VI.10), given that the yield spread between the 10-year and the 3-year bond increased by 41 basis units and came at end-December 2008 to 86 basis points. The yield of the Greek 10-year bond was 5.23% at the end of December 2008, i.e. it had increased by 57 basis points compared with end-December 2007[33] (see Chart VI.9).

As mentioned above, the average daily value of transactions in the Electronic Secondary Securities Market (HDAT) fell significantly in the period under review to €1.1 billion,[34] i.e. almost by half compared with 2007 (see Chart VI.11). It should be noted that in the last three months of 2008 the average daily value of transactions in HDAT was particularly low (€423 million, against €1,573 million in the corresponding 2007 period). The average bid-ask spread in bond prices increased to 55.9 basis points in December 2008 from 9.7 basis points in December 2007, reflecting the reduced liquidity and the investors' aversion to risk.[35]

28 The yield spread between Greek and German bonds stood in 2008 at levels similar with 1999 levels.

29 See "Recent developments in government bond yield spreads", ECB, *Monthly Bulletin*, May 2008, and "Recent widening in euro area sovereign bond yields spreads", ECB, *Monthly Bulletin*, November 2008.

30 On 22 October 2008, the international rating agency Fitch downgraded the outlook for the Greek economy as regards its credit standing to "stable" from "positive", keeping however the country's national credit rating at "A".

31 There are clear indications (Kielborn and Mietzner, 2005, "EU Financial integration: Is there a core Europe? Evidence from a cluster-based approach", J.W. Goethe Universität, Working paper no. 130) that the yield of the Greek 10-year bond keeps close track of similar yields in the so-called regional markets of the euro area, especially of the Italian bonds. The corresponding yield spread between the Italian and the German 10-year bond increased at the end of 2008 to 144 basis points from 28 basis points at the end of 2007.

32 This development is connected with the downgrading, on 14 January 2009, of the country's credit standing by the international rating agency Standard & Poor's from "A" to "A-" (the relevant warning was given a few days before).

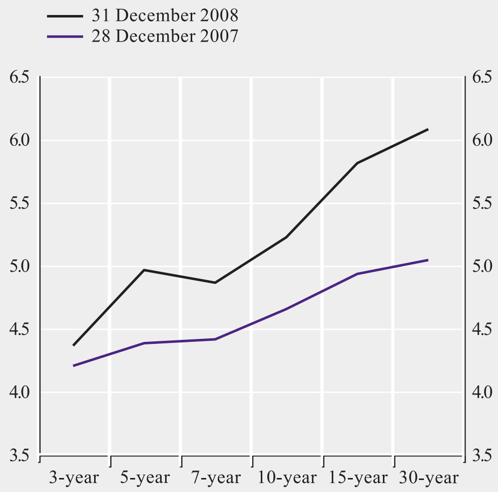
33 By contrast, the yield of the Italian 10-year bond decreased to 4.39% at end-2008 from 4.65% at end-2007.

34 However, the average daily value of transactions in the Book-Entry Securities System of the Bank of Greece (which, apart from transactions in HDAT, includes transactions between banks and their customers in the OTC market) was €19.6 billion in 2008, roughly the same as in 2007.

35 The large widening of this spread is the result of the fact that, due to the adverse conditions in the secondary market in 2008, the bid-ask spread allowed by HDAT operating rules increased significantly, depending on the maturity of the securities traded.

Chart VI.10 Greek government paper yield curves

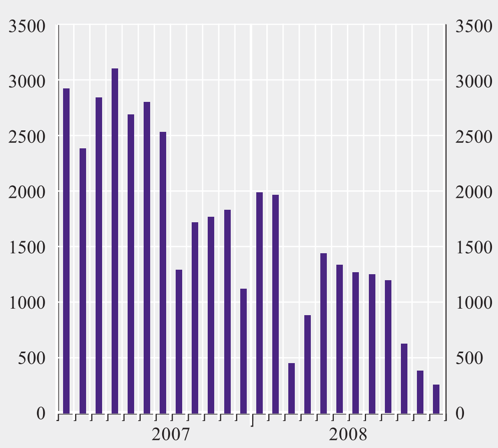
(yields in percentages per annum)



Source: Bank of Greece.

Chart VI.11 Average daily value of transactions in the Electronic Secondary Securities Market (HDAT) (January 2007-December 2008)

(million euro)



Source: Bank of Greece.

The main characteristics of developments in the primary market for government securities in 2008 were the significant increase in funds raised through this market and the increase in interest rates, which resulted from the rise in the yields recorded in the secondary market. The increase in interest rates had a negative impact on the cost of new government bond issues, at the same time raising the servicing costs for a small part of the debt (with a floating rate). Despite these adverse conditions, the average cost of government borrowing in 2008 increased moderately, by about 21 basis points compared with 2007.[36]

The funds raised by the government through the primary market in 2008 were by 15.6% increased compared with 2007 and amounted to €43.4 billion[37] (see Table VI.7).[38] A new 10-year reference bond was issued through syndication, as well as a new 3-year and 5-year auction bond. To enhance the liquidity of these issues, the Greek government re-opened them using auction procedures. It also re-opened past issues of 15-year, 30-year and 23-year index-linked bonds via syndication. Finally, four Treasury bill series (13, 26 and 52 weeks) were issued through auction procedures in the same period, but accounted for just 5% of the total value of issues (see Table VI.7).[39]

Notwithstanding the negative climate in the secondary market, the interest of investors in Greek government securities in the primary market was maintained at satisfactory levels, given that the auction coverage ratio was 3.1 in 2008, compared with 4.2 in 2007.

5 THE STOCK MARKET

The main developments in the Athens Exchange (Athex) in 2008 were the **significant**

36 The average weighted cost of new loans amounted to 4.63% in 2008, from 4.42% in 2007, 3.72% in 2006 and 3.20% in 2005. This level is considered relatively satisfactory, considering that the average weighted maturity of these issues is 11.7 years.

37 In 2008, redemptions of Greek T-bills and government bonds and interest payments amounted to €24.0 billion and €10.0 billion respectively, from €20.1 billion and €8.6 billion in 2007.

38 Moreover, Greece made use of the current flexible programme for short-term securities in the euro market (Euro Commercial Paper) in order to cover unforeseen cash requirements between these scheduled issues. This programme makes it possible to issue immediately securities with a rate fixation or a floating rate, in euro or in other currencies, with a maturity of 1-365 days, on money market terms.

39 According to balance of payments statistics, the net inflow of external funds for the purchase of Greek government securities in the period January-November 2008 amounted to €23.5 billion, compared with €24.3 billion in the corresponding 2007 period.

Table VI.7 Greek government paper issuance

	2007			2008		
Type of security	**Million euro**	**Percentage of total**		**Million euro**	**Percentage of total**	
Treasury bills	*1,574*	*4.2*		*1,874*	*4.3*	
Bonds[1]	*35,958*	*95.8*	*100.0*	*41,515*	*95.7*	*100.0*
3-year	1,508		4.2	9,890		23.9
5-year	7,804		21.7	5,822		14.0
8-year[2]	-		-	5,600		13.5
10-year	11,266		31.3	8,439		20.3
15-year	6,926		19.3	3,457		8.3
23-year	3,470		9.7	3,966		9.6
30-year	3,984		11.2	3,741		9.0
50-year*	1,000			600		1.4
Total	**37,532**	**100.0**		**43,389**	**100.0**	

Source: Ministry of Economy and Finance.
1 Reopenings of past issues have been classified on the basis of their initial maturity.
* Issued through private placement.

fall in share prices, which was an international concurrence, the subsequent decrease in stock exchange transactions and the subdued fund-raising by firms (see Chart VI.12 and Table VI.8). Share prices continued to follow a fluctuating downward path in January 2009 as well.

Between end-December 2007 and end-December 2008 the Athex composite share price index fell by 65.5% and stood at a level similar to that of early 2003 (see Chart VI.12). The decline in Athex share prices gathered pace during September-October, same as occurred worldwide,[40] due to the further decrease in investor confidence regarding high-risk holdings, e.g. of shares. The collapse of Lehman Brothers at mid-September had a particularly negative impact. However, in the November-December period, there were signs of stabilisation, following the concerted efforts of governments, central banks and international organisations to attenuate the financial crisis and minimise its impact on the real economy.

The decline in share prices in the Athex and internationally was the result of investors' growing uncertainty regarding the extent and duration of the financial turmoil and, by extension, their estimates of relatively low corporate profits[41] and an increased possibility of a number of firms going into default.[42] These investor

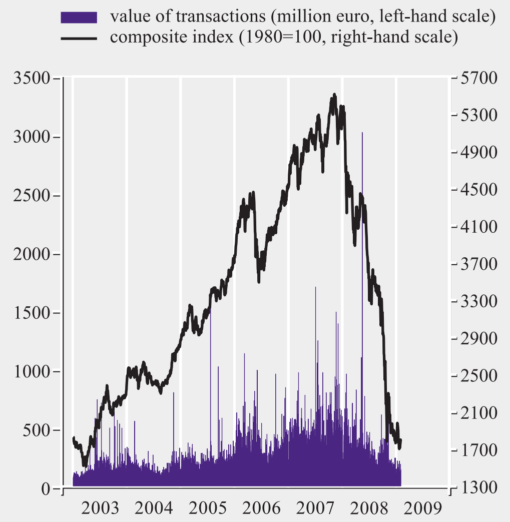
40 In 2008 the correlation between the Athex composite share price index and share price indices in euro area stock markets increased, a development usually observed in periods of falling share prices.

41 The profits per share of firms included in the Dow Jones EURO STOXX index recorded a drop of 13% at end-December 2008 compared with end-December 2007, while estimates on their expected rate of change in the forthcoming 12 months were revised downwards for the fourth consecutive month after August 2008 (December 2008: 3%, August 2008: 8%, see ECB, *Monthly Bulletin*, January 2009). In Greece, in the period January-September 2008, net profits (on a consolidated basis) of non-financial firms as a whole with shares listed on the Athex dropped by about 20% compared with the corresponding 2007 period. Profits in the period under review were negatively affected by the increased production costs, due to the maintenance of raw material prices at a relatively high level until mid-July 2008 and the fact that extraordinary revenue was not recorded (contrary to the corresponding 2007 period). The results for the last quarter of 2008 are estimated to paint a similar picture.

42 A sign of the increased difficulties faced by some firms in dealing with their debt obligations is the doubling, in 2008, of the number of firms which were put under surveillance (9 firms) or the trading of the shares of which on the Athex was suspended (7 firms). Moreover, 10 firms were delisted from the Athex in 2008 (2007: 6 firms).

Chart VI.12 Athens Exchange: composite share price index and value of transactions (January 2003-January 2009)

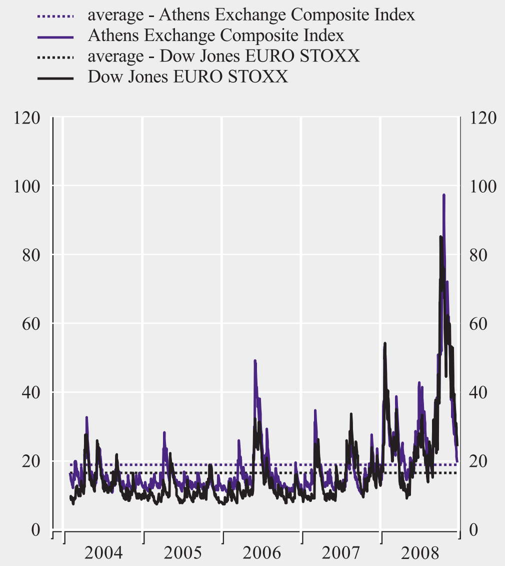
(daily data)



Source: Athens Exchange.

Chart VI.13 Volatility of the Athens Exchange Composite Index and of Dow Jones EURO STOXX (January 2004-December 2008)

(daily data)



Source: Bank of Greece.

concerns are reflected in the development of share price volatility, which both in the Athex and in the euro area followed a similar pattern, with peaks in the course of the year, and remained at levels considerably higher than the last five years' average, though it decreased significantly in December (see Chart VI.13).

An additional important factor that contributed to the fall in Athex-listed share prices was the high net sales effected by foreign investors.[43] The effect of foreign investors on the transactions and the market capitalisation in the Athex was significant, on account of the high degree of internationalisation of the Greek Stock Exchange in the last years. The participation of foreign investors in the Athex total market capitalisation fell, for the first time after March 2007, to levels below 50%.[44]

Owing to the above mentioned influences, the Athex share price index decreased more than the Dow Jones EURO STOXX index (-46.3%) and the corresponding indices of most euro area stock exchanges.[45,46] The valuation of Athex shares, calculated as the (after tax) P/E ratio per share in the Athex composite share price index, reached historically low levels (5.8), in line with the development of the corresponding ratio (7.8) of the Dow Jones EURO STOXX broad index for the euro area.

The average daily value of transactions in the Athex in 2008 (€316 million) fell by 34.2% compared with 2007 (see Chart VI.10), i.e. considerably less than share prices (-65.5%) and thus the value of transactions recorded an increase at constant prices. More than 90% of

43 During January-December 2008, according to data from the Central Securities Depository, there was a net outflow of €3.6 billion from foreign investors' holdings of Athex shares.

44 According to Central Securities Depository data, the percentage of Athex shares' market capitalisation held by foreign investors (70% of whom are institutional investors) decreased in December 2008 to 47.8% from 51.8% in December 2007.

45 Share prices declined in all euro area stock exchanges, from -35% (Malta) to -77.2% (Cyprus), whereas the drop in the Athex composite share price index was the third smallest among the corresponding euro area share price indices.

46 It should be noted that even at the sectoral level, according to the data on selected sectors published by the ECB in its *Monthly Bulletin*, the drop in the share prices of key Athex sectors was steeper than that in the corresponding euro area sectors.

Table VI.8 Fund-raising through the Athens Exchange

Business sector	Number of firms		Funds raised (million euro)[1]	
	2007	2008*	2007	2008*
Listed companies	25	13	9,987.8	622.7
Newly listed companies	4	7	146.6	8.6
Total	**29**	**20**	**10,134.4**	**631.3**
Financial sector	6	-	8,066.4	0.0
Non-financial sector	23	14	2,068.0	631.3

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.

the transactions relate to the shares of firms in the large capitalisation category.

The negative climate prevailing in the stock markets internationally is inevitably reflected in the sluggish fund-raising through these markets. More specifically, in 2008 the funds raised through the Athex declined to €631.3 million, i.e. by about 94% compared with 2007 (see Table VI.8). Financial corporations raised no funds at all and non-financial corporations raised 69% less funds.[47]

Investors' reduced risk appetite internationally, especially with respect to bank shares, the sales effected by foreign investors and the decline in bank profitability[48] affected the prices of the Athex-listed bank shares[49] more negatively than the Greek stock market as a whole. Thus, at end-December 2008, bank share prices were 73.9% lower than at end-December 2007.[50] This decline was steeper than that of the euro area bank share prices (-63.7%), although Greek banks' fundamentals remained satisfactory because, *inter alia*, of their indirect only and limited exposure to risks related with the financial turmoil (see Box VI.1). Greek banks' share prices showed significant volatility from the beginning of 2009 onwards. During this period, the adoption by banks of measures pertinent to Law 3723/2008 on enhancing liquidity and dealing with the impact of the international financial turmoil[51] had a positive effect, whereas estimates that the Greek economy will record a low growth rate in the next two years had a negative effect.

Finally, significant institutional developments in the Greek stock exchange were: (i) the operation of the "Alternative Market" in the Athex, (ii) the first Exchange Traded Fund, which is a reproduction of the composition of the FTSE/ATHEX 20 share price index and (iii) the decision[52] of the Board of Directors of the Hellenic Capital Market Commission to prohibit the "short-selling"[53] of shares traded on the Athex.[54]

47 The significant difference observed in the funds raised by newly listed firms between 2007 and 2008 is essentially the result of the fact that in 2008 the newly listed firms were those that traded their shares in the Alternative Market, i.e. the new Athex market that commenced operation at the beginning of 2008, in which the shares of very small, developing companies are traded.
48 According to January-September 2008 data, the net profits of banking groups with shares listed on the Athex declined by 16.7%. It should be noted however that this decline is considerably smaller (8.9%) if the extraordinary (one-off) results of the corresponding 2007 period are not taken into account. For more details on the decline in bank profitability, see Box VI.1.
49 Owing to this decline of bank share prices, the market capitalisation of the banking sector accounted for about 33% of the market as a whole at the end of 2008, against about 43% at the end of 2007.
50 Furthermore, the average daily value of transactions in bank shares, which accounts for almost half of the value of Athex transactions as a whole, fell by 27% in 2008 compared with 2007.
51 For more details on this law, see Box VI.1.
52 Decision No. 1/488/10 October 2008 (Government Gazette B 2176/23 October 2008). The effect of this decision, by virtue of an amendment (Decision 15/493/11 December 2008), was extended until 31 May 2009.
53 Short-selling is an investors' option, which allows them to sell shares they have not yet bought, provided that they have borrowed from the Derivatives Exchange shares of the same number and of a similar type to those sold.
54 Similar decisions were taken in most of the developed stock markets internationally.

Box VI.1

THE STABILITY OF THE GREEK BANKING SYSTEM

1. Review of developments

The continued malfunctions in international money and capital markets have had a negative impact on the real economy, at an increasing rate in the last months of 2008. Inevitably, these conditions affect the stability of the international and, certainly, the Greek banking system, gradually leading to a credit squeeze.

However, as a result of Greek banks' only marginal exposure to assets directly or indirectly connected with the causes of the turmoil, satisfactory capital adequacy and leverage ratios, low dependence on the money market for raising funds, the tightening of credit standards and the continuous conduct of examinations by the Bank of Greece, the fundamentals of the Greek banking system have been little affected; as a result, **Greek banks remain fundamentally healthy and strong.**

Nevertheless, the Bank of Greece, in the light of increased risks from the economic slowdown, high volatility in money and capital markets, liquidity stresses and reduced profitability, **recommends that banks should implement appropriate policies for ensuring financial stability.** Moreover, also taking into account developments in banks' profitability, loan book quality, liquidity and capital adequacy ratios, the Bank of Greece has urged Greek banks to make use of the government's scheme for enhancing liquidity of the economy (Law 3723/2008),[1] with a view to preventing a credit squeeze and enhancing banks' capital base. **At the same time, the Bank of Greece has asked banks to cut dividends (in order to increase their capital), increase loan-loss provisions and reduce their bonuses to senior officers.** Banks have already started taking advantage of the scheme in order to enhance their capital base by issuing preference shares and to increase their liquidity through government securities and State guarantees for loans to be granted to businesses and households.

2. The profitability and capital adequacy of Greek banks

2.1 Profitability

In the January-September 2008 period, **Athex-listed banks' pre-tax profits fell considerably** year-on-year, both at *bank* (-38.1%) and *group* (-16.7%) level,[2] to €1.8 billion and €3.7 billion respectively. This drop in profits is reduced to almost half (-16.6% and -8.9% respectively) if the non-recurring profits[3] recorded in the January-September 2007 period are not taken into account. The comparatively better performance of groups is explained by the high profitability of Greek banks' international activities. **However, Greek banks should be very careful with their international activities, which are mainly focused on the Southeastern European countries (including Turkey), the economies of which face increased risks in the current conjuncture (see Chapter II.3). The Bank of Greece has recommended that the Greek banks active in the region should assess carefully local economic conditions and the possibility of getting exposed —if these conditions deteriorate— to**

1 For the progress in the implementation of this law, see Section 4 of this box.
2 Actually, this decline was stronger than that observed in the first half of 2008 (-27.3% and -15.7% respectively).
3 They were profits from discontinued activities and from other investments.

not only credit risk, but also foreign exchange risk.

The downturn in the profitability of *banks* and *groups* is attributable to:

- the higher cost of funding due to enhanced competition for attracting deposits (mainly time deposits), as well as interbank rate hikes;[4]

- a considerable increase in impairment losses (i.e. provisions for credit risk)[5] as a result of the deterioration in the economic environment and the adoption of more conservative provisioning policies by banks;

- worse results from financial operations and the valuation of the investment book;[6] and

- higher operating costs.[7]

Moreover, at bank level, profitability was unfavourably affected also by net commission income[8] owing to a drop in commissions from financial operations, customers' fund management services and investment banking.

For these reasons, banks' key profitability ratios (net interest rate margin, return on risk-weighted assets and return on equity)[9] and the efficiency ratios[10] of both banks and their groups worsened (see the table of this box). These ratios, with the exception of the net interest rate margin, showed a decline similar to that for large banking groups in the euro area, but remained at a comparatively better level.[11]

4 In the January-September 2008 period, interest expenses (debit interest) rose by 41.3% and 41.5% year-on-year at bank and group level respectively. This development contributed to lower than in the past net interest income growth (banks: 9.1%, banking groups: 15.7%).
5 Of 30.5% for banks and 34.8% for groups.
6 Banks saw losses of €285 million and groups recorded a 82.2% drop in profits. These losses would have been by around €70 million higher if banks had not made use of their discretion under the amended IAS 39 to transfer (reclassify) assets of the trading portfolio to all the other portfolios and to transfer assets from the available-for-sale portfolio to the loans and receivables portfolio.
7 By 10.7% for banks and 14.3% for groups.
8 Net commission income showed a decline of 5.4% at bank level and a small increase of 1.8% at group level.
9 The net interest rate margin is calculated as the ratio of net interest income to assets, while return on equity and return on risk-weighted assets are calculated as the ratios of pre-tax profits to own funds and to risk-weighted assets respectively.
10 Operating costs to operating income.
11 On the basis of a sample of large banking groups surveyed by the ECB, in the first half of 2008 the average net interest rate margin came to 1% (2007: 0.9%), return on risk-weighted assets dropped to 0.7% (2007: 0.9%), return on equity declined to 7.9% (2007: 11.4%) and the efficiency ratio rose to 78.5% (2007: 63.6%).

Athens Exchange-listed Greek commercial banks and groups: profitability and efficiency ratios

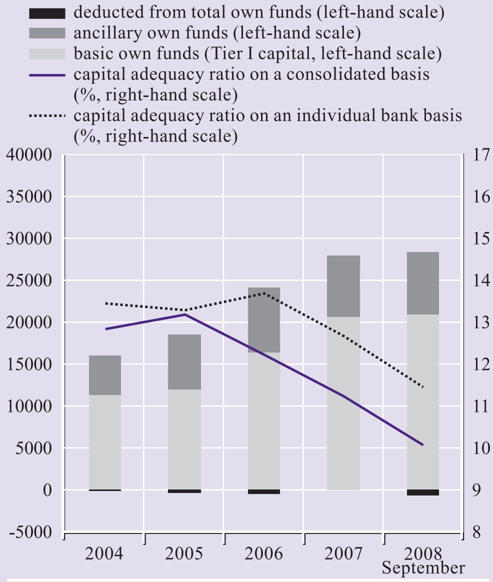
(percentages)

	Banking groups		Banks	
	Jan.-Sept. 2008	Jan.-Sept. 2007	Jan.-Sept. 2008	Jan.-Sept. 2007
Net interest rate margin	2.9	3.1	2.2	2.6
Return on risk-weighted assets (after tax) (ROA)	1.6	2.5	0.8	1.8
Return on equity (after tax) (ROE)	14.6	20.4	8.9	17.4
Efficiency ratio	53.1	49.8	56.5	49.2

Source: Bank of Greece.

Chart A Breakdown of supervisory own funds (on an individual basis) and evolution of capital adequacy of Greek commercial banks

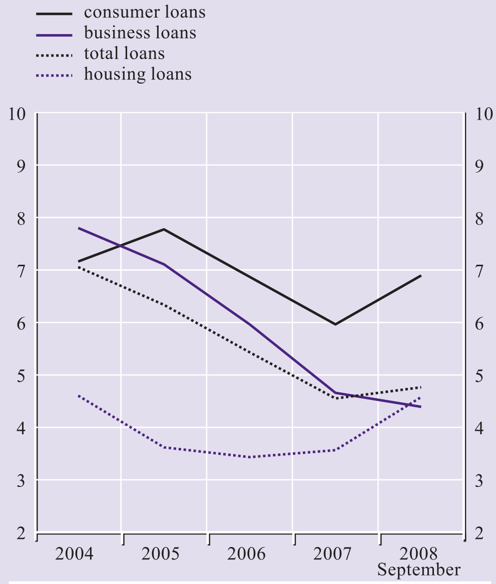
(million euro)



Source: Bank of Greece.

Chart B Ratio of non-performing loans to total loans by Greek commercial banks

(percentages)



Source: Bank of Greece.

2.2 Capital adequacy

During the reviewed period, the capital adequacy ratios of Greek banks fell. At end-September 2008, banks' Capital Adequacy Ratio (CAR) and Tier I Ratio stood at 11.4% and 8.6% respectively (from 12.7% and 9.3% respectively at end-2007 – see Chart A in this box). This development reflects a 1.1% decline in supervisory own funds and a 9.3% rise in risk-weighted assets.[12]

Considerable valuation losses and purchases of treasury shares by banks had a downward effect on supervisory own funds, as these purchases are deducted from own funds. At the same time, the share of profitability in internal capital formation was limited, while the use of the amended IAS 39 by several banks had a small positive effect.[13] The rise in risk-weighted assets is exclusively attributable to the calculation, for the first time, of capital requirements for operational risk pursuant to the Basel II framework, as risk-weighted assets for credit risk remained unchanged, while risk-weighted assets for market risk dropped.

At group level, the CAR and the Tier I Ratio declined to 10% and 8.4% respectively during the reviewed period (from 11.2% and 9.2% respectively at end-2007). This decrease is explained by the fact that supervisory own funds rose by 3.6%, less than weighted assets (15.7%), as the increase in risk-weighted assets for credit risk more than offset a fall in risk-weighted assets for market risk. Moreover, Greek banking groups' leverage ratio[14] remains low, standing at 15.1 at end-September 2008.

12 Assets are weighted for three risks: credit, market and operational risk, according to the provisions of the Basel II framework.
13 However, securities reclassified to the investment book will be valued at unamortised cost: measurement of their impaired value may warrant provisioning.
14 Calculated as the ratio of total assets to own funds.

Despite the aforementioned decline in capital adequacy, the Tier I Ratio of Greek banking groups is still comparable to that of large and complex banking groups in the euro area (8.3% in the first half of 2008). On the other hand, the CAR falls short of that for large banking groups in the euro area (10.9% in the first half of 2008), mainly because the latter increased their capital considerably during 2008, often with government assistance, as both supervisory authorities and investors globally require credit institutions to enhance their capital adequacy ratios. Under these circumstances, banks' use of the measures provided for by Law 3723/2008, in particular that giving them an opportunity to boost their capital by issuing preference shares, is expected to have a beneficial effect.

3. Banking risks

3.1 Credit risk

The quality of Greek banks' loan book deteriorated slightly, **as the non-performing loans to total loans ratio (NPL ratio)[15] rose to 4.8% in September 2008, from 4.5% in December 2007** (see Chart B). This ratio increased for both housing loans (September 2008: 4.6%, December 2007: 3.6%) and consumer loans (September 2008: 6.9%, December 2007: 6.0%). By contrast, with respect to the corporate loan book, the NPL ratio improved (September 2008: 4.4%, December 2007: 4.6%), albeit at a slower rate than in previous years. On the negative side, the coverage ratio of provisions to NPLs dropped (September 2008: 46.9%, December 2007: 53.4%) and the ratio of net NPLs[16] to supervisory own funds rose (September 2008: 23.6%, December 2007: 16.8%).

The outlook for the quality of Greek banks' portfolios in 2009 is not favourable. Regarding firms, their income and profitability will be unfavourably affected by the expected slowdown in economic growth both in Greece and abroad. At the same time, firms face increased debt servicing costs, as lending rates remain relatively high, despite their downward trend seeming to prevail after the coordinated interventions by governments and central banks internationally.[17] These effects are expected to be stronger on construction, shipping, tourism and retail trade (cars, electronics, household appliances).

With respect to households, the emerging slowdown in disposable income growth and the consequences of the financial crisis for employment are expected to put more final pressure on them. In addition, credit growth has already started to slow and is expected to decelerate further (especially for households), which (also for technical reasons)[18] will further push up the NPL ratio.

3.2 Liquidity and market risks

During the reviewed period, liquidity sources, both in the Greek and the international banking system, remained particularly tight; as a result, banks' funding costs remained very high. Greek banks continued to be relatively more resilient in these conditions, as they benefit from their strong deposit base and still have a satisfactory loan-to-deposit ratio. During the reviewed period, this ratio came to marginally over 100% for banks and close to 110% for banking groups, which is con-

15 However, in the January-September 2008 period, loan write-offs came to €1 billion, from €1.8 billion in 2007 as a whole.
16 Net NPLs are defined as total loans overdue by more than 90 days minus cumulative provisions.
17 For interest rate developments, see Section 3 of this chapter.
18 The slowdown in the growth rate of loans reduces the rate of increase in the denominator of this indicator, while it takes some time before recently granted loans start to become non-performing. For details of developments in the growth rate of loans, see Section 2 of this chapter.

siderably lower than that for banking groups in the euro area (130%). It should be pointed out, however, that Greek banks attract and maintain deposits at a relatively increased cost, while much caution should be exercised in their liquidity management, as short-term securities issued thereby are maturing at the beginning of 2009, which will probably prove difficult to refinance without resorting to the scheme for enhancing liquidity of the economy. By making use of the measures provided for by Law 3723/2008,[19] Greek banks will enhance their liquidity-raising capacity, through both the interbank market and the Eurosystem.

At bank level, at end-September 2008, the liquid asset ratio[20] reached 20.4% (December 2007: 23.2%) and the asset/liability maturity mismatch ratio[21] came to -3.1% (December 2007: -2.8%), compared with regulatory minimums of 20% and -20% respectively.[22] Moreover, despite continued relatively strong credit growth, the loan-to-deposit ratio rose slightly (September 2008: 103.4%, December 2007: 100.7%).

During the reviewed period, international money and capital market volatility was particularly heightened. However, risk-weighted assets for market risk declined at both bank (-21.8%) and group (-10.8%) level in comparison with December 2007. This development is mainly attributable to the reduction by certain banks of their positions subject to market risk, as well as reclassifications of assets from the trading book to the loans and receivables book according to the discretion provided by the amended IAS 39.

4. The scheme for enhancing liquidity of the economy (Law 3723/2008)

Governments and central banks internationally continue to take coordinated action for restoring confidence and the smooth operation of financial markets, in order to limit the impact from the continued financial crisis. The main strand of action involves enhancing the liquidity and strengthening the capital base of banks, directly or indirectly (through State guarantees), so as to avert, to the extent possible, a credit crunch.

Against this background, Law 3723/2008 on enhancing liquidity of the economy was passed in Greece, with a view to tackling the implications of the international financial crisis. The provisions of this law are in harmony with the common principles agreed upon in the informal summit of the euro area countries on 12 October 2008. This law is aimed at strengthening the Greek economy by enhancing liquidity in the financial system, which is expected to contribute to reducing the pressure on deposit and lending rates, thus enabling credit institutions to grant credit to households and businesses.

This law includes **three measures:** (a) **State participation in the capital** of credit institutions through the acquisition of preference shares with a value of up to €5 billion; (b) **provision of State guarantees** with a value of up to €15 billion to beneficiary credit institutions for loans to be granted to them by 31 December 2009 with a maturity of three months to five years; and (c) issuance by 31 December 2009 of **government securities** with a value of up to €8 billion and a maturity of up

19 For these measures, see Section 4 of this box.
20 Defined as the ratio of liquid assets with a maturity of up to 30 days to total borrowed funds with a maturity of up to one year.
21 Defined as the ratio of assets net of liabilities with a maturity of up to 30 days to total borrowed funds with a maturity of up to one year.
22 However, for certain banks the liquid asset ratio falls slightly short of the supervisory minimum, hence the Bank of Greece has asked them to increase their liquidity. In this connection, the changes in the relevant regulatory framework should also be taken into account, in particular those concerning banks' refinancing by the Eurosystem.

to three years, to be lent to beneficiary credit institutions for enhancing liquidity, since these securities can be used as collateral for obtaining credit from either the Eurosystem or the interbank market. In particular for the last two measures, the credit institutions to take advantage of the scheme should maintain a minimum capital adequacy level, while funds provided by the State may, subject to conditions and following a proposal by the Bank of Greece, be allocated within a total cap of €23 billion on State guarantees and securities. **The total amount available under these measures (€28 billion[23]) corresponds to about 11.5% of Greece's 2008 GDP, which falls short of the average of similar measures taken by other euro area countries (about 26.5% of the 2008 GDP)[24] and the EU-27 (around 23% of the 2008 GDP), keeping of course in mind that big differences are observed across countries.**

As pointed out in the ECB's opinion on the draft law submitted to it before the law was passed by Parliament, these measures are in line with the principles governing similar measures taken by the other EU Member States. Specifically, the ECB praises these measures for aiming at (a) addressing the funding problems of liquidity-constrained solvent banks by improving the functioning of the market for bank debt of longer-term maturity; (b) preserving the level-playing field among financial institutions and avoiding market distortions; (c) ensuring consistency with the management of liquidity by the Bank of Greece; and (d) ensuring that the beneficiary credit institutions do not profit from undue use of their guaranteed status to engage in a heightened level of activities.

The Bank of Greece contributed to the drafting of the bill (which was passed by Parliament and became Law 3723/2008) by expressing its opinion on technical issues. Moreover, it will provide the technical support required in the implementation of the law. Specifically, the Bank of Greece is responsible for monitoring credit institutions' compliance with the conditions of implementation of the scheme and may recommend sanctions, which may include revocation of these measures for non-compliant credit institutions.

Greek banks started taking advantage of these measures as early as at the end of 2008, by obtaining liquidity through government securities. By the beginning of February 2009, six banks had raised about €3.4 billion, while another ten had applied for around €1 billion. Moreover, two banks have been authorised to **obtain State guarantees** with a value of €1 billion, while another two have applied for State guarantees with a value of €1.7 billion.

Regarding **capital injections** through the issuance of preference shares, the general meetings of 12 banks have authorised the raising of about €4 billion. The raising of €3.4 billion out of this amount by eight banks has already been approved by the Greek State.

23 In determining this amount, the results of stress tests carried out by credit institutions, as well as developments in the wider financial and economic environment were taken into account.
24 See European Commission, DG ECFIN, *Quarterly report on the euro area,* December 2008, Box 2 ("Rescue packages of euro-area Member States"), pp. 13-14.

MONETARY POLICY MEASURES OF THE EUROSYSTEM

10 JANUARY, 7 FEBRUARY, 6 MARCH, 10 APRIL, 8 MAY AND 5 JUNE 2008

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 4%, 5% and 3% respectively.

3 JULY 2008

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 4.25%, starting from the operation to be settled on 9 July 2008. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 5.25% and 3.25%, respectively, with effect from 9 July 2008.

7 AUGUST, 4 SEPTEMBER AND 2 OCTOBER 2008

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 4.25%, 5.25% and 3.25% respectively.

8 OCTOBER 2008

The Governing Council of the ECB decides to decrease the minimum bid rate on the main refinancing operations by 50 basis points to 3.75%, starting from the operations to be settled on 15 October 2008. In addition, it decides to decrease by 50 basis points the interest rates on both the marginal lending facility and the deposit facility, to 4.75% and 2.75% respectively, with immediate effect. Moreover, the Governing Council decides that, as from the operations to be settled from 15 October onwards, the weekly main refinancing operations will be carried out through a fixed-rate tender procedure with full allotment at the interest rate on the main refinancing operations (today 3.75%). Furthermore, as of 9 October, the ECB will reduce the corridor set by the standing facility rates from 200 basis points to 100 basis points around the interest rate on the main refinancing operations. Consequently, as of 9 October, the interest rate on the marginal lending facility will decrease from 100 to 50 basis points above the interest rate on the main refinancing operation, to 4.25%, and the interest rate on the deposit facility will increase from 100 to 50 basis points below the interest rate on the main refinancing operations, to 3.25%. The two measures will remain in place for as long as needed, and at least until the end of the first maintenance period of 2009, on 20 January.

6 NOVEMBER 2008

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 3.25%, starting from the operations to be settled on 12 November 2008. In addition, it decides to decrease by 50 basis points the interest rates on both the marginal lending facility and the deposit facility, to 3.75% and 2.75% respectively, with effect from 12 November 2008.

4 DECEMBER 2008

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 75 basis points to 2.50%, starting from the operations to be settled on 10 December 2008. In addition, it decides to decrease by 75 basis points the interest rates on both the marginal lending and the deposit facility to 3.00% and 2.00% respectively, with effect from 10 December 2008.

18 DECEMBER 2008

Following the decision of 8 October 2008 on the changes in the tender procedure and the "corridor" set by the interest rates of standing facilities, the Governing Council of the ECB decides that the main refinancing operations will continue to be carried out through a fixed rate tender procedure with full allotment beyond the maintenance period ending on 20 January 2009. This measure will be in place for as long as needed, and at least until the last allotment of the third maintenance period in 2009 on 31 March. Moreover, as of 21 January 2009, the corridor of standing facility rates, which on 9 October 2008 was reduced to 100 basis points around the prevailing interest rate on the main refinancing operations, will be re-widened symmetrically to 200 basis points. Consequently, as from 21 January, the interest rate on the marginal lending facility will increase from 50 basis point to 100 basis points above the interest rate on the main refinancing operations and the interest rate on the deposit facility will be reduced from 50 basis points to 100 basis points below the interest rate on the main refinancing operations.

JANUARY–DECEMBER 2008

The Governing Council of the ECB decides to carry out further open market operations, supplementary to the scheduled main and longer-term refinancing operations, with a view to restoring the operation of the money market in euro.

15 JANUARY 2009

The Governing Council of the ECB decides to decrease the fixed rate on the main refinancing operations by 50 basis points to 2.00%, starting from the operations to be settled on 21 January 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facilities will be 3.00% and 1.00% respectively, with effect from 21 January 2009. These decisions are in line with the Governing Council's decision of 18 December 2008 to bring back to 200 basis points the corridor set by the interest rates on the standing facilities around the interest rate on the main refinancing operations.

GLOSSARY

Community Support Framework (CSF): compiled by the Commission of the European Communities in co-operation with the Member State and approved by the Commission. It includes the country's growth strategy, activity priorities and financing resources (participation of the Community, national public expenditure, participation of the private sector).

Deposit facility: a standing facility of the Eurosystem, which counterparties may use to make overnight deposits, remunerated at a pre-specified interest rate, at a national central bank.

Deposits redeemable at notice: this instrument comprises savings deposits which the depositor may withdraw once he has given notification thereof within a predetermined time period. At some instances, it is possible to withdraw part of the amount deposited at notice or before, subject to penalty.

Deposits with an agreed maturity (time deposits): deposits with a fixed maturity, which, according to the national practice, are either not convertible into cash before their maturity or are convertible into cash subject to penalty. They include some non-negotiable instruments, such as non-negotiable certificates of (private) deposit.

Effective (nominal/real) exchange rates: nominal effective exchange rates are weighted averages of bilateral exchange rates. Real effective exchange rates are nominal effective exchange rates deflated by a weighted average of foreign, relative to domestic, prices or costs. They are, thus, measures of price and cost competitiveness.

EONIA (euro overnight index average): a measure of the interest rate prevailing in the euro interbank overnight market, based on transactions.

EURIBOR (euro interbank offered rate): the rate at which a prime bank is willing to lend funds in euro to another prime bank, computed daily for interbank deposits with different maturities of up to 12 months.

Euro area: the area encompassing those Member States in which the euro has been adopted as the single currency in accordance with the Treaty and in which a single monetary policy is conducted under the responsibility of the Governing Council of the ECB. The euro area currently comprises 16 countries: Austria, Belgium, Cyprus, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, Spain, and Finland.

European Central Bank (ECB): the ECB lies at the centre of the European System of Central Banks (ESCB) and the Eurosystem and has legal personality under Community law. It ensures that the tasks conferred upon the Eurosystem and the ESCB are implemented either through its own activities or through those of the national central banks, pursuant to the Statute of the ESCB and of the ECB. The ECB is governed by the Governing Council and the Executive Board, and, as a third decision-making body, by the General Council.

European System of Central Banks (ESCB): composed of the ECB and the national central banks of all 27 EU Member States, i.e. it includes, in addition to the members of the Eurosystem, the national central banks of those Member States that have not yet adopted the euro. The ESCB is governed by the Governing Council and the Executive Board, and, as a third decision-making body, by the General Council.

Eurosystem: comprises the ECB and the national central banks of those Member States that have adopted the euro. There are currently 16 national central banks in the Eurosystem. The Eurosystem is governed by the Governing Council and the Executive Board of the ECB.

Executive Board: one of the decision-making bodies of the ECB. It comprises the President and the Vice-President of the ECB and four other members appointed by common accord by the Heads of State or Government of the countries that have adopted the euro.

General government: as defined in the European System of Accounts 1995 (ESA 95), comprises central, state and local government and social security organisations.

Governing Council: one of the decision-making bodies of the ECB. It comprises all the members of the Executive Board and the governors of the national central banks of the countries that have adopted the euro.

Harmonised Index of Consumer Prices (HICP): a measure of consumer prices which is compiled by Eurostat and harmonised for all EU Member States.

Key ECB interest rates: the interest rates, set by the ECB, which reflect the monetary policy stance of the ECB. Currently, key ECB interest rates are the minimum bid rate on the main refinancing operations, the interest rate on the marginal lending facility and the interest rate on the deposit facility.

Main refinancing operation: main refinancing operations are regular reverse transactions for the provision of liquidity, they are conducted once a week and usually have a maturity of one week. They are conducted by the national central banks as regular tenders.

Marginal lending facility: a standing facility of the Eurosystem, which counterparties may use to receive overnight credit from a national central bank at a pre-specified interest rate against eligible assets.

Monetary aggregates: a monetary aggregate is the sum total of currency in circulation plus the overdue amounts of certain liabilities of MFIs and central governments which have a high degree of "moneyness" (or liquidity in a broad sense). The narrow monetary aggregate M1, as defined by the Eurosystem, comprises currency in circulation plus overnight deposits which non-MFI euro area residents (other than central government) keep with euro area institutions that issue money. The monetary aggregate M2 comprises M1 plus deposits with an agreed maturity of up to two years plus deposits redeemable at a period of notice of up to three months. The broad monetary aggregate M3 comprises M2 and repurchase agreements (repos), money market fund shares/units, money market paper and debt securities with a maturity of up to two years.

Monetary Financial Institutions (MFIs): financial institutions which together form the money-issuing sector of the euro area. These include the ECB, euro area national central banks, as well as resident credit institutions and money market mutual funds.

Overnight deposits: deposits due on the next working day. This instrument comprises both fully transferable (through cheques etc.) and non-transferable deposits convertible into cash upon request or until the end of the next working day. Particularly for Greece, this instrument includes sight deposits, deposits in current accounts and savings deposits.

Standing facility: a national central bank facility available to counterparties on their own initiative. The Eurosystem offers two overnight standing facilities: the marginal lending facility and the deposit facility.

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
2005		100.0	3.5	100.0	3.4	100.0	3.7	100.0	3.1	100.0	3.2
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
2007	I	104.4	2.7	103.7	2.1	105.3	3.4	104.3	3.2	104.1	3.3
	II	106.3	2.6	106.4	1.9	106.2	3.6	105.7	2.9	105.7	3.1
	III	105.7	2.7	104.9	2.0	106.8	3.6	105.3	2.8	105.1	3.0
	IV	108.3	3.6	108.7	3.9	107.8	3.2	107.5	2.8	107.0	2.5
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
2006	Jan.	101.7	3.2	101.6	3.3	101.8	3.2	101.3	2.3	101.3	2.0
	Feb.	100.5	3.2	99.7	3.3	101.7	3.2	99.7	2.5	99.2	2.3
	March	102.8	3.3	103.3	3.3	102.1	3.3	102.2	2.9	102.0	2.6
	Apr.	103.6	3.3	104.3	3.6	102.5	2.9	102.5	2.6	102.3	2.3
	May	103.7	3.1	104.7	3.6	102.4	2.6	102.8	2.4	102.6	2.1
	June	103.6	3.2	104.3	3.6	102.7	2.7	103.1	2.6	102.8	2.3
	July	103.0	3.8	103.1	4.6	102.8	2.7	102.2	2.6	101.8	2.3
	Aug.	102.2	3.5	101.5	3.9	103.1	2.9	101.4	2.7	100.8	2.4
	Sept.	103.8	2.9	104.1	3.0	103.5	2.8	103.6	2.7	103.4	2.5
	Oct.	104.4	2.8	104.7	2.7	104.0	3.0	104.3	3.0	104.2	2.8
	Nov.	104.3	2.9	104.3	2.8	104.2	3.2	104.4	3.0	104.3	2.8
	Dec.	104.8	2.9	104.7	2.7	104.9	3.2	104.8	3.0	104.8	2.9
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

Source: Calculations based on NSSG data.

Table 2 Harmonised index of consumer prices (HICP): 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
2005		100.0	3.5	100.0	-1.5	100.0	2.8	100.0	2.8
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
2007	I	104.5	2.9	104.0	0.7	107.7	5.0	101.9	2.9
	II	106.6	2.6	104.2	1.4	108.4	3.7	105.1	2.0
	III	105.9	2.8	103.0	4.3	108.7	2.5	102.0	2.3
	IV	108.6	3.6	105.5	2.5	111.8	3.7	106.2	1.8
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
2006	Jan.	101.7	3.0	101.2	-0.4	102.1	4.1	100.4	0.1
	Feb.	100.1	3.1	104.5	0.3	102.4	4.4	94.7	0.7
	March	102.8	3.3	104.2	-0.2	103.2	4.9	102.1	1.6
	Apr.	103.8	3.5	105.4	1.5	103.4	4.5	102.6	1.8
	May	104.0	3.3	103.3	-0.7	104.5	4.9	103.3	1.9
	June	103.9	3.4	99.5	0.3	105.6	5.4	103.4	1.9
	July	103.0	3.9	98.0	5.2	105.7	5.0	99.8	1.6
	Aug.	102.0	3.4	98.4	3.0	105.7	5.0	96.2	1.1
	Sept.	104.1	3.1	99.9	3.4	106.6	5.5	103.3	1.9
	Oct.	104.7	3.1	103.0	4.3	107.9	6.7	104.2	2.0
	Nov.	104.6	3.2	102.1	3.3	107.9	6.4	104.3	2.0
	Dec.	105.2	3.2	103.5	3.6	107.7	5.8	104.4	2.0
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

Source: Calculations based on NSSG data.

Table 2 Harmonised index of consumer prices (HICP): 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
2005		100.0	13.6	100.0	3.6	100.0	3.2
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
2007	I	103.4	-2.4	105.6	3.7	104.7	3.7
	II	112.3	-0.5	106.7	3.7	106.4	3.1
	III	112.2	-1.8	107.2	3.9	105.7	3.2
	IV	119.3	14.0	108.1	3.3	108.0	2.8
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
2006	Jan.	105.4	18.6	101.9	3.2	101.4	2.2
	Feb.	105.1	14.4	101.5	3.1	99.2	2.5
	March	107.5	11.8	102.0	3.3	102.2	3.0
	Apr.	112.0	12.3	103.0	3.3	103.0	3.0
	May	113.4	14.3	102.6	2.6	103.2	2.7
	June	113.2	12.0	102.9	3.0	103.5	3.0
	July	116.7	14.8	103.1	3.0	102.3	2.8
	Aug.	116.0	12.3	103.2	3.0	101.1	2.7
	Sept.	110.0	4.1	103.5	2.9	103.9	3.0
	Oct.	106.2	-0.6	104.1	3.3	104.8	3.4
	Nov.	103.7	1.2	104.3	3.4	104.9	3.4
	Dec.	104.2	1.1	105.4	3.5	105.4	3.4
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

Source: Calculations based on NSSG data.

Table 3 Industrial producer price index (PPI) for the domestic market: general index and basic sub-indices

Period		General index		Energy (total)		Fuels		General index excl. energy	
		(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year
2005		118.9	5.9	118.9	13.2	119.5	25.1	118.9	3.0
2006		127.1	6.9	128.5	8.1	135.0	12.9	126.5	6.3
2007		131.3	3.3	135.4	5.3	142.1	5.3	129.5	2.4
2008		142.6	8.6	154.8	14.4	169.1	19.1	137.3	6.0
2007	I	126.3	0.7	125.2	-1.4	124.7	-6.9	126.8	1.6
	II	130.3	1.9	133.9	2.4	139.6	-1.1	128.8	1.6
	III	132.1	2.6	136.8	4.0	144.5	3.1	130.0	2.0
	IV	136.4	8.0	145.5	16.7	159.5	27.9	132.5	4.4
2008	I	139.8	10.6	150.3	20.1	164.9	32.3	135.3	6.7
	II	145.0	11.2	161.4	20.5	187.3	34.2	137.9	7.1
	III	147.8	11.9	167.5	22.4	190.5	31.9	139.3	7.1
	IV	137.7	1.0	140.1	-3.7	133.8	-16.1	136.7	3.2
2006	Jan.	124.9	9.9	126.0	17.8	132.0	36.2	124.4	6.9
	Feb.	125.4	9.5	126.8	16.2	133.6	32.0	124.9	6.8
	March	126.1	8.3	128.2	12.3	136.1	22.7	125.2	6.6
	Apr.	127.8	8.6	131.1	12.4	142.0	22.5	126.3	7.0
	May	128.0	9.3	130.8	14.0	141.0	25.9	126.8	7.3
	June	128.0	8.0	130.5	9.7	140.4	16.7	127.0	7.2
	July	129.1	8.3	133.4	10.6	146.3	18.2	127.2	7.3
	Aug.	129.5	7.7	133.6	8.2	143.2	10.9	127.7	7.4
	Sept.	127.6	4.5	127.6	-0.3	130.8	-3.8	127.6	6.8
	Oct.	126.7	3.0	125.2	-2.1	126.0	-7.4	127.3	5.3
	Nov.	126.1	3.4	124.5	1.3	124.2	-1.2	126.7	4.3
	Dec.	126.1	2.7	124.4	1.0	123.9	-1.9	126.8	3.4
2007	Jan.	125.4	0.4	122.6	-2.7	119.6	-9.4	126.6	1.8
	Feb.	126.1	0.6	125.0	-1.4	124.5	-6.8	126.6	1.4
	March	127.5	1.1	128.0	-0.2	129.9	-4.6	127.3	1.7
	Apr.	129.9	1.7	132.6	1.1	136.8	-3.6	128.7	1.9
	May	130.4	1.9	134.2	2.6	140.1	-0.7	128.8	1.6
	June	130.6	2.0	135.0	3.4	141.9	1.1	128.7	1.4
	July	131.3	1.7	136.3	2.2	144.7	-1.1	129.2	1.5
	Aug.	131.7	1.7	136.1	1.8	142.5	-0.5	129.8	1.7
	Sept.	133.2	4.4	138.1	8.2	146.4	11.9	131.1	2.8
	Oct.	134.7	6.4	140.9	12.5	152.2	20.8	132.1	3.8
	Nov.	137.1	8.7	147.4	18.3	164.8	32.7	132.7	4.7
	Dec.	137.4	9.0	148.4	19.3	161.4	30.2	132.7	4.7
2008	Jan.	138.2	10.2	148.6	21.2	161.5	35.1	133.7	5.6
	Feb.	139.8	10.8	150.0	20.0	164.4	32.0	135.4	7.0
	March	141.4	10.9	152.4	19.1	169.0	30.1	136.7	7.4
	Apr.	142.7	9.8	155.3	17.2	174.9	27.8	137.3	6.6
	May	145.1	11.3	162.3	20.9	189.1	35.0	137.7	7.0
	June	147.1	12.6	166.6	23.4	197.9	39.5	138.7	7.7
	July	149.3	13.7	172.8	26.7	201.3	39.2	139.3	7.8
	Aug.	147.6	12.0	166.8	22.5	189.1	32.7	139.3	7.3
	Sept.	146.5	10.0	163.0	18.1	181.1	23.7	139.4	6.3
	Oct.	142.4	5.7	151.0	7.2	156.4	2.7	138.7	5.0
	Nov.	137.1	0.0	139.3	-5.4	132.2	-19.8	136.1	2.6
	Dec.	133.8	-2.7	129.9	-12.4	112.8	-30.1	135.4	2.0

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					
		(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year	(2000=100)	Percentage change over previous year
2005		110.6	3.7	106.6	0.3	116.9	8.8	106.5	1.2
2006		115.2	4.2	109.5	2.7	122.0	4.4	109.5	2.8
2007		117.3	1.8	111.6	1.9	125.6	3.0	113.0	3.2
2008		123.8	5.6	114.6	2.7	...	...	...	...
2007	I	113.8	-0.8	110.5	1.6	121.0	-0.4	111.7	3.5
	II	116.9	0.9	111.5	2.0	124.6	1.2	112.9	3.3
	III	117.7	1.3	111.8	1.8	126.6	3.3	113.4	3.1
	IV	120.6	5.9	112.5	2.4	130.4	7.8	113.8	2.7
2008	I	122.0	7.2	113.7	2.9	131.3	8.5	114.7	2.7
	II	126.6	8.3	114.5	2.7	137.7	10.5	115.7	2.5
	III	127.8	8.6	115.2	3.1	139.9	10.5	116.8	2.9
	IV	118.7	-1.6	114.9	2.1	...	...	...	...
2006	Jan.	114.2	7.5	108.3	2.5	120.8	8.8	107.6	1.7
	Feb.	114.6	7.2	108.8	2.7	121.4	7.4	108.0	1.8
	March	115.4	6.4	109.1	3.0	122.1	6.8	108.2	2.0
	Apr.	116.0	6.3	109.3	3.1	122.9	7.4	108.8	2.4
	May	115.8	6.2	109.3	2.8	123.1	8.1	109.2	2.7
	June	115.8	5.2	109.3	2.7	123.3	5.0	109.7	3.0
	July	116.3	4.3	109.3	2.4	123.3	3.8	109.8	3.0
	Aug.	117.3	4.2	110.1	3.0	122.8	2.3	110.0	3.3
	Sept.	115.0	1.0	110.2	2.9	121.5	2.1	110.2	3.1
	Oct.	114.3	0.6	110.1	2.8	121.3	1.2	110.6	3.3
	Nov.	114.0	0.8	110.1	2.5	121.0	0.6	110.9	3.4
	Dec.	113.5	0.9	109.6	1.7	120.4	0.2	110.9	3.4
2007	Jan.	112.7	-1.3	110.1	1.7	119.6	-1.0	111.4	3.6
	Feb.	113.9	-0.6	110.4	1.5	120.9	-0.4	111.7	3.4
	March	114.9	-0.5	110.9	1.7	122.4	0.3	112.1	3.6
	Apr.	116.8	0.7	111.6	2.1	123.9	0.8	112.5	3.4
	May	116.7	0.8	111.3	1.8	124.6	1.3	112.9	3.4
	June	117.1	1.1	111.5	2.0	125.2	1.5	113.3	3.3
	July	117.7	1.2	111.6	2.1	126.6	2.6	113.4	3.3
	Aug.	117.1	-0.2	111.6	1.4	126.0	2.6	113.3	3.0
	Sept.	118.3	2.9	112.1	1.8	127.2	4.7	113.6	3.2
	Oct.	119.5	4.6	112.6	2.3	129.1	6.4	113.7	2.8
	Nov.	121.4	6.5	112.4	2.1	131.4	8.6	113.8	2.6
	Dec.	121.0	6.6	112.6	2.7	130.5	8.4	113.9	2.7
2008	Jan.	121.1	7.4	113.1	2.7	130.3	8.9	114.3	2.6
	Feb.	122.0	7.1	113.8	3.1	131.4	8.7	114.8	2.8
	March	122.9	7.0	114.2	2.9	132.2	7.9	115.0	2.6
	Apr.	124.2	6.3	114.2	2.4	134.3	8.4	115.3	2.5
	May	126.6	8.5	114.3	2.7	137.7	10.5	115.6	2.4
	June	128.9	10.1	114.8	3.0	141.0	12.6	116.2	2.5
	July	129.6	10.1	115.0	3.0	142.8	12.8	116.4	2.7
	Aug.	127.6	8.9	115.1	3.1	139.9	11.0	116.7	3.0
	Sept.	126.4	6.9	115.6	3.1	136.9	7.6	117.2	3.1
	Oct.	122.3	2.3	115.2	2.2	134.5	4.2	117.1	3.0
	Nov.	118.8	-2.2	115.0	2.3	131.3	-0.1	116.5	2.3
	Dec.	114.9	-5.0	114.4	1.7	...	...	...	...

Source: Calculations based on NSSG data.

Table 5 Dwelling price index

Period		Urban areas-total*			Athens			Other urban areas		
		Index	Percentage changes		Index	Percentage changes		Index	Percentage changes	
		1997=100	Over previous period	Over correspond-ing period of previous year	1997=100	Over previous period	Over correspond-ing period of previous year	1993 IV=100	Over previous period	Over correspond-ing period of previous year
1994		76.1	...	...	73.4	9.5	9.5	106.0	...	...
1995		82.6	8.5	8.5	80.1	9.2	9.2	114.3	7.8	7.8
1996		91.2	10.5	10.5	88.9	11.0	11.0	125.7	10.0	10.0
1997		100.0	9.7	9.7	100.0	12.5	12.5	134.7	7.1	7.1
1998		114.4	14.4	14.4	115.5	15.5	15.5	152.6	13.3	13.3
1999		124.5	8.9	8.9	129.6	12.2	12.2	161.5	5.8	5.8
2000		137.7	10.6	10.6	149.1	15.1	15.1	171.3	6.1	6.1
2001		157.5	14.4	14.4	175.4	17.6	17.6	190.2	11.0	11.0
2002		179.3	13.9	13.9	203.8	16.2	16.2	211.7	11.3	11.3
2003		189.0	5.4	5.4	211.9	4.0	4.0	226.8	7.1	7.1
2004		193.4	2.3	2.3	212.4	0.3	0.3	237.4	4.7	4.7
2005		214.5	10.9	10.9	230.8	8.6	8.6	269.3	13.4	13.4
2006		240.6	12.2	12.2	256.7	11.3	11.3	304.2	13.0	13.0
2007		249.3	3.6	3.6	265.6	3.5	3.5	315.8	3.8	3.8
1997	I	96.2	...	...	95.1	...	...	130.9	3.0	6.1
	II	98.2	2.1	...	97.8	2.9	...	132.6	1.3	6.2
	III	100.2	2.0	...	100.8	3.1	...	134.0	1.1	4.8
	IV	105.4	5.1	...	105.7	4.8	...	141.3	5.5	11.2
1998	I	110.1	4.5	14.4	109.3	3.4	14.9	149.4	5.7	14.1
	II	113.9	3.5	16.0	115.4	5.6	18.0	151.6	1.5	14.4
	III	115.0	0.9	14.8	116.5	1.0	15.6	153.0	0.9	14.2
	IV	118.4	2.9	12.3	120.9	3.7	14.4	156.3	2.1	10.6
1999	I	120.4	1.7	9.3	123.8	2.5	13.3	157.9	1.0	5.7
	II	123.6	2.7	8.5	128.1	3.4	11.0	161.0	2.0	6.2
	III	125.3	1.3	8.9	130.5	1.9	12.0	162.3	0.8	6.1
	IV	128.8	2.9	8.9	136.0	4.2	12.5	164.7	1.5	5.4
2000	I	132.1	2.5	9.7	141.6	4.1	14.3	166.1	0.8	5.2
	II	135.7	2.8	9.8	146.5	3.5	14.4	169.6	2.1	5.3
	III	138.8	2.2	10.8	150.4	2.7	15.3	172.6	1.8	6.4
	IV	144.2	3.9	11.9	158.0	5.0	16.2	177.1	2.6	7.5
2001	I	150.5	4.4	14.0	165.7	4.9	17.0	184.0	3.9	10.8
	II	156.1	3.7	15.0	174.2	5.1	18.9	188.0	2.2	10.8
	III	159.5	2.2	15.0	178.7	2.6	18.8	191.3	1.8	10.9
	IV	164.0	2.8	13.7	183.0	2.4	15.8	197.5	3.2	11.5
2002	I	171.5	4.6	14.0	193.6	5.8	16.8	204.0	3.3	10.8
	II	180.3	5.1	15.5	208.0	7.4	19.4	208.9	2.4	11.2
	III	180.7	0.2	13.3	205.4	-1.3	14.9	213.3	2.1	11.5
	IV	184.9	2.3	12.7	208.2	1.4	13.8	220.5	3.4	11.6
2003	I	188.6	2.0	10.0	214.6	3.1	10.8	222.5	0.9	9.1
	II	187.5	-0.6	4.0	210.6	-1.8	1.3	224.4	0.8	7.4
	III	189.0	0.8	4.6	210.6	0.0	2.6	228.1	1.7	7.0
	IV	190.9	1.0	3.3	211.5	0.4	1.6	232.1	1.7	5.3
2004	I	190.6	-0.2	1.0	209.7	-0.9	-2.3	233.6	0.6	5.0
	II	191.6	0.5	2.2	209.4	-0.2	-0.6	236.5	1.2	5.4
	III	193.3	0.9	2.3	211.1	0.8	0.2	238.8	1.0	4.7
	IV	198.0	2.4	3.7	219.4	3.9	3.7	240.9	0.9	3.8
2005	I	205.2	3.6	7.7	223.7	2.0	6.6	254.1	5.5	8.8
	II	211.6	3.1	10.5	228.9	2.3	9.3	264.1	3.9	11.7
	III	216.9	2.5	12.2	231.5	1.1	9.7	274.5	4.0	15.0
	IV	224.1	3.3	13.2	239.0	3.2	8.9	283.8	3.4	17.8
2006	I	232.2	3.6	13.1	247.5	3.6	10.6	294.1	3.6	15.7
	II	238.9	2.9	12.9	255.3	3.2	11.6	301.7	2.6	14.2
	III	242.5	1.5	11.8	258.1	1.1	11.5	307.4	1.9	12.0
	IV	248.6	2.5	11.0	266.0	3.0	11.3	313.7	2.0	10.5
2007	I	248.8	0.1	7.1	264.6	-0.5	6.9	315.8	0.7	7.4
	II	246.9	-0.8	3.3	261.8	-1.1	2.5	314.3	-0.5	4.2
	III	248.5	0.6	2.5	264.9	1.2	2.6	314.5	0.1	2.3
	IV	253.1	1.9	1.8	271.3	2.4	2.0	318.4	1.2	1.5
2008	I	...	...	...	...	...	...	321.1	0.8	1.7
	II	...	...	...	...	...	...	323.7	0.8	3.0

Sources: For the other urban areas: Bank of Greece. For Athens: calculations based on data from "Danos and Associates" (1993-97), "Property Ltd" (1997-2005) and "PropIndex SA" (2005-07). For the total of urban areas: weighted index based on the housing stock in Athens and the other urban areas.

Table 6 Employed persons of 15 years and over, by branch of economic activity

(thousands)

	Q3 2008	
	Total employed persons	Salaried employees
Total	**4,589.8**	**2,969.9**
Agriculture, forestry and fishing	513.9	39.1
Mining and quarrying	17.7	16.6
Manufacturing	542.6	402.1
Electricity, gas, steam and air conditioning supply	33.2	32.6
Water supply, sewerage, waste management and remediation activities	32.3	31.2
Construction	398.8	278.7
Wholesale and retail trade; repair of motor vehicles and motorcycles	830.1	440.8
Transportation and storage	212.7	152.7
Accommodation and food service activities	339.5	202.2
Information and communication	76.9	68.2
Financial and insurance activities	116.9	105.8
Real estate activities	8.8	1.2
Professional, scientific and technical activities	235.8	107.9
Administrative and support service activities	77.7	63.3
Public administration and defence; compulsory social security	374.8	374.8
Education	316.2	292.0
Human health and social work activities	230.3	192.7
Arts, entertainment and recreation	60.0	43.4
Other service activities	94.3	52.3
Activities of households as employers	75.9	71.1
Activities of extraterritorial organisations and bodies	1.4	1.4

Source: NSSG, Labour Force Survey.

Table 7 Balance of payments

(million euro)

	January-November			November		
	2006	2007	2008	2006	2007	2008
I CURRENT ACCOUNT BALANCE (I.A+I.B+I.C+I.D)	**-20,855.2**	**-27,453.4**	**-31,853.8**	**-2,658.1**	**-3,460.9**	**-3,457.9**
I.A TRADE BALANCE *(I.A.1–I.A.2)*	***-32,061.0***	***-37,327.0***	***-40,991.4***	***-3,002.4***	***-3,711.6***	***-3,061.5***
Oil trade balance	-7,982.1	-8,087.0	-11,584.4	-719.0	-887.0	-824.9
Non-oil trade balance	-24,078.9	-29,240.0	-29,407.0	-2,283.4	-2,824.6	-2,236.6
Ship balance	-2,969.0	-4,865.1	-4,446.1	-350.2	-567.4	-392.2
Trade balance excl. oil and ships	-21,109.9	-24,374.9	-24,961.0	-1,933.2	-2,257.2	-1,844.5
I.A.1 Exports of goods	*14,910.0*	*15,987.1*	*18,356.2*	*1,347.2*	*1,630.8*	*1,451.4*
Fuel	2,778.5	2,738.6	3,987.2	158.4	293.1	265.0
Ships (receipts)	1,558.3	2,156.9	1,496.3	124.3	299.3	53.7
Other goods	10,573.2	11,091.6	12,872.7	1,064.5	1,038.4	1,132.7
I.A.2 Imports of goods	*46,971.0*	*53,314.1*	*59,347.5*	*4,349.6*	*5,342.4*	*4,512.9*
Fuel	10,760.6	10,825.6	15,571.5	877.4	1,180.1	1,089.8
Ships (payments)	4,527.3	7,022.0	5,942.3	474.5	866.7	445.8
Other goods	31,683.1	35,466.5	37,833.7	2,997.7	3,295.6	2,977.2
I.B SERVICES BALANCE *(I.B.1–I.B.2)*	**14,899.9**	**16,017.9**	**16,667.0**	**629.7**	**876.5**	**548.6**
I.B.1 Receipts	*26,721.1*	*29,286.0*	*32,176.1*	*1,772.3*	*2,163.2*	*1,800.5*
Travel	11,157.5	11,108.4	11,438.1	236.9	264.4	252.0
Transport	13,194.2	15,387.8	17,822.9	1,282.3	1,631.3	1,282.5
Other services	2,369.5	2,789.7	2,915.2	253.1	267.4	266.0
I.B.2 Payments	*11,821.2*	*13,268.0*	*15,509.1*	*1,142.6*	*1,286.6*	*1,251.9*
Travel	2,130.6	2,188.8	2,367.4	198.3	220.4	221.0
Transport	6,377.6	7,021.7	8,662.1	601.0	698.3	665.9
Other services	3,313.0	4,057.5	4,479.6	343.3	367.9	365.1
I.C INCOME BALANCE *(I.C.1–I.C.2)*	**-6,430.7**	**-8,150.3**	**-9,978.0**	**-494.9**	**-636.9**	**-857.7**
I.C.1 Receipts	*3,252.0*	*4,224.9*	*5,233.4*	*390.2*	*390.0*	*482.6*
Wages, salaries	287.3	335.2	316.5	28.2	31.6	23.2
Interest, dividends, profits	2,964.6	3,889.7	4,917.0	361.9	358.4	459.5
I.C.2 Payments	*9,682.6*	*12,375.2*	*15,211.4*	*885.1*	*1,026.9*	*1,340.3*
Wages, salaries	253.7	299.1	365.0	19.5	28.5	40.5
Interest, dividends, profits	9,429.0	12,076.1	14,846.4	865.5	998.4	1,299.9
I.D CURRENT TRANSFERS BALANCE *(I.D.1–I.D.2)*	**2,736.5**	**2,006.0**	**2,448.5**	**209.5**	**11.1**	**-87.3**
I.D.1 Receipts	*5,922.6*	*5,641.3*	*6,119.3*	*441.6*	*294.2*	*241.7*
General government (mainly transfers from the EU)	3,730.3	3,580.5	4,070.9	274.3	94.1	102.0
Other sectors (emigrants' remittances etc.)	2,192.3	2,060.9	2,048.4	167.3	200.1	139.7
I.D.2 Payments	*3,186.1*	*3,635.4*	*3,670.8*	*232.1*	*283.1*	*329.0*
General government (mainly payments to the EU)	2,294.0	2,530.7	2,366.8	154.6	182.4	211.6
Other sectors	892.2	1,104.7	1,304.0	77.5	100.7	117.4
II CAPITAL TRANSFERS BALANCE (II.1– II.2)	**2,586.9**	**2,983.1**	**3,947.7**	**451.8**	**459.8**	**923.2**
II.1 Receipts	*2,833.6*	*3,294.9*	*4,452.3*	*472.9*	*486.2*	*950.3*
General government (mainly transfers from the EU)	2,659.7	3,061.7	4,067.7	456.9	462.2	794.5
Other sectors	173.9	233.3	384.5	16.0	24.0	155.8
II.2 Payments	*246.6*	*311.8*	*504.6*	*21.0*	*26.4*	*27.1*
General government (mainly payments to the EU)	29.2	26.0	190.5	1.3	1.5	2.2
Other sectors	217.4	285.8	314.0	19.7	24.9	24.9
III CURRENT ACCOUNT AND CAPITAL TRANSFERS BALANCE (I+II)	**-18,268.3**	**-24,470.3**	**-27,906.1**	**-2,206.2**	**-3,001.1**	**-2,534.7**
IV FINANCIAL ACCOUNT BALANCE (IV.A+IV.B+IV.C+IV.D)	**18,215.6**	**23,960.8**	**27,384.8**	**2,510.9**	**2,418.8**	**2,244.4**
IV.A DIRECT INVESTMENT [1]	***1,225.7***	***-2,389.4***	***1,291.4***	***457.7***	***70.6***	***393.8***
By residents abroad	-2,785.1	-3,381.2	-2,032.2	201.4	-88.0	-133.4
By non-residents in Greece	4,010.8	991.8	3,323.7	256.3	158.6	527.3
IV.B PORTFOLIO INVESTMENT [1]	***5,463.9***	***13,395.3***	***15,768.7***	***2,322.4***	***-2,341.9***	***-1,259.1***
Assets	-9,037.2	-18,602.0	-4,861.9	-1,204.2	-2,508.3	-4,094.7
Liabilities	14,501.1	31,997.2	20,630.7	3,526.6	166.4	2,835.6
IV.C OTHER INVESTMENT [1]	***11,900.0***	***13,135.9***	***10,327.6***	***-64.3***	***4,700.2***	***3,172.7***
Assets	-8,508.5	-13,052.5	-22,331.4	-2,402.7	-1,592.5	552.8
Liabilities	20,408.4	26,188.4	32,659.0	2,338.4	6,292.7	2,619.9
(General government loans)	*-210.1*	*-2,261.7*	*-494.7*	*-14.3*	*-125.3*	*-28.6*
IV.D CHANGE IN RESERVE ASSETS [2]	***-374.0***	***-181.0***	***-3.0***	***-205.0***	***-10.0***	***-63.0***
V ERRORS AND OMISSIONS	**52.7**	**509.5**	**521.3**	**-304.6**	**582.3**	**290.3**
RESERVE ASSETS [3]				***2,319.0***	***2,350.0***	***2,495.0***

Source: Bank of Greece.
1 (+) net inflow, (-) net outflow.
2 (+) decrease, (-) increase.
3 Following Greece's entry into 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 8 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)
2004		468.4	2,480.5	2,948.9	1,040.5	1,642.9	5,632.2	229.7	604.9	102.3	6,568.2
2005		532.8	2,946.8	3,479.6	1,123.6	1,549.6	6,152.9	221.9	615.8	126.2	7,116.8
2006		592.2	3,164.3	3,756.5	1,414.8	1,557.1	6,728.4	248.0	614.1	198.6	7,789.7
2007		638.5	3,262.0	3,900.5	1,984.9	1,539.7	7,425.1	283.0	660.4	316.2	8,684.8
2008		723.2	3,305.1	4,028.2	2,487.0	1,554.2	8,069.7	330.7	723.0	261.7	9,385.0
2006	Jan.	520.8	2,922.2	3,443.1	1,113.7	1,565.7	6,122.5	237.0	608.4	143.4	7,111.3
	Feb.	524.8	2,917.2	3,442.0	1,134.8	1,569.2	6,146.1	235.0	610.2	152.7	7,143.9
	March	532.3	2,936.0	3,468.2	1,162.0	1,570.9	6,201.2	235.9	603.1	163.1	7,203.3
	Apr.	540.3	2,992.0	3,532.3	1,201.5	1,569.3	6,303.1	249.7	613.1	163.9	7,329.7
	May	543.6	3,006.5	3,550.1	1,189.1	1,568.5	6,307.7	258.2	621.6	173.7	7,361.2
	June	553.7	3,044.4	3,598.1	1,208.7	1,565.7	6,372.5	245.1	616.5	161.8	7,395.9
	July	562.7	3,009.8	3,572.5	1,232.9	1,562.6	6,368.0	250.5	627.4	160.3	7,406.2
	Aug.	559.0	2,956.9	3,515.9	1,267.8	1,562.6	6,346.3	264.9	639.7	179.1	7,430.0
	Sept.	563.2	3,018.2	3,581.4	1,304.8	1,558.9	6,445.1	263.8	645.6	178.7	7,533.2
	Oct.	567.1	2,996.5	3,563.5	1,341.7	1,551.8	6,457.1	261.2	644.7	194.3	7,557.3
	Nov.	571.5	3,038.2	3,609.7	1,367.3	1,543.5	6,520.5	260.8	636.9	199.4	7,617.6
	Dec.	592.2	3,164.3	3,756.5	1,414.8	1,557.1	6,728.4	248.0	614.1	198.7	7,789.3
2007	Jan.	575.6	3,106.1	3,681.8	1,446.4	1,558.4	6,686.5	262.3	641.5	220.7	7,811.3
	Feb.	578.7	3,095.3	3,674.0	1,469.6	1,547.1	6,690.7	268.8	651.9	231.7	7,843.0
	March	588.5	3,146.9	3,735.4	1,534.1	1,544.8	6,814.3	282.0	666.2	239.8	8,002.3
	Apr.	594.7	3,160.7	3,755.4	1,567.8	1,537.1	6,860.3	281.6	681.7	241.6	8,065.3
	May	597.6	3,179.4	3,777.0	1,599.7	1,533.4	6,910.1	285.2	702.3	254.3	8,152.0
	June	604.9	3,240.3	3,845.2	1,634.3	1,526.3	7,005.8	282.2	698.9	241.7	8,228.7
	July	612.9	3,218.0	3,830.9	1,694.8	1,516.1	7,041.8	287.1	712.4	239.1	8,280.4
	Aug.	610.6	3,137.8	3,748.4	1,765.4	1,508.1	7,022.0	297.6	705.9	259.9	8,285.5
	Sept.	610.4	3,212.2	3,822.6	1,795.6	1,501.6	7,119.9	295.4	682.2	281.5	8,378.9
	Oct.	613.5	3,176.1	3,789.6	1,890.9	1,525.1	7,205.7	293.5	684.0	297.9	8,481.2
	Nov.	618.6	3,210.9	3,829.5	1,916.0	1,518.8	7,264.3	301.8	696.7	312.4	8,575.2
	Dec.	638.5	3,262.0	3,900.5	1,984.9	1,539.7	7,425.1	283.0	660.4	316.2	8,684.8
2008	Jan.	623.1	3,227.5	3,850.6	2,040.2	1,545.8	7,436.5	307.4	737.2	297.5	8,778.6
	Feb.	628.7	3,170.9	3,799.6	2,115.7	1,542.9	7,458.2	314.4	749.6	275.9	8,798.0
	March	632.9	3,218.7	3,851.6	2,130.9	1,548.4	7,530.9	314.0	742.5	281.5	8,869.0
	Apr.	641.3	3,194.3	3,835.7	2,227.9	1,546.6	7,610.1	329.0	751.3	272.9	8,963.3
	May	645.7	3,221.2	3,866.9	2,261.2	1,542.5	7,670.6	333.4	755.8	290.1	9,049.8
	June	652.1	3,262.4	3,914.5	2,264.4	1,538.7	7,717.6	330.3	733.0	287.3	9,068.2
	July	658.7	3,178.3	3,837.1	2,365.1	1,528.5	7,730.7	333.2	743.2	290.4	9,097.6
	Aug.	656.0	3,133.2	3,789.2	2,425.9	1,526.2	7,741.3	343.1	757.9	281.6	9,123.8
	Sept.	657.1	3,219.5	3,876.7	2,431.6	1,516.4	7,825.1	345.6	731.1	291.1	9,191.6
	Oct.	698.8	3,244.8	3,943.6	2,499.2	1,511.9	7,955.3	351.0	729.8	278.4	9,314.5
	Nov.	703.7	3,265.2	3,968.1	2,517.2	1,516.2	8,001.9	336.7	739.7	277.4	9,355.7
	Dec.*	723.2	3,305.1	4,028.2	2,487.0	1,554.2	8,069.7	330.7	723.0	261.7	9,385.0

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 9 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 (1)	Sight deposits and current accounts (1.1)	Savings deposits (1.2)	Deposits with an agreed maturity up to two years (2)	Deposits redeemable at notice up to three months[1] (3)	Repurchase agreements (repos) (4)	Money market fund shares/units (5)	Debt securities up to two years[2] (6)	Total[3] (M3 excluding currency in circulation) (7)=(1)+(2)+ +(3)+(4)+ +(5)+(6)
2004		91.7	20.7	71.0	33.4	1.9	9.5	15.2	0.5	152.3
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		90.8	25.9	64.9	137.6	1.9	0.4	2.3	2.1	235.1
2006	Jan.	95.8	22.7	73.1	53.8	4.4	2.6	4.7	0.4	161.7
	Feb.	95.3	22.6	72.7	55.1	4.5	2.5	4.7	0.4	162.5
	March	95.3	22.7	72.6	56.8	4.1	2.5	4.6	0.5	163.9
	Apr.	95.6	22.3	73.3	57.9	4.0	2.4	4.6	0.6	165.1
	May	95.8	22.6	73.2	59.0	3.7	2.4	4.9	0.6	166.5
	June	99.2	25.1	74.0	60.4	3.6	2.5	5.2	0.6	171.5
	July	98.0	24.2	73.8	61.7	3.5	2.1	5.3	0.6	171.1
	Aug.	97.0	23.4	73.6	63.3	3.4	2.0	5.4	0.6	171.7
	Sept.	96.8	23.4	73.3	63.7	3.3	2.1	5.5	0.5	171.9
	Oct.	95.3	23.1	72.3	65.4	3.2	1.9	5.6	0.5	171.9
	Nov.	95.3	23.4	71.9	66.8	3.0	1.6	5.7	0.5	173.0
	Dec.	100.1	26.0	74.1	69.3	2.9	1.6	5.8	0.5	180.2
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.	90.8	25.9	64.9	137.6	1.9	0.4	2.3	2.1	235.1

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 10 Greece: deposits of domestic firms and households with other MFIs,[1] by currency and type

(outstanding balances in million euro, not seasonally adjusted)

End of period		Total deposits	Breakdown by currency: In euro	Breakdown by currency: In other currencies	Breakdown by type: Sight deposits	Breakdown by type: Savings deposits	Breakdown by type: Time deposits[2]
2004		128,424.6	110,206.7	18,217.9	18,274.2	73,954.2	36,196.1
2005		156,857.7	135,797.3	21,060.4	22,180.2	79,800.8	54,876.1
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	73,561.9	98,657.6
2008		227,056.3	200,441.5	26,614.8	21,819.4	67,328.3	137,908.6
2006	Jan.	155,334.6	134,509.7	20,824.9	20,097.8	78,361.8	56,875.1
	Feb.	156,125.0	134,733.6	21,391.4	19,797.5	78,114.4	58,213.2
	March	157,740.9	136,352.9	21,388.0	20,229.3	77,611.2	59,900.5
	Apr.	158,730.2	137,689.9	21,040.3	19,707.4	78,160.7	60,862.1
	May	159,942.6	138,812.0	21,130.6	20,063.9	77,829.2	62,049.5
	June	164,328.3	143,200.3	21,128.0	22,398.5	78,543.2	63,386.6
	July	164,473.3	143,231.3	21,242.0	21,667.6	78,137.8	64,667.9
	Aug.	164,706.1	143,088.1	21,618.0	20,710.6	77,844.8	66,150.8
	Sept.	164,750.2	143,309.9	21,440.3	20,693.0	77,479.1	66,578.1
	Oct.	164,848.2	143,096.0	21,752.3	20,410.6	76,266.5	68,171.1
	Nov.	166,195.3	144,335.6	21,859.7	21,116.2	75,520.4	69,558.6
	Dec.	173,370.4	151,321.5	22,048.9	23,525.0	77,858.3	71,987.2
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	173,494.0	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.	227,056.3	200,441.5	26,614.8	21,819.4	67,328.3	137,908.6

Source: Bank of Greece.
1 Other Monetary Financial Institutions (MFIs) comprise credit institutions (other than the Bank of Greece) and money market funds.
2 Including blocked deposits.

Table 11 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]
2004		2.05	2.08	2.11	2.15	2.20	2.27
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		3.86	4.27	4.63	4.72	4.76	4.81
2006	Jan.	2.33	2.39	2.51	2.65	2.75	2.83
	Feb.	2.35	2.46	2.60	2.72	2.83	2.91
	March	2.52	2.63	2.72	2.87	3.00	3.11
	Apr.	2.63	2.65	2.79	2.96	3.11	3.22
	May	2.58	2.69	2.89	3.06	3.20	3.31
	June	2.70	2.87	2.99	3.16	3.29	3.40
	July	2.81	2.94	3.10	3.29	3.43	3.54
	Aug.	2.97	3.09	3.23	3.41	3.53	3.62
	Sept.	3.04	3.16	3.34	3.53	3.64	3.72
	Oct.	3.28	3.35	3.50	3.64	3.74	3.80
	Nov.	3.33	3.42	3.60	3.73	3.81	3.86
	Dec.	3.50	3.64	3.68	3.79	3.87	3.92
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

Source: Bloomberg.
1 Euro overnight index average (EONIA).
2 Euro interbank offered rates (EURIBOR).

Table 12 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]	32-year
2004		2.27	2.87	3.37	3.81	4.26	4.53	4.77	–
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		4.82	4.27	4.51	4.54	4.80	5.18	–	5.30
2006	Jan.	2.84	2.99	3.17	3.32	3.60	3.71	3.79	3.98
	Feb.	2.91	3.09	3.30	3.50	3.77	3.86	3.94	4.14
	March	3.11	3.38	3.50	3.74	3.95	4.02	4.11	4.29
	Apr.	3.22	3.61	3.72	4.01	4.23	4.32	4.41	4.60
	May	3.31	3.63	3.80	4.05	4.30	4.38	4.48	4.69
	June	3.41	3.70	3.93	4.07	4.31	4.41	4.50	4.72
	July	3.54	3.78	3.98	4.10	4.33	4.42	4.50	4.72
	Aug.	3.61	3.72	3.88	3.98	4.19	4.29	4.37	4.58
	Sept.	3.72	3.71	3.81	3.89	4.06	4.15	4.21	4.39
	Oct.	3.80	3.77	3.87	3.93	4.08	4.15	4.21	4.35
	Nov.	3.87	3.77	3.82	3.86	3.98	4.05	4.09	4.23
	Dec.	3.92	3.84	3.89	3.93	4.04	4.12	4.17	4.30
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.	2.61	3.93	5.22	5.26	5.60	6.21	–	6.46

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 13 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	Agriculture	Industry[2]	Trade	Tourism	Other	Total	Housing	Consumer credit	Other
2000		59,330.0	42,360.3	3,884.9	11,823.7	12,374.2	1,814.3	12,463.2	16,969.7	11,271.9	5,511.3	186.5
2001		74,027.4	50,198.7	3,724.2	12,614.9	15,524.3	2,171.3	16,164.0	23,828.7	15,652.2	7,852.0	324.5
2002		86,510.5	55,012.2	3,224.7	14,364.0	15,670.8	2,903.2	18,849.5	31,498.3	21,224.7	9,755.4	518.2
2003		101,178.1	60,979.3	3,082.7	15,865.1	16,514.4	3,488.2	22,028.9	40,198.8	26,534.2	12,409.6	1,255.0
2004		117,201.7	65,566.3	3,248.0	15,675.6	18,821.6	4,040.0	23,781.1	51,635.4	33,126.8	17,053.8	1,454.8
2005		136,981.1	71,282.9	2,954.0	15,753.8	19,958.4	4,189.8	28,426.9	65,698.2	43,199.4	20,850.0	1,648.8
2006		156,896.4	76,659.8	3,051.0	16,371.4	20,572.0	4,194.1	32,471.3	80,236.6	52,502.5	25,599.2	2,134.9
2007		183,722.2	89,755.1	3,228.1	17,347.0	23,603.7	4,637.7	40,938.6	93,967.1	63,613.1	27,543.3	2,810.7
2008		200,383.7	103,516.4	3,663.2	18,968.0	27,217.2	5,036.5	48,631.5	96,867.3	65,446.3	28,352.8	3,068.2
2005	Jan.	118,387.3	65,985.6	3,237.8	15,645.2	18,921.1	4,079.3	24,102.2	52,401.7	33,672.4	17,275.8	1,453.5
	Feb.	118,906.4	65,521.9	3,161.6	15,623.8	19,104.7	4,129.9	23,501.9	53,384.5	34,281.6	17,610.7	1,492.2
	March	120,704.9	66,096.9	3,079.3	15,565.9	19,309.8	4,180.8	23,961.1	54,608.0	35,091.5	17,995.6	1,520.9
	Apr.	123,037.2	67,097.9	3,059.3	15,926.1	19,565.9	4,211.2	24,335.4	55,939.3	35,878.7	18,550.0	1,510.6
	May	124,228.8	67,257.5	3,038.1	15,872.9	19,520.5	4,225.7	24,600.3	56,971.3	36,610.2	18,896.4	1,464.7
	June	125,452.3	68,474.1	3,096.1	15,918.8	20,142.8	4,293.7	25,022.7	56,978.2	36,102.8	19,386.6	1,488.8
	July	127,215.3	69,613.6	3,119.2	16,123.2	20,352.3	4,135.7	25,883.2	57,601.7	37,238.6	18,897.0	1,466.1
	Aug.	127,788.5	69,212.3	3,123.3	15,838.2	20,027.5	4,110.4	26,112.9	58,576.2	37,850.0	19,245.1	1,481.1
	Sept.	129,507.9	69,305.5	2,939.4	15,674.2	19,985.6	4,073.7	26,632.6	60,202.4	39,022.1	19,628.5	1,551.8
	Oct.	131,111.7	69,462.4	2,884.1	15,757.2	19,905.6	4,089.4	26,826.1	61,649.3	40,000.4	20,080.7	1,568.2
	Nov.	133,136.0	69,791.5	2,919.6	15,712.5	19,717.1	4,184.2	27,258.1	63,344.5	41,244.2	20,511.7	1,588.6
	Dec.	136,981.1	71,282.9	2,954.0	15,753.8	19,958.4	4,189.8	28,426.9	65,698.2	43,199.4	20,850.0	1,648.8
2006	Jan.	137,731.3	70,999.2	2,948.7	15,690.0	19,672.8	4,205.7	28,482.0	66,732.1	44,010.6	21,047.7	1,673.8
	Feb.	139,714.7	71,491.8	2,957.3	15,747.6	19,389.1	4,248.8	29,149.0	68,222.9	44,873.8	21,637.5	1,711.6
	March	142,633.3	72,960.5	3,086.1	15,955.2	19,843.2	4,356.4	29,719.6	69,672.8	45,919.6	22,045.2	1,708.0
	Apr.	144,593.1	73,944.8	3,098.7	16,399.3	20,160.3	4,352.3	29,934.2	70,648.3	46,612.7	22,344.3	1,691.3
	May	145,477.5	74,372.3	3,105.7	16,661.9	19,876.8	4,377.7	30,350.2	71,105.2	46,539.9	22,815.5	1,749.8
	June	148,322.9	76,259.8	3,192.4	16,900.2	20,531.4	4,416.8	31,219.0	72,063.1	46,929.0	23,275.7	1,858.4
	July	150,012.0	76,374.7	3,203.6	16,706.6	20,573.2	4,350.0	31,541.3	73,637.3	48,165.4	23,610.7	1,861.2
	Aug.	150,031.2	76,033.8	3,204.1	16,658.0	20,371.5	4,301.8	31,498.4	73,997.4	48,138.4	23,956.0	1,903.0
	Sept.	152,943.1	77,450.6	3,239.2	16,769.4	20,916.6	4,337.6	32,187.8	75,492.5	49,140.0	24,394.4	1,958.1
	Oct.	153,584.8	76,893.8	3,226.8	16,627.6	20,662.5	4,346.0	32,030.9	76,691.0	49,923.5	24,709.6	2,057.9
	Nov.	152,551.9	74,519.8	3,141.2	16,223.8	19,823.8	4,213.5	31,117.5	78,032.1	50,672.3	25,283.7	2,076.1
	Dec.	156,896.4	76,659.8	3,051.0	16,371.4	20,572.0	4,194.1	32,471.3	80,236.6	52,502.5	25,599.2	2,134.9
2007	Jan.	157,445.6	75,917.1	3,021.6	16,099.9	20,119.0	4,218.6	32,458.0	81,528.5	53,517.4	25,881.3	2,129.8
	Feb.	159,987.8	77,080.3	3,039.1	16,168.8	20,500.8	4,327.7	33,043.9	82,907.5	54,619.9	26,114.4	2,173.2
	March	164,281.1	79,285.9	3,049.5	16,366.8	21,120.2	4,355.7	34,393.7	84,995.2	56,200.1	26,572.7	2,222.4
	Apr.	165,479.2	79,008.3	3,005.9	16,364.7	21,008.8	4,361.1	34,267.8	86,470.9	57,218.4	27,071.9	2,180.6
	May	168,128.9	79,941.2	3,034.2	16,706.6	21,238.3	4,380.6	34,581.5	88,187.7	58,277.3	27,714.2	2,196.2
	June	173,093.9	84,391.7	3,206.8	17,077.7	22,083.4	4,439.4	37,584.4	88,702.2	58,156.5	28,101.5	2,444.2
	July	173,441.0	84,073.0	3,216.2	16,876.8	22,117.2	4,388.6	37,474.2	89,368.0	58,169.6	28,596.5	2,601.9
	Aug.	175,889.4	85,133.8	3,276.4	16,979.5	22,211.6	4,346.8	38,319.5	90,755.6	59,067.4	29,055.8	2,632.4
	Sept.	178,821.4	86,275.4	3,287.6	17,211.2	22,677.0	4,386.2	38,713.4	92,546.0	60,119.2	29,466.4	2,960.4
	Oct.	180,197.8	86,146.6	3,310.4	17,098.1	22,685.0	4,420.3	38,632.8	94,051.2	61,052.5	30,101.9	2,896.8
	Nov.	179,873.5	87,830.9	3,320.9	17,420.5	22,932.6	4,466.7	39,690.2	92,042.6	62,158.7	27,128.2	2,755.7
	Dec.	183,722.2	89,755.1	3,228.1	17,347.0	23,603.7	4,637.7	40,938.6	93,967.1	63,613.1	27,543.3	2,810.7
2008	Jan.	185,746.7	90,623.4	3,300.7	17,447.4	23,749.0	4,673.8	41,452.5	95,123.3	64,361.2	27,995.2	2,766.9
	Feb.	187,446.5	91,656.1	3,464.6	17,708.8	23,917.3	4,772.6	41,792.8	95,790.4	64,142.7	28,835.5	2,812.2
	March	191,179.8	94,055.5	3,496.6	17,955.6	24,688.4	4,890.2	43,024.7	97,124.3	65,042.9	29,193.5	2,887.9
	Apr.	191,848.4	94,548.9	3,560.3	18,030.0	24,968.9	4,935.9	43,053.8	97,299.5	64,928.0	29,597.8	2,773.7
	May	194,575.9	95,836.7	3,631.2	18,625.6	25,364.4	4,969.7	43,245.8	98,739.2	65,704.6	30,195.4	2,839.2
	June	199,435.2	98,933.1	3,703.3	18,926.8	26,187.2	5,134.9	44,980.9	100,502.1	66,878.5	30,675.5	2,948.1
	July	197,628.9	99,588.0	3,719.7	19,194.5	26,329.8	5,121.1	45,222.9	98,040.9	64,448.0	30,646.3	2,946.6
	Aug.	200,739.7	101,911.9	3,762.5	19,374.0	26,575.9	5,171.5	47,028.0	98,827.8	64,854.2	31,051.3	2,922.3
	Sept.	203,437.6	103,033.0	3,776.9	19,413.1	26,948.7	5,273.6	47,620.7	100,404.6	65,735.7	31,663.2	3,005.7
	Oct.	206,738.3	105,090.3	3,826.5	19,497.0	27,143.1	5,230.4	49,393.3	101,648.0	66,617.3	31,984.7	3,046.0
	Nov.	204,051.4	104,176.5	3,835.1	19,273.0	27,188.6	4,964.7	48,915.1	99,874.9	64,690.4	32,140.3	3,044.2
	Dec.	200,383.7	103,516.4	3,663.2	18,968.0	27,217.2	5,036.5	48,631.5	96,867.3	65,446.3	28,352.8	3,068.2

Source: Bank of Greece.
1 Excluding securitised loans.
2 Comprising manufacturing and mining.

Table 14 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	
2004		0.91	0.90	2.29	0.55	2.17	1.98
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		1.26	1.17	4.87	1.09	4.48	3.93
2006	Jan.	0.93	0.90	2.44	0.69	2.33	2.23
	Feb.	0.93	0.90	2.45	0.65	2.35	2.25
	March	0.99	0.95	2.58	0.73	2.57	2.42
	Apr.	0.98	0.95	2.63	0.73	2.61	2.50
	May	0.98	0.95	2.66	0.73	2.57	2.47
	June	1.02	0.98	2.76	0.75	2.70	2.60
	July	1.02	0.98	2.84	0.74	2.79	2.60
	Aug.	1.04	1.00	2.95	0.83	2.96	2.74
	Sept.	1.05	1.00	3.03	0.83	2.97	2.85
	Oct.	1.11	1.06	3.24	0.93	3.15	3.02
	Nov.	1.09	1.04	3.26	0.89	3.24	3.09
	Dec.	1.14	1.09	3.47	0.92	3.48	3.30
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

Source: Bank of Greece.
1 Weighted average of the current account rate and the savings deposit rate.
2 End-of-month interest rate.

Table 15 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 without defined maturity[2,3]	Consumer loans: With a floating rate or an initial rate fixation of up to one year	Consumer loans: Average rate on total consumer loans	Housing loans: With a floating rate or an initial rate fixation of up to one year	Housing loans: Average rate on total housing loans	Loans to non-financial corporations[1]: Loans without defined maturity[3,4]	With a floating rate or an initial rate fixation of up to one year: Up to €1 million	With a floating rate or an initial rate fixation of up to one year: Over €1 million
2004		13.81	9.55	9.86	4.30	4.51	7.01	4.98	3.67
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	4.45	7.54	6.57	5.32
2008		14.80	8.65	8.96	5.10	4.81	7.61	6.82	5.75
2006	Jan.	13.18	7.77	8.30	3.92	4.00	6.94	5.26	3.70
	Feb.	13.18	8.06	8.51	3.89	3.97	6.99	5.44	3.74
	March	13.22	8.09	8.44	3.92	4.02	7.13	5.50	4.15
	Apr.	13.24	7.82	8.48	3.93	4.08	7.09	5.57	3.92
	May	13.22	7.84	8.66	4.00	4.15	7.10	5.61	4.17
	June	13.45	8.09	8.75	4.22	4.32	7.18	5.65	4.41
	July	13.41	7.85	8.59	4.28	4.36	7.19	5.70	4.40
	Aug.	13.60	7.99	8.77	4.51	4.53	7.26	5.88	4.27
	Sept.	13.58	8.03	8.85	4.50	4.54	7.26	5.91	4.72
	Oct.	13.72	8.15	8.87	4.66	4.62	7.37	6.14	4.83
	Nov.	13.81	8.19	8.86	4.69	4.59	7.25	6.15	4.94
	Dec.	13.80	6.82	7.82	4.36	4.41	7.35	6.30	5.16
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

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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