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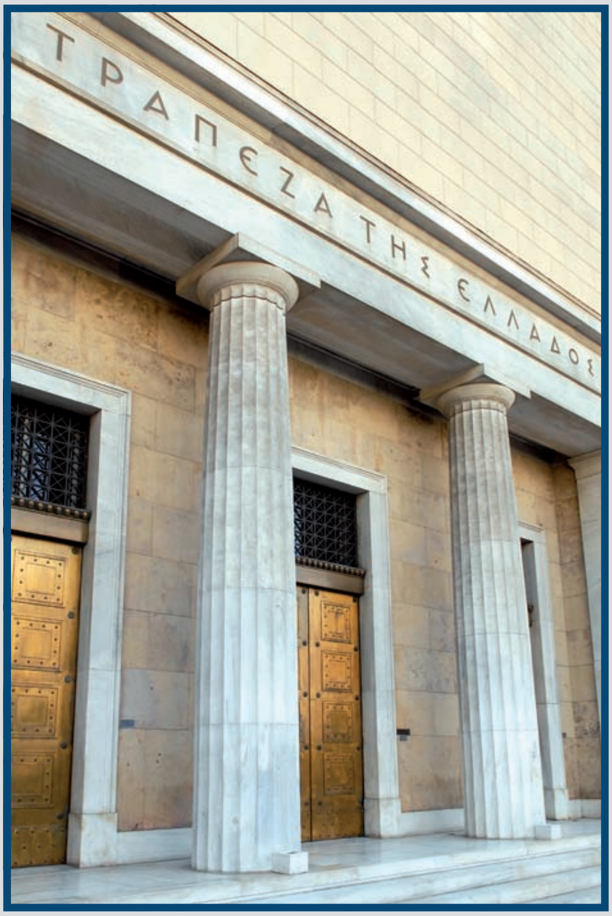
ANNUAL REPORT
2012

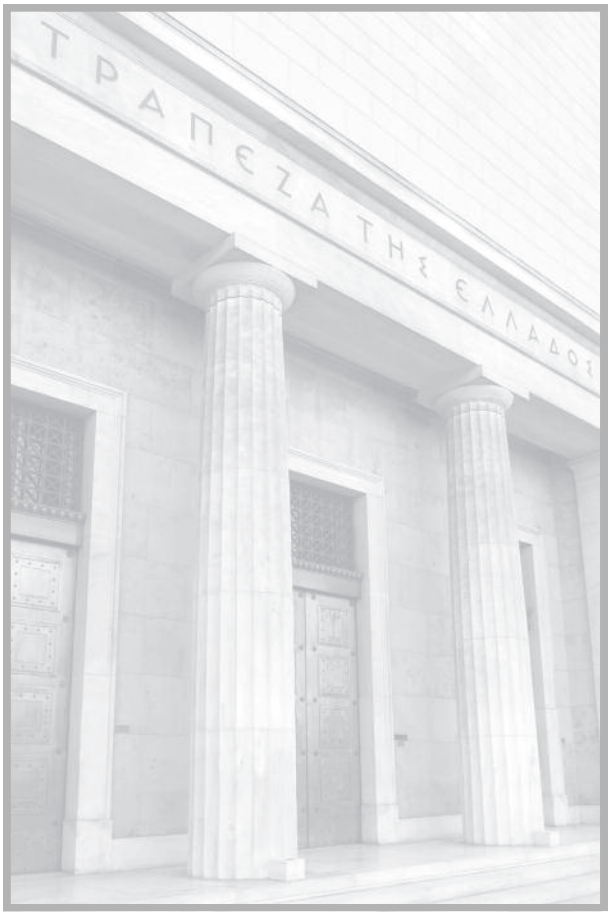


FEBRUARY 2013

BANK OF GREECE
EUROSYSTEM

ANNUAL REPORT
2012

Presented to the 80th General Meeting of Shareholders
on 25 February 2013 by Governor George Provopoulos



FEBRUARY 2013

BANK OF GREECE
EUROSYSTEM

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GENERAL COUNCIL

George Provopoulos	**Chairman – Governor**	
Helen Dendrinou – Louri	**Deputy Governor**	
Ioannis Papadakis	**Deputy Governor**	
Ilias Plaskovitis*	Member of the MPC and Member	
Charalampos Stamatopoulos	Member of the MPC and Member	
Dimitrios Asimakopoulos	Member	
Ioannis Gozadinos	»	*Term of office expires in 2013***
Georgios Kassimatis	»	*Term of office expires in 2013***
Georgios Mylonas	»	
Christos Polyzogopoulos	»	
Michael Chandris	»	
Attending		
Panagiotis Karakousis	Government Commissioner	

* By the Presidential Decree of 20 July 2012 published in the Government Gazette, Mr. Ilias Plaskovitis was appointed Member of the Monetary Policy Council, and consequently Member of the General Council for six years, in accordance with Article 35A of the Bank's Statute.

** The term of office of Mr. Ioannis Gozadinos and Mr. Georgios Kassimatis, elected by the Annual General Meeting of Shareholders on 27 April 2010, expires at the current Annual General Meeting, in accordance with Article 21 of the Bank's Statute.

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I FINANCIAL RESULTS FOR 2012

1 FINANCIAL RESULTS FOR 2012

The Bank's total net revenue for 2012 rose by 87.8%, while general operating expenses excluding provisions continued to decline for yet another year (-3.6%), despite a €10.3 million extraordinary expenditure on consultancy fees for the auditing of the banking system. Staff costs, down by a substantial 13.7%, had a significant contribution to the reduction of operating costs.

Provisions amounted to €2,342.7 million, up from €1,151.4 million in 2011.

The Bank's profits in 2012 came to €318.6 million, compared with €96.6 million in 2011.

In accordance with Article 71 of the Bank's Statute, the General Council has decided to propose to the General Meeting of Shareholders to allocate the profits of 2012 as follows: distribute €13.3 million, or 12% of the Bank's capital, as dividend (€10.7 million: net dividend payment, €2.6 million: tax withheld) and transfer the balance (€305.3 million) to the State.

In greater detail, the Bank's income and expenses in financial year 2012 were as follows:

Income

The Bank's total net income from Eurosystem monetary policy operations, interest and commission fees, and other revenue from domestic and foreign operations increased by 87.8% to €2,995.5 million, from €1,594.8 million in 2011.

Specifically:

Net interest income and income from financial operations and the reallocation of Eurosystem monetary income soared to €2,888.9 million, up by 98% from €1,458.8 million in 2011. Net income from fees and commissions fell by 27% to €71.8 million, compared with €98.3 million in the previous year.

Income from equity shares and participating interests dropped by €3.7 million to €20.1 million, from €23.8 million in 2011. Most of this income came from the Bank's share in the capital of the ECB, while the remainder represents dividends received from participating interests of the Bank.

As in 2011, the ECB decided that, out of its income (€1.741 million) on euro banknotes in circulation and on securities purchased under the Securities Markets Programme (SMP), an amount of €1,166 million will be used to increase its risk provisions. Out of the remaining €575 million distributed to the National Central Banks of the Eurosystem on 31 January 2013, the Bank of Greece received €16.1 million, according to its share in the capital of the ECB. The remaining profit of the ECB (€431 million) will be distributed to the NCBs in March 2013, and the amount allocated to the Bank of Greece (€12.1 million[1]) will benefit the Bank's results for 2013.

Finally, other income increased by 5% to €14.6 million, compared with €13.9 million in 2011. The bulk of this amount is income from operations carried out by the Banknote Printing Works (IETA) on behalf of the Greek State.

Expenses

Total expenses in 2012 increased by €1,178.7 million to €2,676.8 million, compared with €1,498.1 million in 2011, solely on account of high provisioning, whereas general operating expenses excluding provisions declined.

1 The above amounts are based on provisional ECB data, as available at the date the present Report went to press. The final amounts, which were approved at the meeting of the ECB Governing Council of 21 February 2013 are as follows: amount to be distributed to NCBs: €423 million, amount to be received by the Bank of Greece: 11.9 million, date of distribution: 25 February 2013.

Specifically:

The Bank's general operating costs excluding provisions (staff costs, pensions, depreciation and other costs) decreased by €12.6 million (-3.6%) to €334.1 million, from €346.7 million in 2011, despite a €10.3 million extraordinary expenditure on consultancy fees for the auditing of the banking system in 2012. Staff costs fell by €25.1 million (or 13.7%), making a significant contribution to the reduction of operating expenses, while other regular administrative expenses declined by €6.9 million (or 14.7%).

This reflects the Bank's sustained efforts to curtail operating expenses by implementing targeted measures and initiatives, as well as by signing in April 2012 a three-year firm-level collective agreement with the Bank of Greece Employees' Union.

In fact, as part of a general effort to rationalise the Bank's expenses, operating expenses excluding provisions were cut by €105 million (or 24%) in the past three years. A significant contribution to this effect came from a reduction of €49.1 million (or 24%) in staff costs. It should be noted that the members of the Administration and the Monetary Policy Council have waived 20% of their pay since December 2009, whereas the Governor's and the two Deputy Governors' remuneration has been reduced by a further 30% since October 2012.

Operating expenses were reduced despite the Bank's increased obligations in ensuring financial stability (additional audits, bank recapitalisation operations, etc.) and supervising private insurance, as well as its obligations arising from the EU/IMF financial support programme for Greece.

High provisioning for operational risks and obligations of the Bank continued in 2012, with the setting aside of €2,342.7 million, thereby bringing cumulative provisions to €6,213.5 million.

High provisioning is in line with the principle of prudence followed by the ECB and the NCBs of the Eurosystem. This practice aims at strengthening the financial position of the Bank of Greece, enabling it to fulfil its duties and address the risks it faces in the best possible way.

In particular, the Bank of Greece, as an integral part of the Eurosystem, contributed to safeguarding the stability of the Greek banking system by providing the liquidity needed to mitigate the adverse impact of the debt crisis and of fiscal adjustment on domestic economic activity.

Organisational restructuring

Unfavourable economic developments at the national and global level forced the Bank to press ahead with the abolition or merger of units and the redeployment or reassignment of their duties. This will help the Bank to achieve synergies, use more effectively the existing staff (which has been reduced by 820 people over the past five years), enhance financial supervision, avoid possible overlaps, as well as lower operating costs and operational risk.

In particular, significant restructuring was carried out within the Financial Operations Department, the Economic Research Department and the Government Financial Operations and Accounts Department, while some sections of the Human Resources and Organisation Department and of the Accounting Department have also undergone several organisational adjustments. In addition:

- A special unit by the name "Credit Institutions' Resolution Unit" was established pursuant to Law 4046/2012, which provides for a clear organisational separation between the Bank's supervisory tasks and its tasks in relation to the resolution of credit institutions.

- In an effort to create a more functional and efficient branch structure that would allow the Bank of Greece to meet its constantly changing needs, the Statistics and Supervision Units (or the Balance of Payments Statistics Units, where applicable) were abolished in all branches of the Bank and a new Cash Supervision and Distribution Control Unit was established in its six (6) principal branches (Heraklion, Ioannina, Kavala, Larissa, Patras and Rhodes). Also, the Domestic Operations Unit and the Foreign Operations Unit at the Kavala, Kalamata and Chania branches were merged into a new General Operations Unit.

• The rationalisation of the operation of the Bank' regional branch network continued in 2012, with an aim to further cut down on operating costs and cash distribution levels. As part of this process, the operation of the Nafpaktos agency was discontinued as from 22 October 2012, and the NHTO ("notes held to order") scheme serving it was abolished, as was the case with the Corfu, Agrinio, Sparta and Florina outlets. In addition, the Lavrio and Siteia agencies closed on 14 January 2013, while the Limnos and Poros agencies will also be abolished as from 18 March 2013; their operations will be taken over by adjacent Bank of Greece units and the NHTO stocks with National Bank of Greece branches will be abolished.

Development of Operating Regulations for the Bank's units

The regulatory framework for the operation of the Bank's units is continuously being streamlined and adapted to new requirements by drafting Operating Regulations and submitting them for final approval to the General Council, with a view to facilitating their seamless operation and their more efficient supervision and control. In total, 44 section-level Operating Regulations were approved in 2012 by the General Council of the Bank.

Introduction of a Code of Conduct of the Bank

The Bank's Administration introduced a formal Code of Conduct of the Bank of Greece, which provides guidance to all staff on matters of business practices and professional conduct, and serves as a reference document (complementary to the Bank's Statute and Staff Rules) on the standards of behaviour expected from them.

Business Continuity Management Policy

The Bank's Administration approved the Business Continuity Management (BCM) Policy that outlines the methodological framework and describes the roles and responsibilities of all parties involved in business continuity management.

The BCM structured approach provides an organised way for reinforcing the Bank's resilience, namely its ability to ensure the safety and protection of its staff and assets, as well as the uninterrupted functioning and the fulfilment of its statutory obligations in the event of business disruption due to emergency situations.

Corporate governance

The Risk Management Unit was established two years ago. In 2012, its main task was to upgrade the Bank's credit risk measurement system in line with the techniques applied by most central banks of the Eurosystem. Meanwhile, after the approval of the Operational Risk Management Policy and the Business Continuity Management Policy by the Risk Management Committee, 2012 saw the phasing-in of the relevant procedures in the Bank's Departments, with the coordination and support of the Risk Management Unit, according to a programme approved and supervised by the above Committee.

The Compliance Unit began its work by rationalising the Bank's internal procedures and then focused on the development of a documented policy, IT systems and procedures for the prevention of money laundering and terrorist financing. This was set as a priority due to the vital importance attached worldwide to compliance with the AML/CTF legislation, although the transactions of the Bank of Greece —as a central bank and a member of the Eurosystem— involve primarily the Greek State and credit institutions. Since early 2013, the compliance function has been jointly assumed by the Internal Audit Department and the Risk Management Unit.

The Audit Committee provided support to the Bank's General Council within its scope of responsibility (review of the Bank's financial statements, contracts and evaluation of external auditors' work, supervision of the internal control and internal audit functions).

Amendments to the Statute of the Bank of Greece

In 2012, important amendments were adopted to the Statute of the Bank, which has the force of law.

These amendments were introduced on the initiative of the General Council of the Bank, were approved by decision of the 79th Annual Ordinary General Meeting of Shareholders of the Bank of Greece on 24 April 2012 and then ratified by Article 165(7) of Law 4099/2012 (Government Gazette A 250). Among others, they: (a) provide for the extension of the duration of the Bank until 31 December 2050; (b) introduce more collegial decision-making on the critical —in terms of macro-prudential supervision— matters referred to in Article 55A of the Statute, by a three-member Executive Committee composed of the Governor and the two Deputy Governors; (c) prohibit entities supervised by the Bank from owning shares of the Bank, and cap the voting rights of any shareholder other than the Greek State and the legal persons in public law referred to in Article 2 of Law 2292/1953 at 2% of the Bank's share capital; and (d) allow the Bank to transfer to the Greek State the Bank's income on the Greek government bonds held in its investment portfolio as at 31 December 2011.

Observance of professional secrecy by the Bank of Greece

The Bank of Greece complied fully and strictly with the obligation of professional secrecy under Article 60 of Law 3601/2007, in line with EU legislation. Any derogation is explicitly stipulated by law. The most recent exception to the obligation of professional secrecy was introduced by Article 165(8a) of Law 4099/2012, which authorised the publication of the Report on the Recapitalisation and Restructuring of the Greek Banking Sector on 27 December 2012.

Buildings and technical projects

As regards the Bank's premises, in 2012 the Technical and Administrative Support Department continued the maintenance and rearrangement of the Bank's buildings and business premises in Attica and other regions, as part of a project to improve working conditions, enhance the physical security of facilities and transactions, and switch over to more environment-friendly solutions.

With respect to environmental management, the construction of the private network for natural gas heating and cooling in the Halandri complex was completed.

Meanwhile, works to transform the Head Office ground floor on Stadiou Street into a transaction hall (with a view to enhancing the building's security), as well as the relocation of the relevant business units, were completed in 2012.

In the context of the implementation of security measures, the installation and improvement of all electronic safety and protection systems was completed, and fire safety certificates were obtained for the buildings of the Bank's branches and outlets.

In 2012, the buildings that housed the former insurance funds of the Bank's personnel vested in the ownership of the Bank. The Technical and Administrative Support Department defined their management procedures and started the required maintenance works.

Finally, the restoration of the sides of the traditional and listed building of the Rhodes Branch was completed in cooperation with the

Medieval Town Department of the Municipality of Rhodes.

Other activities

In the context of continuing research into matters relating to the Greek and European economy, the Bank participated in the Eurosystem's research activities.

About ten working papers and two issues of the Economic Bulletin of the Bank of Greece were published in 2012. Joint research projects were also carried out, bringing together experts from the Bank of Greece and the domestic and foreign academic community, as well as postgraduate students from Greek universities, on matters relating to social policy, regulatory burden, competition and growth, the economic effects of immigration, the implications of structural changes on the basis of a general equilibrium macroeconomic model, inflation measuring and the monetary policy transmission mechanism in the Balkans.

Moreover, three conferences and events were organised on financial crises, the Greek labour market during the crisis and Southeast European countries, as well as about 20 seminars and research workshops with the participation of speakers from Greece and abroad, aiming to inform the Bank's economists and the academic community about the latest developments in research.

In the context of the Bank's financial education activities, the Museum of the Bank of Greece continued its operations. Since its first year, the number of visitors has exceeded 10,000 (3,700 in 2012), in their majority high school and university students. The second temporary exhibition, entitled "Production squared", opened in December 2012. Its subject is both the production of banknotes and coins and the representation of actual forms of production on them.

In 2012, the Climate Change Impacts Study Committee, continuing the research in its fields of competence, launched a series of works aiming to formulate an adaptation strategy on climate change. At the same time, with a view to fostering scientific debate, it organised a cycle of specialised seminars; the speakers were members of the Committee, as well as renowned scientists in disciplines relevant to the Committee's activities. In total, nine specialised seminars were held with 23 speakers from Greece, Europe and the United States, covering a wide variety of subjects and focusing on the impacts of climate change.

In the context of its overall effort to contribute to historical and scientific research, in December 2012 the Bank of Greece published a biography of Emmanuel Tsouderos, who was the second Governor in the Bank's history and played a pivotal role in its establishment. The work, entitled *Emmanuel I. Tsouderos 1882-1956. Central banker and politician*, was written by the historian Margarita Dritsas. It is based on research of the archive of Emmanuel Tsouderos, kept at the Bank of Greece, as well as new archival material, and sheds light on unknown aspects of Tsouderos' actions. At the same time, it places emphasis on the timeless values of central bank independence and integrity, which constitute the most important legacy of Tsouderos's administration for the next generations.

Expiry of General Council members' term of office

By the Presidential Decree of 20 July 2012 published in the Government Gazette, Mr. Ilias Plaskovitis was appointed Member of the Monetary Policy Council and consequently Member of the General Council, with a term of six years.

In December 2012, Mr George Ekonomou tendered his resignation to the Monetary Policy Council and, consequently, to the General Council of the Bank of Greece. Mr Ekonomou was a Member of the Monetary Policy Council from October 2002 to his resignation.

The terms of office of Mr Ioannis Gozadinos and Mr Georgios Kassimatis, elected by the Annual Ordinary General Meeting of Shareholders of 27 April 2010, expire at the current Annual Ordinary General Meeting, in accordance with Article 21 of the Bank's Statute. For this reason, the General Meeting will be called upon to elect new General Council members for a three-year term in their place. The outgoing General Council members are eligible for re-election.

II THE OUTLOOK IS IMPROVING – EFFORTS SHOULD CONTINUE IN ORDER TO ENSURE THAT THE SACRIFICES ARE NOT IN VAIN

1 A VISIBLE IMPROVEMENT IN GREECE'S ECONOMIC PROSPECTS

The ten months since the last General Meeting of Shareholders have seen important developments, which are now shaping a new and clearly improved economic environment.

The progress made during this crucial period was far from predictable, given that a year ago many analysts anticipated that a Greek default and exit from the euro area was almost inevitable. This eventuality has been significantly reduced and the economy can now look forward to a recovery and exit from the crisis, with the support of our European partners and the International Monetary Fund.

The turnaround in sentiment, the dissipation of pessimistic expectations and the gradual restoration of confidence have been due to a number of factors, which helped the Greek economy avoid the serious impending risks and get back onto a track of rebalancing and stabilisation.

First among these factors was *the affirmative answer of the Greek people to the historic dilemma concerning Greece's continued participation in the euro area.* This answer was delivered with the formation of the coalition government, which explicitly stated its determination to safeguard the country's European path and pledged to implement the adjustment programme. These key choices, the more intense implementation of the programme and the progress in making up for the major delays caused by the two consecutive national elections made it possible for the Eurogroup, at end-November and in mid-December 2012, to decide to support Greece financially. These developments had a beneficial effect on economic sentiment in Greece and abroad.

On the domestic front, the Economic Sentiment Indicator rose to a two-year high of 86-87 in December 2012-January 2013, suggesting that the strong uncertainties of the previous months have eased considerably. An improvement in confidence is also evidenced by developments in the Athens Exchange, with stock prices more than doubling since early June 2012. Further evidence of improved confidence is the reversal of the downward trend of deposits, which increased by €15 billion between June 2012 and January 2013.[1]

Abroad, the negative references to Greece are now much less frequent, while EU officials express unequivocally their willingness to support Greece. The reversal in sentiment is reflected in a sharp narrowing of the yield spread between Greek and German ten-year government bonds, from about 3,000 basis points in May 2012 to less than 1,000 basis points by February 2013.

*The **second** factor which has contributed to this improvement is the progress made in the implementation of the adjustment programme, particularly in addressing the twin deficits – fiscal and external. This progress is a sign of incipient rebalancing and restructuring in the economy.*

In the *fiscal domain*, deficit reduction has been remarkable. Between 2009 and 2012, both the general government deficit and the corresponding primary deficit were reduced by 9 percentage points of GDP, while the fall in the structural deficit was even larger (15 percentage points). The fiscal measures taken by end-2012 corresponded to 30% of GDP (on a gross basis) – one of the main reasons for the observed social tensions. Debt dynamics, which had been worsening until recently mainly on account of the large and protracted decrease in GDP, is already being positively affected by the Eurogroup decisions of 27 November 2012. The debt-to-GDP ratio is estimated to have dropped by almost 10 percentage points in 2012 and, according to the Economic Adjustment Programme, is forecast to come to 124% of GDP in 2020 and to fall below 110% by 2022. The Eurogroup decisions

1 On the basis of *monthly* data, domestic deposits by the private sector decreased by €89.2 billion between October 2009 and June 2012, before rising by €11.4 billion between July and December 2012. On the basis of *daily* data, however, both the outflow of October 2009-20 June 2012 and the inflow of 21 June-31 December 2012 were higher.

included debt buy-back, lower interest rates and extension of maturities of loans from the official sector and the transfer to Greece of income from Greek government bonds held by euro area national central banks. As a result, Greece is now able to borrow from the official sector at particularly low rates. These measures are subject to strict conditionality, while further interest rate cuts are foreseen once Greece achieves an annual primary surplus.

Regarding the *external sector*, the current account deficit shrank to 2.9% in 2012, down from a peak of almost 15% of GDP in 2008. More importantly, between 2010 and 2012, Greece recovered more than 75% of the loss in cost competitiveness incurred over the 2001-2009 period. This development, together with structural reforms underway, will have a beneficial impact on export performance and growth in the years ahead.

Third *was the success in safeguarding financial stability and confidence in the banking system in a period marked by record levels of uncertainty.* The progress that has been made would obviously not have been feasible, had the banking system collapsed making Greece's exit from the euro area inevitable. This risk however was averted and not a single depositor suffered the slightest loss. More importantly, though, despite the deep crisis, not only was systemic stability preserved, but also the groundwork was laid for a robust banking system.

Fourth*, the continued financial support from our official lenders, which gives Greece both the chance to restructure its banking system and the time to carry forward the structural transformation of its economy.* This support, provided on favourable terms, is unprecedented by international standards, with loans to Greece for the period 2010-2014 amounting to €237 billion, of which €195.3 billion had been disbursed by January 2013. The remaining €41.7 billion are to be disbursed by end-2014.

Fifth*, the steps being taken towards supplementing the institutional architecture of both the European Union and the euro area.* The ongoing discussions and the first decisions taken in this direction have helped to turn the international climate around; in turn, this affected sentiment in Greece favourably. True, the pace of institutional reforms in the European Union may at times be slower than what markets would expect. Still, there is tangible evidence of Europe's will to avert crises in the future or, should they emerge, to address them effectively. The report "Towards a Genuine Economic and Monetary Union", prepared by the President of the European Council, in collaboration with the Presidents of the European Commission, the Eurogroup and the European Central Bank, initially proposed the establishment of an integrated financial framework, having as central elements a single European banking supervision mechanism and a common deposit insurance and resolution framework. The regulatory framework for the assignment of the single banking supervision to the ECB, which, together with national supervisory authorities, will make up the single supervisory mechanism, has been prepared and will soon be adopted. In December, the European Council urged co-legislators to agree on the proposals for a Recovery and Resolution Directive and for a Deposit Guarantee Scheme Directive by June 2013. Finally, of particular importance was the announcement in August 2012 of the Outright Monetary Transactions (OMTs) (the details of which were made known one month later), which by itself helped to restore relatively normal conditions in euro area financial markets.

2 THE ONGOING RECESSION LEAVES NO ROOM FOR COMPLACENCY

The developments outlined above suggest that Greece has come a long way. The distance that remains to be covered, though shorter, will be particularly hard, as all efforts from now on will be on top of the sacrifices already made. However, the foundations for addressing serious, chronic problems have been laid. The significant and immediate risk of collapse has been averted; the possibility of a Greek exit from the euro area has been significantly reduced; and confidence is gradually being restored. Yet, these encouraging developments leave no room for complacency.

2013 will be another year of recession – Unemployment will rise further

The Greek economy is still going through a deep crisis, and the risk of a derailing has not been completely eliminated.

In 2012, GDP contracted for the fifth year in a row (by 6.4%, according to provisional estimates from ELSTAT), bringing the cumulative decline for the five-year period 2008-2012 to 20.1%. This percentage will rise further, as the recession is expected to continue, albeit at a slower pace.

The recession led to a dramatic decline in employment: over the four-year span 2009-2012, total employment decreased by about 17.5%, while salaried employment decreased more, by over 19%. The loss of thousands of jobs pushed the rate of unemployment up from 7.6% in 2008 to historically high levels: about 24.5% *on average* in 2012 and 27.0% in November; a further rise is expected in 2013.

This crisis, unprecedented in magnitude and duration, has multiple adverse effects as it:

– reduces per capita income and the standard of living;

– makes physical and human capital obsolete;

– causes savings and banks' deposit base to shrink, thereby leading to liquidity constraints;

– feeds uncertainty and discourages investment;

– hampers fiscal consolidation, as lower incomes mean less public revenue. This fuels a vicious circle of deficits and recession that leads to repeated revisions of deficit and debt targets, undermining the credibility of the consolidation programme.

The recession of the last few years has, indeed, turned out to be deeper than initially forecast. The magnitude of the recession, though, should not be put down to forecasting errors, but rather to the manner in which the adjustment programme has been implemented: with the wavering, the mistakes and omissions and, above all, the delays in implementing structural reforms – i.e. shortcomings which not only prevented the mitigation of the contractionary effects of fiscal consolidation, but also prolonged and compounded the deterioration in confidence, thus entrenching the debilitating view that *Greece would default and exit the euro area*. The recession was also intensified by tight financing conditions for enterprises and households, largely caused by heightened uncertainty and concern. However, if the envisaged structural reforms had been implemented consistently right from the start, their favourable effects on the duration and severity of the recession would, by now, have already made themselves felt. It should, furthermore, be noted that the inaccuracy of the initial forecasts has, in fact, been recognised in practice with the revisions to the programme: the implementation horizon, the cost of borrowing and the maturities of the loans provided to Greece, the size of financial support and even the measures to reduce the level of sovereign debt. In any event, the inaccuracy of forecasts cannot be used as an excuse to deviate from the programme and, especially, to relax the structural reform effort. The implementation of the programme has become all the more crucial, now that the financing conditions for the private sector and the overall economic outlook have begun to improve in the wake of the June 2012 elections.

3 2013 WILL BE A DIFFICULT YEAR – RECOVERY WILL BE VISIBLE IN THE COURSE OF 2014

As long as the prospect of an exit from the crisis is not clearly in sight, the deep and continuing recession creates a very unfavourable climate and feeds social tensions. Nevertheless, it must be understood that we are now at a turning point. There is no doubt that 2013 will be a difficult year, mainly due to the implementation of fiscal measures and to high unemployment. But today we can expect recessionary forces to weaken gradually by end-2013 and the Greek economy to return to positive growth rates in the course of 2014. This forecast is supported not only by the factors mentioned above, but also by tangible signs that improvement is filtering through to the real economy. Positive effects are expected from:

• a boost to liquidity and confidence as a result of the recapitalisation of banks and, primarily, the return of deposits to the banking system that will also enhance bank liquidity. This gradual return into the system of cash hoarded at the peak of the crisis could, by itself, further strengthen liquidity at banks and in the economy as a whole by about €15 billion over the next 12-18 months;

• a further improvement in cost competitiveness – expected in 2013 to more than offset the competitiveness losses of 2001-2009 – and a continued increase in exports, especially to non-EU countries;

• a speeding-up of the privatisation process, leading potentially to investments several times larger than the initial ones. The recent decisions of multinational firms to expand or further support their activities in Greece are another positive development;

• swifter progress in the deregulation of markets;

• the relaunching of major infrastructure projects, such as highways;

• the implementation of private investment projects, supported indirectly through funding from the National Strategic Reference Framework (NSRF) and the European Investment Bank;

• the planned repayment of public sector arrears, amounting in total to €9.3 billion. The Ministry of Finance estimates that €3.5 billion will have been repaid by end-March 2013.

Furthermore, the *external environment* is expected to be less adverse. In 2013 global GDP growth is expected to pick up slightly, provided that concerted efforts continue to be made towards resolving the European crisis. Euro area GDP is projected to decrease only marginally and in any case less than in 2012, while positive GDP growth rates, albeit lower than in 2012, are projected for the US and Japan.

In order to ensure that the above factors will deliver the expected results, it is necessary to safeguard the recent improvement in confidence. Any extreme or untimely demands put forward by different social groups would be counterproductive. Society as a whole stands to make a lasting gain when the economy gets back on its feet again. It also goes without saying that unlawful incidents against business operations – no matter how isolated – are particularly detrimental to the investment environment and, in the end, undermine the prospect for a recovery in employment.

4 PRESSING AHEAD WITH THE IMPLEMENTATION OF THE PROGRAMME IS A PREREQUISITE FOR RECOVERY

If the previously outlined trends persist, it can be reasonably expected that real economic recovery will come fairly soon. For this to happen, certain conditions must be fulfilled, the most important of which is **the continued implementation of the adjustment programme, with strict adherence to the targets and timetables set**. This will ensure ongoing funding as well as reduction of the debt and will once and for all eliminate the risk of exit from the euro area, consolidate confidence in the economy's future, attract new foreign investment and convey a clear message that **the worst is behind us and an exit from the crisis is in sight**.

At this crucial moment, however, any complacency or relaxation leading to deviation from the targets would cause the improvements seen so far to evaporate, the adjustment programme to fail, the crisis to deepen and the negative consequences we are experiencing today to multiply. In such an event, the economy would find itself much worse off than it was before the programme was launched.

5 A COMPREHENSIVE POLICY FOR RECOVERY AND SUSTAINABLE GROWTH

Speeding up recovery and growth

According to the Medium-Term Fiscal Strategy and the Budget, GDP will drop by 4.5% in 2013, with a small increase forecast for 2014 that will accelerate over the following two years. All of the fiscal and debt targets have been set for Greece based on these forecasts.

Therefore, if these forecasts can be overshot, i.e. if a recovery can be achieved by the end of 2013 and if output growth can then be speeded up in the following years, Greece would be able to surprise the markets positively and turn the situation around, given that:

- the trends of rising unemployment and declining incomes would be halted sooner;

- the debt-to-GDP ratio would improve faster;

- confidence would be strengthened, with a positive impact on sentiment, as it would become increasingly clear that there is an end to the crisis;

- public revenue would rise (in absolute terms), thereby creating fiscal room for manoeuvre.

It is indeed feasible to achieve economic recovery sooner than forecast, as long as certain conditions are fulfilled.

Completion of the reforms currently underway

As pointed out above, pressing ahead with the implementation of the adjustment programme is the main prerequisite for recovery. Together with the consistent implementation of the fiscal consolidation measures already enacted, action must now be taken to make up for the gaps caused by past delays in the areas of structural reforms in the public sector and the markets, privatisations and the creation of an environment favourable to entrepreneurship.

Creating the conditions for gradually lightening the tax burden of those who already pay taxes

Top priority must be given to the tax reform agenda, centred on broadening the tax base and curbing tax evasion. This would create scope for reducing the heavy tax burden that, increasingly in the last few years, has been shouldered by those who already pay taxes. This increase in the tax burden came as the result of two factors: first, the decision to base the deficit reduction effort on increasing revenue, more so than on cutting back on expenditure; and second, a chronic structural inability of the tax administration to curb tax evasion. The combination of these two factors brought about a disproportionate increase in the tax burden and led many to believe that tax increases were the basic aim of the adjustment programme and would continue perpetually.

This is why both factors must change. Fiscal adjustment should focus, first, on cutting down on those expenditure items that are not conducive to growth and increasing the return on other items of expenditure and, second, on modernising tax administration in order to effectively tackle tax evasion.

The tax policy must now turn the situation around and convince that the ultimate aim of the adjustment programme is in fact to reduce taxes, something that cannot be achieved if the programme is not implemented consistently. This would help restore the sense of equity in tax matters, which has been seriously undermined, and will generate positive expectations that will serve to partly offset the contractionary impact of spending cuts.

Implementation of a new growth model

As the Bank of Greece has repeatedly stressed, the aims of the adjustment programme are fiscal consolidation and, through structural reforms, the rebasing of the country's productive capacity on new foundations and a new, more export-led growth model. This would require shifting resources towards the production of competitive, internationally tradable goods and services. But if we are to succeed in transforming the economy, we must realise that this far-reaching, historically imperative change is our sole responsibility. The adjustment programme sets out only the minimum changes that need to be made. In no way does the programme relieve us of our primary responsibility as a nation to implement a broader national action plan for growth. Such an action plan, in parallel to the fiscal consolidation programme, would incorporate the necessary policies for the transition to a new model of sustainable growth.[2] There has been progress in this area as well, albeit at a much slower pace than in the fiscal area. Now that public finances are stabilising, it is essential, and indeed feasible, that we proceed faster with structural reforms that will ensure:

- an efficient public sector, both citizen- and business-friendly;

- modern infrastructure; and

- open, competitive markets.

A positive step in this direction was the joint announcement, on 28 January 2013 by the Ministries of Finance and Development, of a study on the prospects of the Greek economy through 2020, for the purpose of drawing up a multi-year action plan for growth.

Effective use of EU funds

Following the recent decision by the European Council (8 February 2013), the total structural funds allocated to Greece for 2014-2020 can be as much as €18.3 billion. More specifically, €14.5 billion will come from the new National Strategic Reference Framework (NSRF), up from the amount of €11.2 billion initially proposed by the European Commission. An additional amount of €1.8 billion, previously included in the NSRF, will be allocated for agricultural development. Furthermore, the government estimates that, as provided for in paragraph 54 of the European Council Conclusions with its explicit reference to Greece, another €2 billion will be made available to Greece in 2016, when the total allocations to the Member States are to be adjusted on the basis of the then available most recent statistics on the large decrease in GDP caused by the crisis.

These resources could significantly boost demand and in the short term help, first, to bring recovery forward (together with a faster absorption of NSRF 2007-2013 funds) and, second, to implement a medium-term strategy for the transformation of the economy's productive base.

In the current context of low investment activity and insufficient liquidity, EU resources can, if used efficiently, help to address serious gaps in the financing of new investment projects. The EU funds available under the current and the next NSRF will function this time as powerful tools for growth, provided they are effectively integrated into a broader national action plan for growth. So far, EU funds, despite their positive contribution, have not been managed in a way to yield maximum advantage. This is precisely why, under the new circumstances, integrating EU resources into a national growth strategy will reinforce the necessary transformations towards a new, sound production model. The management of NSRF funds will also have to be completely redesigned, in order to accelerate absorption and eliminate the remaining time-consuming bureaucratic procedures.

2 See Malliaropulos, D. and T. Anastasatos, "The Improvement in the Competitive Position of the Greek Economy and Prospects for an Export-led Growth Model", *Economy and Markets*, Eurobank, January 2013, and the proceedings of the conference "The Content of Growth" jointly organised by IOBE and Konrad-Adenauer-Stiftung on 24 January 2013.

6 RESTORING NORMAL LIQUIDITY CONDITIONS AND RESTRUCTURING THE BANKING SECTOR

The liquidity crisis turned into a solvency crisis in 2012

Since the onset of the crisis, the Greek banking system has faced the consequences of the repeated downgrades of Greek sovereign debt, which triggered a number of bank downgrades. Banks were cut off from international money and capital markets, while the prevailing uncertainty led to mass deposit withdrawals and a loss of more than one third of the banks' deposit base in less than three years. Banks were forced to have extensive recourse to central bank refinancing, initially through the Eurosystem monetary policy operations. Gradually, however, due to the declining value of the eligible collateral in their portfolios, banks had to turn to the Bank of Greece for Emergency Liquidity Assistance. On account of the private sector participation (PSI) in the restructuring of Greek sovereign debt, bank holdings of government bonds suffered heavy losses, while the continuing recession has led to a progressive rise in non-performing loans.

Pressures on the capital base and liquidity of banks heightened in 2012. In the January-September 2012 period, the Greek banking groups listed on the Athens Exchange recorded losses of €5.1 billion (after tax), which reflect, on the one hand, additional write-downs on their Greek government bond holdings as a result of the PSI and, on the other, impairment charges on loans to the private sector. Accumulated losses led to a sharp decline in banks' capital adequacy, making their recapitalisation imperative. As an indication of the outlook for private loan performance, it is worth noting that the NPL ratio for the banking system as a whole rose to 22.5% by end-September 2012, from 16% at end-December 2011. Meanwhile, the balance of business and household deposits decreased through mid-June 2012. The uncertainties that prevailed throughout the protracted election period led to successive surges in cash outflows from banks, requiring the latter to be supplied with an exceptionally large amount of banknotes. Any failure by the Bank of Greece or technical difficulty in meeting the banks' needs for banknotes in full and any doubt as to the banks' ability to repay customer deposits would have led to a collapse in confidence, with devastating consequences for financial stability and Greece's overall prospects. **Despite the extremely adverse conditions, action taken by the government and the Bank of Greece ensured that the banking system weathered the shock and that not one depositor lost a single euro of their savings.**

The lack of liquidity is affecting the real economy

Liquidity constraints have impaired the banking sector's capacity to finance the real economy. Annual credit expansion to non-financial enterprises and households has remained negative since September 2011 and November 2010 respectively, thus creating problems for production, investment, exports and the real estate market. Insufficient liquidity was one of the channels through which the debt crisis stifled economic activity.

Liquidity tensions were significantly eased by Greek banks' recourse to the monetary policy operations of the Eurosystem and to the Emergency Liquidity Assistance (ELA) from the Bank of Greece. Thanks to the ample provision of central bank liquidity, the decline in bank credit to households and businesses was much milder than the shrinking of the banks' deposit base. In this respect, the Bank of Greece, as an integral part of the Eurosystem, contributed to mitigating the adverse impact on economic activity of the sovereign debt crisis and of fiscal consolidation. Without the support of the central bank, the difficulties of business and households in accessing bank credit, as reported in relevant surveys, would have been much larger and, as a result, the real economy would have faced more severe liquidity constraints.

The restructuring of the banking system

In 2012, despite the deep crisis, the groundwork was laid for the banking system to turn the page. It has now become clear that the Greek banking system could not continue with its previous structure in the new era. Banks are already taking their first steps towards internal reorganisation, by adapting their business models, and the entire banking sector is being reshaped through the joining of forces. The size of the Greek economy calls for fewer and stronger banks that will be more resilient to economic shocks.[3]

This process of consolidation will be to the benefit of depositors and borrowers alike, as larger banks typically have easier access to international money and capital markets and, given their greater efficiency and effectiveness, have fewer incentives to undertake high-risk investments.

The recapitalisation of banks

One positive development, which was a prerequisite for the completion of restructuring, was the securing of necessary funds from the Support Programme for the banks' recapitalisation. In order to determine which banks would be eligible for public support, the Bank of Greece conducted a strategic assessment of the banking system in March 2012. Using a wide range of regulatory and business criteria, the exercise assessed the independent viability prospects of each bank (as envisaged in the Memorandum of March 2012) and estimated which banks were more likely within a reasonable time frame to be able to repay the funds they had been granted.

In May and December 2012, the four big ("core") banks identified as viable received an advance payment from the Hellenic Financial Stability Fund (HFSF), in the form of European Financial Stability Facility (EFSF) notes, to replenish their capital above the regulatory minimum. The next steps of the recapitalisation process involve the issuance of contingent convertible bonds (CoCos) and the completion of capital increases by the end of April 2013. Private shareholders will retain control of HFSF-supported banks, provided that they subscribe no less than 10% of the new common shares to be issued. According to the Memorandum of December 2012, the other banks will have to raise private capital by the end of April 2013. They also have the option of merging with other banks, provided that they can submit a sound Business Plan and meet recapitalisation needs by April 2013. If they fail to recapitalise in either way, the Bank of Greece will activate the steps for an orderly resolution at the latest by June 2013, in a manner that will safeguard financial stability and the interests of depositors.

It should be recalled that the banks' capital needs were estimated taking the following into consideration: (i) the losses incurred due to the PSI; (ii) credit loss projections on banks' loan portfolios; and (iii) banks' internal capital generation in 2012-2014. Furthermore, with respect to the total capital needs of the Greek banking system, the Bank of Greece in December 2012 updated its estimate of the Financial Envelope, i.e. the level of public funds necessary to cover the Greek banking sector's recapitalisation needs and restructuring costs over the period 2012-2014. The Bank of Greece considers that, under reasonable levels of economic uncertainty, the amount of €50 billion earmarked in the Economic Adjustment Programme will be sufficient to cover the Greek banking sector's recapitalisation and restructuring needs. It should be noted that this amount also includes a capital buffer to accommodate any unexpected developments that could increase the needed funds.

The resolution, restructuring and recapitalisation process is well under way, as evidenced by the following comparative facts and figures:

- At the onset of the crisis, there were 17 banks in operation. There were also 16 cooperative banks, with a combined market share of just 1%.

3 See Bank of Greece, *Monetary Policy – Interim Report 2012*, November 2012.

• So far, the resolution framework has been used to resolve seven banks: four commercial banks and three cooperative banks.

• At present, a merger between the two largest banks, the National Bank of Greece and Eurobank, is in the process of being completed.

• Alpha Bank, the third largest bank, has absorbed Emporiki Bank, a subsidiary of Crédit Agricole.

• Piraeus Bank has absorbed Geniki Bank, a subsidiary of Société Générale, as well as the sound assets and the deposits of the state-owned ATEbank; it is currently negotiating the acquisition of Millennium Bank.

It is therefore expected that, in a few months from now, when the process is completed, the banking system will comprise three large, strong groups, as well as some smaller banks, the market shares of which will ensure competition. The Greek banking system is clearly becoming more compact and efficient, as conditions are being put in place to enable it to exploit synergies and economies of scale. It is becoming stronger and better-capitalised. At the same time, it retains its strong and profitable presence in South-Eastern Europe.

A stronger banking system capable of financing economic recovery

The restructuring and parallel recapitalisation of the banking system are pivotal reforms that crucially contribute to gradually restoring confidence in the prospects of the Greek economy and, as mentioned earlier, constitute prerequisites for economic recovery. The gradual return of household and business deposits is a first sign that developments in the banking sector are being positively assessed. The continued return of deposits and the successful completion of the recapitalisation process in the first months of 2013 will help Greek banks in the medium term to gradually regain access to international money and capital markets. On a more general note, the relaxation of banks' capital and liquidity constraints is creating conditions for stronger credit flows to finance production, investment and exports. Having navigated through very troubled waters, the banking system is emerging stronger and able to finance growth.

7 CHALLENGES AND OPPORTUNITIES

As has been repeatedly stressed, the economic crisis has brought about not only acute problems, but also significant opportunities. The two most important opportunities, which also constitute challenges is for Greece today, are:

First, to restructure the economy towards high-productivity and high-value added sectors that would produce internationally tradable goods and services that can prove competitive both in the external and in the domestic market.

Second, to modernise public administration and streamline the public sector, while making it more citizen- and business-friendly.

The ability to rise to these major challenges hinges on building and strengthening social consensus as regards the implementation of the economic adjustment programme, so as to bring the recovery forward and create the conditions for sustainable growth.

Comparing the current situation with the one prevailing just a few months ago, it is clear that much has changed for the better. Most importantly, the risk of default and exit from the euro area is now remote. Thus the main factor that had fuelled uncertainty in the markets and among Greek citizens is weakening. We can now expect, with reasonable certainty, that the next few years will lead Greece out of the crisis and onto a path of growth as a euro area member with the support of its partners. As this expectation is consolidated, sentiment in Greece and abroad will continue to improve, speeding up recovery. For this to happen though, the implementation of the adjustment programme that has been agreed upon must continue without deviations or delays. Commitment to achieving the targets, and where possible, overshooting the targets, will remove any remaining uncertainties and strengthen positive prospects, with direct effects on the real economy.

We have already come most of the way on a difficult road at tremendous cost to Greek society. Now that the end of this road is finally in sight, we need to intensify our efforts in order to cover the remaining distance and ensure, this time, that the citizens' efforts and sacrifices will not be in vain.

III THE INTERNATIONAL AND EUROPEAN ENVIRONMENT

1 DEVELOPMENTS AND PROSPECTS IN THE WORLD ECONOMY AND THE EURO AREA – POLICY RESPONSES[1]

Introduction

• The progress achieved around the end of 2012 in the economic governance of the EMU, as well as the fact that the economic adjustment programme for Greece was brought back on track, contributed to reducing the high level of uncertainty surrounding the European and the global economic outlook. The agreement reached by Congress to avert the fiscal cliff and the risk of an economic recession in the United States worked in the same direction.

• However, important challenges remain. In the euro area, the debt crisis lingers on and the short-term economic outlook continues to be dismal, as GDP growth is expected to remain slightly negative in 2013 and the unemployment rate will approach 12%, with rather wide variations across economies. The outlook for the US economy appears to be more favourable, as GDP growth will stand at 2.0% (according to IMF estimates), but an agreement on a long-term fiscal adjustment programme is still out of sight. As regards the global economy, forecasts about relatively high growth rates in major emerging economies strike a positive note.

Economic developments and prospects

• The *global economy* slowed down further in 2012, reflecting (a) a sharp decline in confidence, mostly as a result of an unusually high degree of uncertainty sparked by the rekindling of the debt crisis in the euro area and amid temporary concerns about the viability of the euro area itself in the second quarter of 2012; (b) the impact from *synchronised* fiscal adjustment in several advanced economies; (c) the wider implications of weakened world trade and the recession in the euro area, mainly for emerging export economies; (d) the impact from the continued deleveraging of households and financial institutions on domestic and global demand; and (e) the effects of the new highs in international oil and commodity prices, most notably foods.

• Global GDP growth is estimated to have declined to 3.2% in 2012, from 3.9% in 2011 (latest IMF estimates – see Table III.1). In the 34 OECD countries, it is estimated that GDP growth declined to 1.4%, from 1.8% in 2011.

• Nevertheless, this slowdown observed in advanced economies in 2012 (to 1.3%, from 1.6%) reflects markedly divergent developments across economic regions and countries. In the United States, growth accelerated to 2.2% from 1.8% in 2011, although in the fourth quarter the annualised rate was slightly negative (-0.1%), mirroring the consequences of both adverse weather conditions and cutbacks in defence spending. Unemployment dropped further to 8.1% in 2012, from 8.9% in 2011. Japan exited the recession in 2012 (+1.9%, against -0.6% in 2011), but recorded a trade deficit for a second consecutive year (which actually widened by 170%), as receipts from exports of goods fell by 2.7% and the import bill rose by 3.8% (mainly on the back of oil imports after the almost complete shutdown of its nuclear plants). Conversely, the euro area experienced a mild recession in 2012 (-0.5%), whereas GDP in the United Kingdom remained flat.

• In *advanced economies*, the decline in GDP throughout 2012 was primarily due to the adverse developments and the recession observed in the euro area, mainly because of fears about a possible spillover of the sovereign debt crisis. The already very low policy rates in these countries and the necessary efforts of the still fragile —as a result of the global crisis— banking sector to deleverage and enhance its capital adequacy did not allow central banks to

1 Main sources: (a) International Monetary Fund, *World Economic Outlook*, October 2012, and *World Economic Outlook Update*, 23.1.2013; (b) Eurosystem staff macroeconomic projections, 6.12.2012; (c) European Commission, *European Economic Forecast*, November 2012; and (d) OECD, *Economic Outlook*, No. 92, November 2012. The cut-off date for the data and forecasts included in this chapter was 14 February 2013.

Table III.1 Key macroeconomic aggregates of the world economy

	Number of coun-tries	Share in GDP[1] (%)	Output (annual percentage changes in real GDP)			Inflation[2] (annual percentage changes)			Fiscal balance (% of GDP)			Gross public debt (% of GDP)			Current account balance (% of GDP)		
			2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013
World total	**186**		**3.9**	**3.2**	**3.5**				**-4.6**	**-4.2**	**-3.5**	**79.9**	**81.3**	**81.5**			
1. Advanced economies	*35*	*51.1*	*1.6*	*1.3*	*1.4*	*2.7*	*2.0*	*1.6*	*-6.6*	*-5.9*	*-4.9*	*105.5*	*110.7*	*113.6*	*-0.2*	*-0.4*	*-0.3*
United States			1.8	2.2[3]	2.0	3.1	2.1	1.8	-10.2	-8.5	-6.8	102.2	109.8	113.0	-3.1	-3.0	-3.0
Japan			-0.6	1.9[4]	1.2	-0.3	0	-0.5	-9.3	-9.9	-10.1	205.3	214.3	224.3	2.1	1.1	1.2
United Kingdom			0.9	-0.0[5]	1.0	4.5	2.6	1.9	7.8	-6.2	-7.2	85.0	88.7	93.2	-1.9	-3.3	-3.5
Euro area			1.4	-0.5[4]	-0.2	2.7	2.4	1.6	-4.1	-3.3	-2.6	88.1	92.9	94.5	0.5	1.4	1.9
2. Emerging and developing economies	*151*	*48.9*	*6.3*	*5.1*	*5.5*	*7.2*	*6.1*	*6.1*	*-1.8*	*-1.9*	*-1.8*	*37.0*	*34.8*	*33.1*	*1.9*	*1.3*	*1.1*
China			9.3	7.8	8.2	5.5	2.6	1.5	0.1	-2.0	-2.2	25.8	22.2	19.6	2.8	2.9	2.9
Russia			4.3	3.6	3.7	8.4	5.0	6.4	1.6	0.5	0.1	12.0	11.0	9.9	5.3	4.6	2.7

Sources: IMF, *World Economic Outlook* October 2012 and *WEO Update*, 23 January 2013. IMF, *Fiscal Monitor*, October 2012. OECD, *Economic Outlook*, No. 92, November 2012, European Commission, *European Economic Forecast*, *Autumn 2012*, November 2012.
Notes: Estimates for 2012 and forecasts for 2013. According to IMF classification: Advanced economies: Euro area-17, the four newly industrialised Asian economies (Korea, Singapore, Taiwan Province of China and Hong Kong SAR), United States, Japan, Australia, Denmark, Switzerland, United Kingdom, Iceland, Israel, Canada, Norway, New Zealand, Sweden and the Czech Republic. Emerging and developing economies: Africa (44), Central and Eastern Europe (14), Commonwealth of Independent States (13 incl. Mongolia), Developing Asia (27), Middle East (20) and Western Hemisphere (32).
1 Percentage share in world GDP in 2011, on the basis of purchasing power parities (PPPs).
2 HICP for the euro area and the United Kingdom; CPI for the other countries. Year averages.
3 Data released on 30 January 2013.
4 Data released on 14 February 2013.
5 Data released on 25 January 2013.

further ease monetary policy through standard measures. By contrast, the use of *non-standard measures* continued both in Europe and the United States.

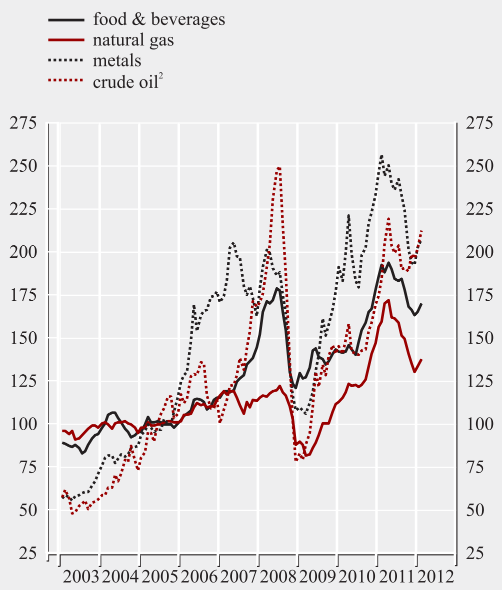
• In *emerging and developing economies*, growth rates remained relatively strong, although GDP growth weakened to 5.1%, from 6.3% (with the exception of the Middle East and North Africa, where GDP growth increased to 5.2%, from 3.5%), mainly on account of the downward trend of external demand from advanced economies and world trade. *Emerging Asia* continues to outperform the rest of the world, although it is estimated that GDP growth slowed to 6.6%, from 8.0% in 2011. GDP growth in China reached a post-1999 trough (7.8%, from 9.3% in 2011).

• High and —in some countries— rising unemployment was an additional factor behind worsened confidence and lower spending. The rate of unemployment in OECD countries is estimated to have remained stable at 8% in 2012, concealing, however, markedly different developments across countries. In the United States it fell sharply further (to 8.1%, from 9.6% in 2010), whereas in Japan its drop (to 4.4%, from 4.6%) was mainly due to lower labour supply. Conversely, unemployment in the euro area increased further to 11.1%, from 10.0% in 2011, i.e. 3.7 percentage points above its historical low observed in 2007-2008 (7.4%).

• *Inflation* moderated in 2012 (in advanced economies to 2.0%, from 2.7%; in developing and emerging economies, to 6.1% from 7.2%), owing to a downturn in economic activity and a widening of the negative output gap in the OECD countries (-2.9%, from -2.5% in 2011), as well as on the back of lower non-energy commodity prices and a markedly slower increase in oil prices. In the United States, where unit labour cost growth in the total economy also declined slightly (to 1.6%, from 2.0% in 2011), CPI inflation declined more sharply, to 2.1% in 2012, from 3.1% in 2011. By contrast, in the euro area, where unit labour cost growth in the total economy picked up (to

Chart III.1 Commodity price index (January 2003-December 2012)

(market prices,[1] monthly averages, 2005=100)



Source: IMF.
1 Last observation: December 2012.
2 Average international price of UK Brent, WTI and Dubai.

1.4%, according to the European Commission, from 0.9% in 2011), the moderation in HICP inflation was weaker, i.e. in 2012 it stood at 2.4%, down from 2.7% in 2011.

• The rate of increase in the *volume of world trade in goods and services* continued to slow in 2012 and came to 2.8%, from 5.9% in 2011, thus contributing substantially to the decline in world GDP growth. Uncertainty and weaker global demand, as well as financing constraints hit both export and import business. World trade volumes are expected to pick up slightly in 2013, to 3.8%.

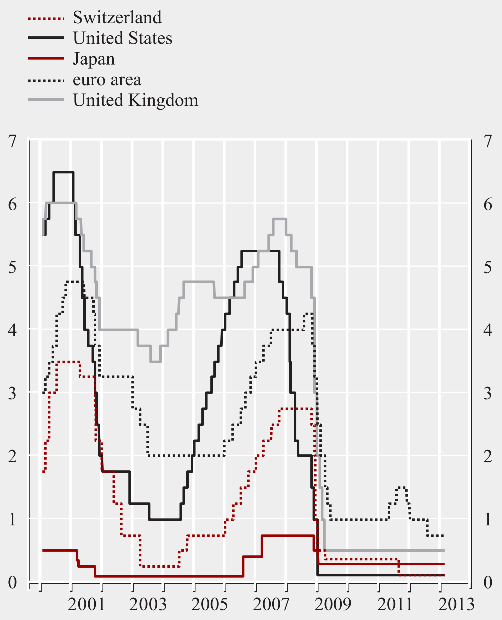
• After rising sharply in 2010 and 2011, *international Brent crude oil prices* almost stabilised in 2012 in average annual terms and in US dollars. In euro terms, the price of Brent crude oil increased in 2012 by 8.7%, compared with 31.3% in 2011 and 36.1% in 2010. *Global non-oil commodity prices* are estimated to have dropped by 9.8% (in US dollars), with the exception of food prices, which remained relatively high due to overall global supply constraints (drought, etc.) (see Chart III.1). According to the 2013 forecasts, international crude oil prices are expected to fall by 5.1% in US dollar terms, while non-oil commodity prices should drop by 3.0% (IMF forecasts).

- *Fiscal policy* in advanced economies continued to be tight and structural deficits narrowed for the second consecutive year in 2012 – with the exception of Japan – with a view to limiting the risks from a very high and still increasing public debt. Even though the degree of fiscal adjustment varies appreciably across countries, fiscal multipliers have been higher than in the past (see also Chapter IX.1.A in this connection) and the current contractionary fiscal policy proved to be a greater than expected drag on growth. This is due to the prevailing uncertainty about developments in the euro area, which contributed to a renewed surge in the yields on Spanish and Italian government bonds. Against this background of widespread uncertainty, higher credit constraints and interest rates at the zero-interest-rate floor, reduced public expenditure could not be offset by an increase in private spending and investment.[2] Despite the expected impact on income, especially for those euro area countries that have suffered rating downgrades or are shut out of markets there is no alternative to promptly eliminating primary fiscal deficits. Nevertheless, in early 2013 (11 January) the Japanese government announced a stimulus package worth JPY 10.3 trillion, aimed at boosting GDP by 2% and creating 600,000 jobs.

- The fiscal deficit in the United States is estimated to have decreased to 8.5% of GDP in 2012, from 10.2% in 2011, while in Japan it increased to 9.9%, from 9.3% in 2011. Turning to the euro area, the fiscal deficit contracted for the third consecutive year in 2012 and reached 3.3%, from 4.1% in 2011. Gross public debt rose further in 2012 to 109.8% in the United States, 214.3% in Japan and 100.6% in the euro area.

Chart III.2 Central bank policy rates (January 2000 - 1 February 2013)

(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.

- *Monetary policy* remained very accommodative in advanced economies, thereby facilitating fiscal adjustment with the least possible impact on growth (see Chart III.2). In both Japan and the United Kingdom, central banks expanded in 2012 their asset purchase programmes by JPY 36 trillion and by a total of GBP 100 billion, respectively. In September 2012, the US Federal Reserve decided to launch a third round of quantitative easing in order to partly offset the impact from the fiscal cliff, while on 30 January 2013 it decided to keep the target range for the federal funds rate at 0% to 0.25% at least as long as the unemployment rate remains above 6.5%, inflation over the medium term is projected to be no more than a half percentage point above the 2.0% longer-run goal, and longer-term inflation expectations continue to be well anchored.

2 See the very interesting Boxes 1.1, 1.2 and 1.3 in IMF, *World Economic Outlook*, October 2012, and Box 1.5 in European Commission, *European Economic Forecast*, November 2012.

In the euro area, after four successive cuts in 2011, the ECB lowered its key interest rates by 25 basis points on 11 July 2012, to 0.75%. In late 2011 it decided to conduct two longer-term refinancing operations (in December 2011 and in February 2012), which substantially boosted liquidity and had a positive effect on financial markets. Furthermore, the ECB purchased government bonds on the secondary market, improved long-term refinancing terms and expanded the list of eligible collateral in the Eurosystem's monetary policy operations. Finally, the announcement in early September of the modalities and conditions of a new programme under which the ECB may purchase government bonds that mature in one to three years (Outright Monetary Transactions) was positively welcomed by the markets (see Chapter IV).

- The *effective exchange rate* of the euro fell in 2012, whereas that of the US dollar, the Chinese renminbi and the pound sterling rose. Still, the gradual normalisation of conditions and the easing of uncertainty in the euro area since the summer have led to an appreciation of the euro vis-à-vis all major currencies, particularly the Japanese yen (approximately 25% between August 2012 and January 2013).

- In *2013*, world GDP growth is projected to pick up somewhat to 3.5%, provided that the concerted efforts to tackle the euro area crisis continue. The expected decline in the euro area GDP will be smaller than in 2012 (-0.2%), while GDP growth will dampen slightly in the US (to 2.0%) and more markedly in Japan (to 1.2%).

- In the *euro area*, an economic downturn was observed during 2012, mainly as a result of heightened uncertainty that was triggered by the debt crisis and temporary fears about the future of the euro in the second quarter of 2012. This uncertainty peaked as the yields on Spanish and Italian government bonds, as well as on other euro area sovereign bonds started to rise again. Fears that a bail-out of these countries would test the strained finances of the euro area and markets' impatience for immediate solutions in the face of slow decision-making in the euro area weighed heavily on the economic climate. Furthermore, despite the already accommodative stance of monetary policy, a major drag on growth came from the necessary[3] implementation of fiscal adjustment programmes in almost all euro area economies, aimed at balancing government budgets and reducing the public debt that had accumulated following the expansionary stimulus policies to tackle the 2008-09 crisis. All of the above led to a vicious circle between fiscal positions, the financial system and the real economy.[4] As a result, lower public expenditure was not offset by an increase in private spending, which itself declined, as households and firms postponed their consumption and investment decisions.

- *Euro area GDP* (according to flash estimates) shrank by 0.5% in 2012, against an increase of 1.4% in 2011. The decrease in all domestic demand components was partly counterbalanced by an improvement in net exports. The current account balance improved and its surplus widened to 1.4% of GDP in 2011, from 0.5% in 2011, which is of course also associated with the improvement of the effective exchange rate of the euro from 2010 onwards. Eight out of the 17 euro area economies experienced a recession in 2012, while the remaining ones saw an economic downturn, as the spread of the crisis through the channels of the financial sector and world trade was inevitable, due to the high degree of integration. *Inflation*, which had risen in 2011 as a result of a hike in commodity prices, declined to 2.4% in 2012. The unemployment

3 Fiscal consolidation is a precondition for lasting economic prosperity, as it will help restore market confidence and ensure an unimpeded access to low-cost borrowing both for the public and the private sector. For instance, it is assumed that an improvement of 1% of GDP in the government balance reduces sovereign borrowing costs by 25 basis points. 50% of this decline spills over into lower financing costs for households and enterprises. See European Commission, *European Economic Forecast*, May 2012, Box 1.4 "Fiscal consolidation and the economic outlook".

4 Recent initiatives towards the establishment of a single supervisory mechanism for banks are expected to enable, under a European Council decision, the direct recapitalisation of banks by the European Stability Mechanism. This will help break the nexus between sovereigns and their banks.

rate kept rising on account of the crisis and the prevailing uncertainty, whereas in some countries such as Spain, Greece and Portugal it reached very high levels in 2012 (25%, 23.6% and 15.5%, respectively, according to European Commission and OECD estimates). Thus, unemployment is the most serious economic and social problem in the euro area. As a result of the protracted recession, the unemployment rate is projected to rise further in 2013, to almost 12%.

I.A DEVELOPMENTS IN EU POLICIES

• 2012 was marked by an intensification of efforts towards the completion of the EMU. Priority was given to the implementation of a framework for strengthening economic governance and enhancing the oversight of budgetary and economic policies in EU Member States, in particular in euro area countries.

• These initiatives include the "European Semester" (see below), as well as measures aimed at reinforcing the surveillance and the coordination of budgetary and macroeconomic policies. At the same time, efforts focused on promoting a more integrated financial framework, recognising the need to break the negative feedback loop betweens sovereigns and banks, safeguard financial stability and restore normal lending to the private sector.

• In 2013, along with the completion of institutional and legislative interventions, emphasis will be placed on the social dimension of the EMU, as well as on possible agreements on competitiveness and growth between individual Member States and EU institutions.

Annual Growth Survey – European Semester

• The implementation of the first "European Semester" in 2011 ensured the *ex ante* coordination of fiscal and economic policy reforms, in line with the enhanced Stability and Growth Pact and the Europe 2020 strategy for "smart, sustainable and inclusive growth".

• The 2013 European Semester was launched in November 2012 with the publication of the *Annual Growth Survey for 2013* by the European Commission. This survey sets out the EU's priorities for 2013 to promote growth and job creation. According to the survey, the March 2013 European Council will provide guidance to EU Member States in conducting their national policies, which will subsequently be specified in Stability and Convergence Programmes and National Reform Programmes submitted to the European Commission in April.

• The *Annual Growth Survey for 2013* concludes that efforts at national and EU level should again focus on the following *five priorities* adopted in the previous survey of March 2012: (i) pursuing differentiated, growth-friendly fiscal consolidation; (ii) restoring normal lending to the economy; (iii) promoting growth and competitiveness; (iv) tackling unemployment and the social consequences of the crisis; and (v) modernising public administration.

• Monitoring and assessing the performance of labour and product markets is essential for the implementation of these five priorities. The survey focuses on the problem of *rising unemployment*, especially among young people, suggesting possible measures to tackle it, such as active employment policies and support for youth entrepreneurship. Furthermore, the survey stresses the importance of a fully integrated single market as a key element of the EU's response to the financial, economic and social crisis. Issues such as professional qualifications, public purchasing, posting of workers, electronic identification and the full implementation of the Services Directive call for urgent action.

• Along with the *Annual Growth Survey for 2013*, the European Commission published the *Alert Mechanism Report* on macroeconomic imbalances, initiating the second round of the Macroeconomic Imbalance Procedure.

• The main conclusion of this report, which was drawn on the basis of a scoreboard comprising eleven macroeconomic indicators and taking account of country-specific circumstances, is that *an adjustment of macroeconomic imbalances is underway in many EU Member States*. Current account deficits are coming down in the countries with the largest external imbalances, supported by gains in competitiveness and a gradual expansion of exports, while the housing market is still in correction mode. However, the rebalancing process, which is a prerequisite for sustainable growth in the long run, is still far from being completed. Over the short term, it will continue to be a drag on growth and employment in several countries. The ongoing adjustment includes both cyclical and structural elements, although structural correction appears to prevail in most countries.

• It should be noted that the countries that are subject to *economic adjustment programmes*, i.e. Greece, Ireland, Portugal and Romania, are excluded from the report's country-specific commentaries. Turning to the remaining Member States, according to the report, developments warrant *in-depth reviews* of developments in the accumulation and unwinding of macroeconomic imbalances in *14 EU Member States* (Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Hungary, Italy, Malta, Netherlands, Slovenia, Spain, Sweden and United Kingdom).

Decisions by EU institutions

Completion of the review of progress in Greece's economic policy programme and disbursement of the second instalment

• On 13 December 2012, the Eurogroup approved the second disbursement under the second economic policy programme for Greece, following the successful outcome of the debt buyback operation conducted by the Greek authorities and the finalisation of the relevant national procedures on 11 December (see also Chapter X.5.A). The debt buyback led to the exchange of existing Greek government bonds with a face value of €31.9 billion for six-month paper issued by the European Financial Stability Facility (EFSF) with a face value of €11.9 billion and was hailed as a success by the euro area Ministers of Finance and the International Monetary Fund (IMF) in respect of the targets set on 26 November by the Eurogroup for the reduction of the Greek debt.

• The instalment released by the EFSF amounts to €49.1 billion, or around €52.4 billion including the share of the IMF, the Executive Board of which formally endorsed the disbursement on 16 January 2013. The amount disbursed by the EFSF will come in several tranches. The first tranche, amounting to €34.3 billion, was paid immediately in December, to be applied towards financing the debt buyback operation and the recapitalisation of Greek banks, as well as covering various financing needs of the Greek government. A second tranche (€9.2 billion, of which €7.2 billion for the recapitalisation of banks) was released in January 2013 (after the Eurogroup consented on 21 January), while the remaining amount (€5.6 billion) will be disbursed in two sub-tranches in the first quarter of 2013. Each of these sub-tranches is conditional upon the implementation of specific milestone actions agreed between the Greek authorities and the European Commission, the European Central Bank and the IMF under the December 2012 update to the Memorandum of Understanding.

Decisions aimed at stemming the debt crisis and achieving closer integration in the EU

• On 3 December 2012, the Eurogroup deemed satisfactory the headway made in the recapitalisation programme of *Spanish banks* and welcomed the endorsement of the first disbursement amounting to €39.5 billion from the European Stability Mechanism (ESM). The total amount of the programme, which will not exceed €100 billion, had already been agreed by the Eurogroup in July 2012. The bulk of the first instalment (€37 billion) will be used to finance the recapitalisation of the four banks that have suffered the heaviest losses and are now state-controlled. The remaining amount will be applied towards the capitalisation of a newly founded enterprise, the object of which is to purchase and manage non-performing assets in the context of the restructuring of financial institutions.

- On 13 December 2012, the Eurogroup considered that progress had been made by the *Cypriot authorities* towards the implementation of the Memorandum of Understanding agreed on 23 November and welcomed the implementation of a first set of measures. Negotiations on the Cyprus support programme are yet to be finalised, as well as the calculation of capital needs of the Cypriot financial sector.

- Further to the European Council of October 2012, which decided that a complete banking union is conditional upon the establishment of a Single Supervisory Mechanism (SSM), at the extraordinary meeting of the ECOFIN Council on 13 December 2012 the Ministers of Finance reached an agreement on the general guidelines of a legislative framework for the SSM. According to the Council's decisions, the European Central Bank assumes the direct supervision of the largest financial institutions of the euro area and will be responsible for the overall functioning of the SSM. The modalities of the SSM implementation are expected to be finalised in the course of 2013, with a view to the SSM becoming fully operational in March 2014. Once an effective SSM is in place, the ESM may recapitalise banks directly. In a context where banking supervision is actually assigned to a single supervisory mechanism, a single resolution mechanism is also warranted, with a view to safeguarding financial stability and ensuring an effective framework for the resolution of credit institutions, thereby protecting taxpayers in the event of a banking crisis. To this end, the European Commission will submit in 2013 a proposal which will be examined as a priority (see also Box IV.1).

European Council's decisions on the Multiannual Financial Framework 2014-2020

On 8 February 2013, the European Council reached an agreement on the Multiannual Financial Framework for the period 2014-2020, determining the ceilings and the breakdown of total appropriations that will be paid by EU funds over the next programming period. The agreement still has to be approved by the European Parliament to become effective. However, negotiations are expected to be long, as the leaders of the largest political groups in the European Parliament issued a joint statement on that same day, rejecting the MFF deal.

Total commitments of the EU budget were agreed at €960 billion, reduced by about 3% relative to the 2007-2013 budget, in order to reflect the fiscal adjustment that is underway in several Member States at the national level. Nevertheless, in an effort to promote growth and job creation, payments for research, innovation and education are envisaged to be higher compared with the previous period, while the creation of a special fund aimed at tackling youth unemployment is being planned. (As regards the appropriations for Greece, see Chapter VIII.3.)

1.B THE IMPACT OF THE CRISIS ON EMPLOYMENT AND UNEMPLOYMENT ACROSS EURO AREA COUNTRIES

- Over the period 2008-12, 4 million jobs were lost in the euro area, against 5 million jobs created between 2005 and 2007. In the second quarter of 2012, the employment rate stood at the 2005 Q2 level, while the unemployment rate exceeded 11%. These developments call in question the structural nature of unemployment falls in certain countries (e.g. Spain) during the period 1996-2005 (see Bentolila et al., 2012). However, labour force participation continued to follow an upward trend, although its growth rate declined sharply after the onset of the crisis. Labour costs in the euro area as a whole kept increasing, albeit at a very low pace, especially in the public sector (European Commission, 2012).

- **Job losses and wage changes showed mixed trends across euro area countries.** The rate of unemployment has reached extremely high levels in some countries – coming close to or above 15% in Ireland, Portugal and Slovakia and exceeding 25% in Greece and Spain. In other countries (e.g. Austria, Germany, Netherlands) unemployment has remained low, between 4% and 6%. Large cross-country differences were also observed in terms of changes in labour force participation. In Ireland, the labour force participation rate fell, as the crisis led many individuals to emigrate or return to education (see Conefrey, 2011). Conversely, in Greece and in Spain participation rates rose, as individuals without previous labour force participation decided to enter the labour market in an effort to make up for losses in the household income. Although in the majority of countries the rise in unemployment is mostly associated with an increase in flows out of employment rather than with a decrease in flows into employment, there are also cross-country differences in the comparative dynamics of flows (see ECB, 2012).

- The fiscal adjustment process also contributed to job losses. The European Commission considers that the impact of fiscal adjustment depends on its magnitude and duration (European Commission, 2012). It should also be noted that another factor behind the rise in unemployment was heightened uncertainty.

- The slowdown in wage growth came with a time lag of 1-2 years after the start of the crisis and escalated in the course of 2012. Cross-country discrepancies in wage changes mirror developments in economic growth rates.

- **Job losses were uneven at the country level**: young people, low-skilled workers and males were worst affected by the current crisis.

- The unemployment rate of young people aged 25-29 in the euro area increased to 15.0% in the second quarter of 2012, compared with 9.1% in the respective period of 2008. By contrast, as regards the age group of 55-59 (or 55-64), the rate of unemployment rose by only 2 percentage points to 8%, from about 6%. The rise in youth unemployment is mainly due to the difficulty in finding a job faced by newcomers into the labour market.

- Unemployment rates among low-skilled workers posted a sharper increase. Specifically, between the second quarter of 2008 and the second quarter of 2012, among individuals aged 40-44 with below-average skills the rate of unemployment rose by 7.7 percentage points, for secondary education graduates the rise was 2.3 percentage points, while for high-skilled workers the rate of change was 1.9 percentage points.

- It should also be noted that changes in average wages appear to be smaller than for most professional groups separately. This is partly attributable to changes in the skill composition of employment, i.e. an increase in the percentage of skilled workers against unskilled workers (see ECB, 2012).

Causes of mixed developments in unemployment across countries

- The uneven impact of GDP changes on unemployment, i.e. variations in Okun's coefficient (which relates changes in unemployment to changes in output), during the current crisis, confirms the results of several analysts who argue that there is no single Okun's coefficient. According to Ball et al. (2013), in the United States a one percent deviation of output from potential output causes an opposite change of

0.45 percentage point in unemployment. The respective figure for Japan is 0.15, while for Spain it is 0.85. Cross-country variations in Okun's coefficient, which are invariably observed over time and not only during the present crisis, are associated with institutional differences (e.g. a social contract with an active participation of the social partners and the government), the use of flexible labour arrangements (e.g. fixed-term labour contracts), the openness of an economy (the more open an economy is, the smaller the impact of GDP changes on employment will be), the skill composition of the workforce and the use of on-the-job training (see Ball et al., 2013, and ECB, 2012).

- Besides, there appears to be a debate as to the extent of Okun's coefficient variation over time. According to a recent discussion by Ball et al. (2013), if account is taken of the lengths of recessions, Okun's coefficient does not vary over time.

Active and passive labour market policies to tackle the effects of the crisis

- Some countries that could afford to increase public expenditure initially raised their spending on active and/or passive labour market policies. Gradually, however, and as the scope for fiscal stimulus narrows, passive labour market policies tend to become less generous, while among the most popular active labour market policies are improving the efficacy of public employment services and supporting firms through short time work schemes. In Germany, the compensation for foregone wages (coupled with a reduction in average working hours[5]) in firms that appear to be viable over the long run has helped firms considerably to avoid layoffs when demand (e.g. for exports) dropped sharply at the onset of the crisis.

Institutional changes brought about by the crisis

- The intensification of the crisis pushed several euro area countries to adopt measures designed to enhance labour market flexibility. Efforts to this end were greater in euro area periphery. Changes mostly refer to the level of wage negotiations —with a special emphasis on enterprise-level negotiations— the suspension of automatic wage indexation schemes in some of the countries where these are still in place (e.g. in Cyprus or Luxemburg) and the facilitation of recruitments and layoffs.

The euro area labour market today

- Today, as already mentioned in the introduction, euro area labour markets are marked by very high unemployment, particularly among young and low-skilled workers. Besides, the duration of joblessness spells has become considerably longer, thereby boosting structural unemployment. At the same time, some countries, as well as some sectors have witnessed both rises in the unemployment rate and increases in job vacancies. The deterioration of this demand and supply mismatch can be reversed over the long run through education. Nevertheless, in order to address this problem immediately, a number of countries are trying to fill job vacancies by attracting foreign workers.

- At the EU level, labour market policy is now focused on tackling youth unemployment through active labour market policies including job subsidisation and training/retraining programmes for young workers. Financing by the European Social Fund is expected to boost this initiative, which ensures that young people receive employment, apprenticeship or training within four months of graduating or becoming unemployed.

References

Ball, L.M., D. Leigh and P. Loungani (2013), "Okun's law: fit at fifty?", *NBER Working Papers*, No. 18668.

5 As mentioned in Box V.1 of the *Bank of Greece Annual Report 2008* (April 2009), "in Germany, the legislation stipulates that, in case working hours are reduced for cyclical or economic reasons, a substantial part of the resulting salary cutback is covered by the Federal Employment Agency – BA" (p. 77).

Bentolila, S., J.J. Dolado and J.F. Jimeno (2011), "Reforming and insider-outsider labor market: the Spanish experience", *IZA Discussion Papers*, No. 6186.

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2 THE ECONOMIES OF SOUTH-EASTERN EUROPE[6]

• Economic growth rates in most SEE countries decelerated further, according to the latest data for the third quarter of 2012, and are overall estimated to have declined sharply in 2012 (regional average excluding Turkey: 0.1%) compared with 2011 (regional average excluding Turkey: 2.2%).[7] However, they appear to have remained in positive territory, except for Croatia and Serbia and, possibly, FYROM and Bosnia and Herzegovina (see Table III.2A). Despite the improved sentiment in financial markets, the weakening of the short-term growth outlook for the economies of the region is due to a drop in external demand, mainly on account of the economic downturn in the euro area, as well as to unfavourable developments on the domestic front. Specifically, in several countries domestic demand is persistently subdued, mainly as a result of a further slowdown in credit growth, and adverse weather conditions have impacted supply.

• The resurgence of inflationary pressures exhibited a clear trend of reversal after summer months, which brought inflation in most countries to a lower level for 2012 as a whole compared with 2011 (see Table III.2A). Serbia and Turkey were the only exceptions, with inflation still remaining the highest among the countries of the region, despite a decline observed in recent months. The negative output gap seen in most countries, as well as higher energy and food prices are common determinants of developments in the region's inflation during 2012.

• The exchange rate stability that characterised the majority of currencies in the region in 2012 allowed monetary policy to continue on a rather accommodative stance, with relatively low interest rates. This trend is projected to continue throughout 2013 with the exception of Serbia, where the central bank raised interest rates considerably in an effort to ease pressures on the currency.

• In most countries, the effort to correct external imbalances is bearing fruit, in spite of weakening foreign demand. This is evidenced by a relative shrinking of current account deficits in the first nine months of the year (see Table III.2B). Serbia was once again an outlier, while deficits in Albania, Turkey, Montenegro, and Bosnia and Herzegovina remain elevated. Still, it should be noted that adjustment relied mostly on weaker domestic demand rather than competiveness gains, which raises doubts as to its sustainability.

• On the front of fiscal adjustment, data covering the first nine months of 2012 show that considerable progress has been made. Thus, it is estimated that budgetary deficits narrowed in most countries in 2012 despite the economic downturn (see Table III.2B). By contrast, Serbia and, to a smaller extent, FYROM saw their fiscal deficits soar.

• The banking systems of the region remain relatively sound (see Table III.3). However, capital constraints on euro area parent banks also affect their subsidiaries in the region, as they increasingly tend to withdraw funds from

6 The discussion covers Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia (FYROM), Montenegro, Romania, Serbia and Turkey.
7 EBRD January 2013 forecasts.

Table III.2 Key macroeconomic indicators in South-East European countries[1]

A. GDP and inflation
(annual percentage changes)

	GDP							Inflation				
Country	2009	2010	2011	Q2 2012	Q3 2012	2012 (estimate)	2013 (forecast)	2009	2010	2011	2012 (estimate)	2013 (forecast)
Albania	3.3	3.8	3.1	2.1	2.7	1.8	2.0	2.3	3.6	3.5	1.9	2.9
Bosnia-Herzegovina	-2.9	0.7	1.0	-	-	-0.5	0.6	-0.4	2.1	3.7	1.9	1.9
Bulgaria	-5.5	0.4	1.7	1.0	1.0	1.1	1.9	2.8	2.4	3.4	2.4	2.6
Croatia	-6.9	-1.4	0.0	-2.2	-1.9	-1.9	0.8	2.4	1.0	2.3	3.4	3.2
Montenegro	-5.7	2.5	3.2	0.3	0.0	0.3	0.8	3.4	0.5	2.9	3.2	2.7
FYROM	-1.0	2.8	2.9	-0.7	0.2	-0.5	1.8	-0.8	1.6	3.9	3.3	2.0
Romania	-6.6	-1.6	2.5	1.2	-0.6	0.3	1.4	5.6	6.1	5.8	3.4	4.0
Serbia	-3.5	1.0	1.6	-0.6	-2.5	-1.9	2.1	6.6	10.3	11.1	7.1	10.5
Turkey	-4.8	9.2	8.5	3.0	1.6	2.6	3.7	6.3	8.6	6.5	8.9	7.8

B. Current account balance and fiscal balance
(% of GDP)

	Current account balance						Fiscal balance					
Country	2009	2010	2011	Q3 2012	2012 (estimate)	2013 (forecast)	2009	2010	2011	Q3 2012	2012 (estimate)	2013 (forecast)
Albania	-15.3	-11.5	-12.3	-10.5	-11.8	-9.2	-7.0	-3.1	-3.5	-1.9	-3.9	-4.8
Bosnia-Herzegovina	-6.6	-5.6	-8.8	-10.7	-8.0	-	-4.4	-2.5	-3.1	-	-	-2.5
Bulgaria	-9.0	-0.4	0.9	0.5	-1.6	0.0	-4.3	-3.1	-2.0	-	-1.5	-2.0
Croatia	-5.2	-1.1	-1.0	-0.6	-1.2	-1.5	-4.1	-4.9	-5.2	-	-4.4	-4.2
Montenegro	-27.9	-23.0	-19.5	-17.9	-20.1	-20.8	-5.7	-4.9	-6.5	-2.4	-4.0	-3.2
FYROM	-6.8	-2.0	-2.7	-1.3	-3.6	-5.5	-2.7	-2.5	-2.5	-1.6	-3.5	-3.5
Romania	-4.2	-3.9	-4.4	-	-4.1	-4.3	-9.0	-6.8	-4.1	-	-2.8	-4.0
Serbia	-7.2	-7.6	-9.5	-12.9	-12.4	-10.3	-4.5	-4.7	-4.2	-6.5	-6.7	-4.2
Turkey	-2.2	-6.4	-10.0	-7.2	-8.0	-6.8	-5.7	-3.6	-1.4	-	-2.4	-3.2

Sources: European Commission, *EU Candidate and Pre-accession Countries Economic Quarterly – CCE*, Q4/2012, and European Bank for Reconstruction and Development (EBRD), *Regional Economic Prospects in EBRD Countries of Operations*, January 2013.
1 Estimates for 2012 and provisions for 2013 are expected to be revised.

the region. This trend is part of a policy to wean their local subsidiaries and make them self-sustainable.[8] Furthermore, after the 2008 crisis, the quality of banks' assets is continuously worsening and threatens to become a serious problem. More specifically, the NPL ratio (non-performing loans to total loans) follows an upward trend, particularly in Albania and Serbia, where in November 2012 it came to 23.1% and 19.9%, respectively. Turkey was an exception (3.0%) thanks to the country's strong economic recovery.

For 2013, the growth prospects of the region's economies appear to be rosier. Still, for these forecasts to prove correct, external demand has to rebound, which in turn depends on the euro area countries' avoiding a protracted recession. Moreover, an expected further decline in inflation and interest rate cuts

8 This is corroborated by the findings of a recent survey conducted by the European Investment Bank (CESEE banks – internationally and domestic driven deleveraging, Conference on European Economic Integration, Helsinki, 26-27 November 2012). Nevertheless, the same survey confirms parent banks' intention to maintain their presence in the region over the long run.

Table III.3 Key banking indicators in selected South-East European countries

Country	CAR (%)					Loans/Deposits (%)					NPL ratio (%)				
	2008	2009	2010	2011	Nov. 2012	2008	2009	2010	2011	Nov. 2012	2008	2009	2010	2011	Nov. 2012
Albania[2]	17.5	16.7	16.2	15.6	15.9	61.5	64.8	60.1	61.3	58.2	6.6	10.5	14.0	18.8	23.1
Bulgaria[1]	14.9	17.0	17.5	17.5	16.6	117.1	118.0	111.2	102.4	98.4	11.5	13.6	11.9	14.9	17.3
FYROM[1]	15.9	16.4	16.4	16.7	17.1	100.7	98.2	89.5	89.0	90.4	7.2	8.8	9.3	9.7	10.8
Romania[1]	13.8	14.7	14.7	14.9	14.7	130.8	119.2	118.0	119.1	117.3	6.5	7.9	11.9	14.3	17.3
Serbia[1]	21.9	21.4	19.9	19.1	16.4	115.8	116.5	131.3	129.8	130.7	11.3	15.7	16.9	19.0	19.9
Turkey	18.0	20.6	19.0	16.5	17.4	80.8	76.0	84.8	98.2	103.1	3.7	5.3	3.7	2.7	3.0

Source: National central banks.
1 The latest available data on CARs and NPL ratios refer to September 2012.
2 The latest available data on the CAR rate in Albania for 2009 refer to September.

should contribute to a recovery in domestic spending. On the positive side, at the beginning of 2013 conditions in financial markets appear to be more favourable relative to one year earlier. Of course, as already mentioned, constraints faced by European banking groups that are active in the region —mirroring the euro area debt crisis— continue to surround with uncertainty the short-term growth outlook, due to their deep penetration into the financial systems of most countries.

If SEE countries are to achieve the goal of sustainable growth, they must invest effort in creating a business-friendly environment through an appropriate institutional framework. An indication of this effort is the fact that, on the basis of the international ranking of SEE countries according to the World Bank's Ease of Doing Business Index, the business environment is improving in the region. Although the pace of implementation of the necessary reforms varies across countries, the majority follow a stable path of convergence towards the euro area average.[9]

9 For instance, in 2012, out of 185 countries, Bulgaria ranked 66th, Turkey 71st, Romania 72nd, Albania 85th and Serbia 86th. Finally, it should be noted that Greece ranked 78th on that same index

IV THE SINGLE MONETARY POLICY AND EUROSYSTEM MEASURES

- In the first half of 2012, key ECB rates remained unchanged owing to expectations of price stability over the medium-term, despite short-term inflationary pressures mainly associated with increases in energy prices and —in many euro area countries— indirect taxes.

- In July 2012, the ECB reduced its key rates by 25 basis points (see Table IV.1). The ECB Governing Council made this decision because of the downside risks surrounding the economic outlook for the euro area —which curbed inflationary pressures— relating, in particular, to a renewed increase in the tensions in several euro area financial markets.[1] In the context of its monetary analysis, the ECB Governing Council also pointed out that the underlying pace of monetary expansion[2] remains subdued.

1 E.g. in Italy and Spain.
2 The underlying pace of monetary expansion is calculated by the ECB using various alternative methods (see ECB, *Monthly Bulletin*, May 2008, Box 1, p. 15) and is not published. It is considered to be linked to developments in inflation more closely than the rate of increase in M3, taking into consideration the time lags.

Table IV.1 Changes in key ECB interest rates

(percentages per annum)

With effect from:[1]		Deposit facility	Main refinancing operations		Marginal lending facility
			Fixed rate tenders (fixed rate)	Variable rate tenders (minimum bid rate)	
2000	6 October	3.75	-	4.75	5.75
2001	11 May	3.50	-	4.50	5.50
	31 August	3.25	-	4.25	5.25
	18 September	2.75	-	3.75	4.75
	9 November	2.25	-	3.25	4.25
2002	6 December	1.75	-	2.75	3.75
2003	7 March	1.50	-	2.50	3.50
	6 June	1.00	-	2.00	3.00
2005	6 December	1.25	-	2.25	3.25
2006	8 March	1.50	-	2.50	3.50
	15 June	1.75	-	2.75	3.75
	9 August	2.00	-	3.00	4.00
	11 October	2.25	-	3.25	4.25
	13 December	2.50	-	3.50	4.50
2007	14 March	2.75	-	3.75	4.75
	13 June	3.00	-	4.00	5.00
2008	9 July	3.25	-	4.25	5.25
	8 October	2.75	-	-	4.75
	9 October	3.25	-	-	4.25
	15 October	3.25	3.75	-	4.25
	12 November	2.75	3.25	-	3.75
	10 December	2.00	2.50	-	3.00
2009	21 January	1.00	2.00	-	3.00
	11 March	0.50	1.50	-	2.50
	8 April	0.25	1.25	-	2.25
	13 May	0.25	1.00	-	1.75
2011	13 April	0.50	1.25	-	2.00
	13 July	0.75	1.50	-	2.25
	9 November	0.50	1.25	-	2.00
	14 December	0.25	1.00	-	1.75
2012	11 July	0.00	0.75	-	1.50

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 on which this decision is made.

• Although the euro area GDP was stable in the first quarter of 2012, it fell in subsequent quarters, chiefly on account of the ongoing tensions in financial markets, which led to a contraction in the supply of bank credit to the economy in certain Member States, but also as a result of restrictive national fiscal policies. Despite the fact that the single monetary policy stance, including non-standard measures, remains accommodative, i.e. lends support to economic activity, the ECB Governing Council expects the euro area economy to recover gradually in the course of 2013. There are several factors inhibiting economic growth in the euro area. In order to maintain the recently improved confidence and progress made towards reducing the fragmentation of financial markets along national borders, which partly offset the impact of the above-mentioned inhibiting factors, governments in certain Member States need to reduce their fiscal imbalances, continue to implement structural reforms and proceed with financial sector restructuring measures.

• Euro area inflation declined moderately in December 2012 to 2.2%, from 2.7% in the same month of 2011. The ECB Governing Council expects inflation to slow down and fall below 2% in the course of 2013 (in January 2013, it had already dropped to 2%, according to Eurostat provisional estimates) and remain in line with price stability over the medium term. Inflationary pressures are expected to remain weak, against a backdrop of well-anchored long-term inflation expectations and subdued economic activity in the euro area. According to the Eurosystem staff macroeconomic projections of December 2012, annual inflation rates are expected to stand between 1.1% and 2.1% in 2013 and between 0.6% and 2.2% in 2014.

• In August 2012, the ECB Governing Council noted that the rise (particularly over the summer months) in the market yields of some euro area government bonds to levels suggesting that they incorporate risk premia related to fears of the reversibility of the euro was unwarranted. It was stressed that the euro is irreversible and fears that national currencies might be reintroduced are unfounded. The incorporation of exceptionally high risk premia had to be averted immediately, given that the ensuing financial fragmentation hinders the effective working of monetary policy. Such fragmentation phenomena included a contraction of interbank transactions, particularly between counterparties, as well as a considerable and unjustified[3] divergence in euro area bank lending rates to non-financial corporations and households.

The introduction and significance of Outright Monetary Transactions

• Fragmented financial markets undermine monetary policy transmission across the euro area and hence the achievement of the Eurosystem's primary objective to maintain price stability over the medium term. In order to mitigate the dysfunctions impairing the monetary policy transmission mechanism, in September 2012 the ECB Governing Council introduced outright purchases of government bonds (Outright Monetary Transactions – OMTs) to be undertaken by the Eurosystem at a level sufficient to restore normal conditions in financial markets. As such, the introduction of OMTs (in contrast to their activation, which has yet to happen given that the necessary conditions are not in place – see below) helped to ease tensions in government bond markets. Among other things, the yields of Italian and Spanish government bonds, as well as the secondary market yields on government bonds of countries under financial assistance programmes, narrowed. Equity prices followed an upward trend. Capital flew back to peripheral countries of the euro area and the outstanding balance of deposits in periphery banks went up, while strong capital inflows were recorded from non-EU countries into the euro area as a whole. Having said that, financial fragmentation along national lines has yet to be eliminated, i.e. there are still low cross-border

3 Bank lending rate differentials cannot be exclusively attributed to different developments in the determinants of credit supply/demand in the euro area countries.

interbank transactions, diverging bank funding costs across euro area countries and, as a result, cross-country heterogeneity in the financing costs of domestic non-financial corporations and households.

• Eligible for Outright Monetary Transactions (OMTs) are funding instruments issued by Member States receiving financial assistance from the European Financial Stability Facility.[4] Once the European Stability Mechanism (ESM) is activated, the instruments to be issued (or already issued) by Member States under an ESM financial programme will also be eligible. A necessary condition for Eurosystem purchases of a euro area Member State's government bonds is adherence to an appropriate macroeconomic adjustment programme.[5] By analogy, full compliance will be required also in the case of Member States granted a precautionary conditioned credit line or an enhanced conditions credit line by the European Stability Mechanism (ESM).[6]

• The liquidity created through Outright Monetary Transactions will be fully sterilised. That is, as in the case of the Securities Markets Programme (SMP), increased liquidity through OMTs will be sterilised by means of liquidity absorbing operations. Government bonds to be purchased in the context of OMTs will have an outstanding maturity of between one and three years. The ECB Governing Council announced that if a Member State restructures its public debt —or, even more so, if a Member State defaults— the Eurosystem will accept the same (pari passu) treatment as private or other creditors with respect to its OMT holdings. This means that in the case of a credit event, losses will be incurred equally between private investors in a given Member State's government bonds, on the one hand, and the Eurosystem, on the other hand (to the extent that the Eurosystem holds such government bonds in its portfolio).

The case for a single banking regulator

• The ECB Governing Council pointed out that it is essential that the resilience of banks continues to be strengthened, in order to avoid dysfunctions impairing the monetary policy transmission mechanism. The soundness of banks' balance sheets will be a key factor in facilitating both an appropriate provision of credit to the economy and the normalisation of all funding channels. The establishment of a single supervisory mechanism in the euro area will promote financial integration —which was thrown into reverse as a result of the sovereign debt crisis— and thus facilitate the proper transmission of monetary policy effects across the euro area and a more effective pass-through to real economy.

Developments in the single money market

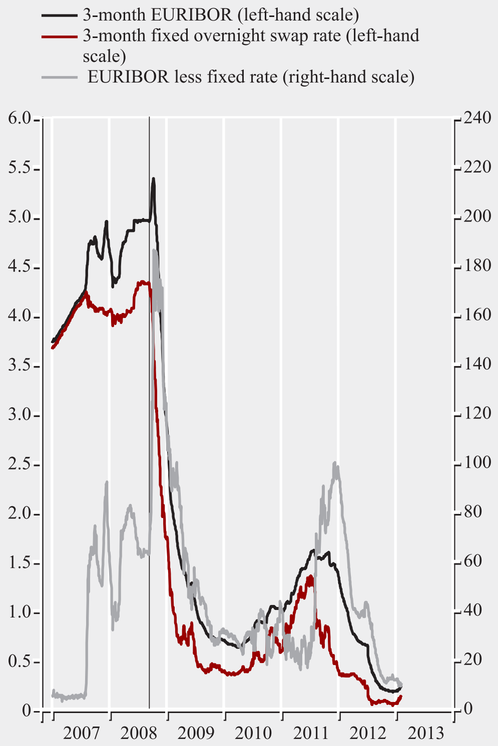
• As regards developments in the single money market, the three-month Euribor declined considerably in January-September 2012, but remained almost unchanged in the last quarter of the year (see Chart IV.1).[7] The lower levels of the three-month Euribor and other interbank interest rates were initially underpinned by expectations of key rate reductions and later consolidated following the cuts in the ECB's key interest rates in July 2012.

• Of course, a much more important contribution to these interbank rate decreases was made by the reduced counterparty risk premia (internalised in Euribor rates) demanded by banks on the interbank money market from late-December 2011 until mid-October 2012, mainly as a result of additional non-standard

4 Securities issued by the central government of Member States already receiving support from the EFSF may become eligible for Outright Monetary Transactions provided that these Member States begin to gain access to international medium- and long-term market funding.
5 OMT operations will be suspended for the duration of the assessment of compliance with the conditionality of the macroeconomic adjustment or precautionary programme.
6 In accordance with the Treaty establishing the European Stability Mechanism (ESM), the ESM may issue the following financial assistance instruments: (i) precautionary financial assistance, (ii) financial assistance for the recapitalisation of financial institutions of an ESM Member, (iii) ESM loan, (iv) primary market support facility, and (v) secondary market support facility. In more detail, precautionary financial assistance may be granted in the form of a precautionary conditioned credit line (PCCL) or in the form of an enhanced conditions credit line (ECCL), to be detailed in a memorandum of understanding (MoU).
7 In January 2013, the three-month Euribor rate recorded a marginal decline.

Chart IV.I Interest rates and spread in the euro area money market (January 2007-January 2013)

(percentages per annum and basis points; daily data)



Sources: ECB and European Banking Federation.
The vertical line marks the date of the Lehman Brothers bankruptcy on 15 September 2008.
The Euribor and fixed overnight swap rate curves refer to the left-hand axis and the curve illustrating developments in the spread between the two rates is shown on the right-hand axis. The presentation of the three curves in a single chart helps the reader to form a qualitative view about whether changes in Euribor are due to changes in the "spread" (which can be explained as the counterparty risk premium) or to changes in the fixed swap rate (reflecting expectations for the overnight rate and, ultimately, for the Eurosystem key rates).

monetary policy measures taken by the ECB in December 2011.

- All main and longer-term refinancing operations carried out in 2012, i.e. those with a maturity of one week to three months, as well as the (single) 36-month open market operation, were conducted as fixed-rate tenders with full allotment[8] and unlimited provision of liquidity (see Table IV.2). It has been announced that the fixed rate full allotment policy will be maintained at least until early July 2013. The Eurosystem purchased bonds under the Securities Markets Programme (SMP) until the first quarter of 2012; then the SMP became inactive and was finally terminated on 6 September 2012. The Second Covered Bond Purchase Programme (CBPP2)[9] continued through to October 2012. Although the initially targeted total nominal amount of purchases was €40 billion, a nominal amount of a mere €16 billion was actually purchased.

- In mid-January 2012, the reserve requirement ratio[10] was temporarily halved from 2% to 1%, for the purpose of increasing money market transaction volumes and reducing the need for credit institutions to raise funds from the Eurosystem and, accordingly, hold eligible collateral.[11]

8 For 3-month and 36-month operations, the rates will be fixed at the average rate of the main refinancing operations (MRO) over the life of the respective longer-term refinancing operation (LTRO).

9 The Second Covered Bond Purchase Programme (CBPP2) began in November 2011 and was completed in October 2012, while the first Covered Bond Purchase Programme (CBPP) had been in operation from July 2009 to June 2010.

10 In the context of reserve requirements, credit institutions must hold an interest-bearing deposit with the Eurosystem (other than their deposits under the standing deposit facility). More specifically, the interest rate on reserve requirements is equal to the (fixed) rate of main refinancing operations. The relevant maintenance periods are set in advance and do not coincide with calendar months but last approximately 30 days. The level of each credit institution's reserve requirement held with the respective NCB must not fall short of the minimum reserve ratio (0.01 since 18 January 2012) multiplied by the sum of a subset of that credit institution's liabilities (e.g. excluding liabilities against other credit institutions and the Eurosystem) as this stood on the last day of the month before last. In case a credit institution's average reserve requirement during a maintenance period falls short of the required level, the ECB may impose sanctions. The credit institutions' ability to maintain their reserve requirements on average during a maintenance period (allowing for daily fluctuations of the reserve requirement level) normally contributes to the stabilisation of money market interest rates. Moreover, under normal conditions, the reserve requirements system facilitates the central bank in influencing money market interest rates, as it helps create a liquidity shortage, which means that commercial banks necessarily rely on the central bank for raising funds, and thus bear the cost entailed by the liquidity supply rates the central bank has set – see ECB, *The monetary policy of the ECB*, 2011, pp. 101-104. Having said that, the conditions currently prevailing in the single money market are rather atypical, a fact that urges the Eurosystem to supply unlimited liquidity to the credit institutions, and therefore curbs the usefulness of the reserve requirements system; hence, room was allowed for reducing the relevant ratio.

11 Many credit institutions raise liquidity to comply with the reserve requirement mainly through the Eurosystem's open market operations, against sufficient collateral. Thus, a lowering of the level of the required minimum reserves would allow credit institutions to dedicate eligible collateral (of which there is a shortage in the euro area) to other uses. The decision to decrease the required reserve ratio also relied on an expectation that certain credit institutions would channel the liquidity no longer committed to reserve requirements into interbank loans; as a result, this would bolster interbank transactions.

Table IV.2 Eurosystem's open market operations in 2012 and the beginning of 2013*

1. Main and longer-term refinancing operations:	
1.1 Main refinancing operations (MRO): provision of liquidity with a maturity of one week	**Frequency:** Once a week. **Procedure:** At least until 9 July 2013, fixed rate tender with full allotment.
1.2 Longer-term refinancing operations (LTRO):	
1.2.1 Provision of liquidity with a maturity of one maintenance period	**Frequency :** Once at the beginning of each maintenance period. These operations will continue to be conducted for as long as needed. **Procedure:** Fixed-rate tender (at a rate equal to the MRO rate) with full allotment.
1.2.2 Provision of liquidity with a maturity of three months	**Frequency :** Once a month (usually at end-month). **Procedure:** At least until June 2013, fixed-rate tender with full allotment and an interest rate set ex post equal to the average value of the fixed rate of the MROs conducted during the life of the respective longer-term refinancing operations.
1.2.3 Provision of liquidity with a maturity of thirty-six months	One longer-term refinancing operation was conducted with a maturity of 36 months on 1 March 2012 (settlement date). **Procedure:** Fixed rate tender with full allotment and an interest rate set ex post equal to the average value of the fixed rate in the MROs conducted over the life of the respective LTRO. Credit institutions are given the option of an early partial or total repayment of the funds they raised a year later.
2. Outright purchases of securities:	
2.1 Securities Markets Programme	The Governing Council of the ECB decided on 9 May 2010 to launch the Programme and on 6 September 2012 to discontinue it. By the end of the Programme, the Eurosystem had purchased securities of a total value of €209 billion.** The Eurosystem will hold these securities to maturity.
2.2 Outright Monetary Transactions	On 6 September 2012, the Governing Council of the ECB announced that the Eurosystem may purchase sovereign bonds with a maturity of 1-3 years on secondary markets, without pre-defined quantitative limits. A prerequisite is that the issuing Member State be subject to an economic adjustment programme by the European Financial Stability Facility (EFSF) or the European Stability Mechanism (ESM) and observes the terms and conditions of the programme, which, furthermore, should necessarily provide for the ability to acquire securities of the respective Member State from the primary market on behalf of the EFSF or the ESM, respectively.
2.3 New covered bond purchase programme	The Governing Council of the ECB decided on 6 October 2011 to apply this programme, from November 2011 to end-October 2012. By the end of the programme, the Eurosystem had purchased covered bonds to a total value of €16 billion.** The Eurosystem will hold these bonds to maturity.
3. Fine-tuning operations:	
3.1 Liquidity absorption on a weekly basis to sterilise the effect, on the overall liquidity of the banking system, of purchases made under the Securities Markets Programme	**Frequency :** Every week, starting on 18 May 2010. The absorption of liquidity continues even after the discontinuation of the Programme (following which new purchases are no longer possible). **Procedure:** Collection of weekly deposits from credit institutions through variable-rate tenders with a maximum bid rate equal to the MRO fixed rate.
3.2 Provision of overnight liquidity on 29 February 2012 (settlement date)	The purpose of this operation was to avert liquidity fluctuations as on 29 February 2012 credit institutions had to repay the amounts raised through the MRO of the previous week, while raising new liquidity through LTROs with a maturity of 36 months was only possible a day later.
4. US dollar liquidity-providing operations:	
4.1 Operations with a maturity of one week	**Procedure :** Fixed-rate tender with full allotment against collateral eligible for the Eurosystem's credit operations in euro.
4.2 Operations with a maturity of three months	

* The table was compiled on the basis of data and information available until early February 2013.
** Excluding repayment.

• In June 2012, it was decided to expand once again the list of eligible collateral for the provision of Eurosystem liquidity to credit institutions (more specifically, MFIs) by lowering the required rating threshold[12] for asset-backed securities (ABS).

• In September 2012, the ECB decided to suspend the application of the minimum credit rating threshold for collateral eligibility requirements in the case of marketable debt instruments issued or guaranteed by the central government, and credit claims granted to or guaranteed by the central government, of countries that (i) are under an EU-IMF programme and comply with the attached conditionality as assessed by the Governing Council, or (ii) are eligible for Outright Monetary Transactions. In addition, marketable debt instruments denominated in the US dollar and the Japanese yen, and issued and held in the euro area, are accepted as eligible collateral in Eurosystem credit operations until further notice.

Decisions directly affecting Greece

With respect to marketable debt instruments, on 28 February 2012 the ECB Governing Council decided to temporarily suspend the eligibility of those issued or (fully) guaranteed by the Hellenic Republic for use as collateral in Eurosystem monetary policy operations. Thereafter, on 8 March 2012 it was decided that they will once again be accepted by the Eurosystem, given the activation of the buy-back scheme, provided to underpin the quality of these instruments. Upon the expiration of the buy-back scheme on 25 July 2012, marketable debt instruments issued or (fully) guaranteed by the Hellenic Republic became for the time being ineligible for use as collateral in Eurosystem monetary policy operations, as they did not meet the Eurosystem's minimum requirements for credit quality thresholds. In the meantime, the liquidity needs of the Eurosystem's counterparties[13] that were affected by the decision to suspend the eligibility of such debt instruments for use as collateral could be covered by the corresponding national banks, under procedures agreed upon at Eurosystem level. In Greece, for instance, it was possible to use such debt instruments as collateral for the provision of Emergency Liquidity Assistance (ELA) by the Bank of Greece. However, as of 21 December 2012, the application of the minimum credit rating threshold was suspended in the case of marketable debt instruments issued or (fully) guaranteed by the Hellenic Republic and, as a result, they constituted again eligible collateral for the purposes of Eurosystem credit operations. It was, nevertheless, specified that a schedule of graduated valuation haircuts would apply to these assets. In this decision, the Governing Council took into consideration the positive assessment by the European Commission, the ECB and the International Monetary Fund of the policy package for the first review under the Second Economic Adjustment Programme for Greece and the wide range of measures already implemented by the Greek government in the areas of fiscal consolidation, structural reforms, privatisation and financial sector stabilisation.

• The implementation of non-standard monetary policy measures led to a considerable rise in liquidity supply to credit institutions by the Eurosystem. In 2012, the amount of outstanding liquidity provided by the Eurosystem[14] to euro area MFIs shrank in the first two months of the year, followed an upward trend in the March-June period, and a slightly downward trend from July onwards: in any event, the average outstanding amount stood at €980

12 The Eurosystem sets a minimum credit rating threshold and does not accept as eligible collateral any assets below this threshold.
13 That is, credit institutions which held Greek government bonds or government-guaranteed Greek bank bonds in their portfolios.
14 Comprising the outstanding amounts of the Eurosystem's marginal lending facility (MLF), main refinancing operations (MROs), longer-term refinancing operations (LTROs) (with a maturity of one maintenance period, 3, 12 and 36 months), as well as the total outstanding amount of covered bonds (under the CBPP and CBPP2). Excluding the purchases of debt securities under the Securities Markets Programme (SMP), as they are not aimed at enhancing liquidity: liquidity created through the SMP is fully sterilised by means of weekly liquidity absorbing fine-tuning operations to collect fixed-term deposits for an amount corresponding to the total size of the SMP operations since their launch (minus the value of matured securities).

billion in December 2012, i.e. remained significantly higher than in December 2011 (€570 billion). In January 2013, liquidity supply rose further to €990 billion. However, starting on 30 January 2013, credit institutions made extensive use of the option of early repayment, after one year, of the two longer-term refinancing operations (LTROs) with a maturity of 36 months conducted in 2011. This shows a reduced need for central bank liquidity, probably as a result of a wider range of market-based funding options, against the backdrop of reduced tensions and normalised conditions in financial markets. At the same time, in the first half of 2012 credit institutions increasingly had recourse to the Eurosystem's standing deposit facility.[15] In more detail, the average amount parked in the standing deposit facility increased from €320 billion in December 2011 to €770 billion in June 2012. After the cut in the ECB's deposit facility rate to zero in early July 2012, the average end-of-day balances on banks' deposit facility accounts fell sharply in the course of the month, then slowly declined further, coming to €240 billion in December 2012 and €235 billion in January 2013.

15 The Eurosystem (i) allows credit institutions to make overnight deposits of an unlimited amount under the deposit facility and (ii) requires credit institutions to hold deposits that are called "minimum" or "required" reserves, the level of which fluctuates on a daily basis. An average reserve requirement during a maintenance period is set in advance (see footnote 10), but in principle, credit institutions are allowed to hold excess reserves. The Eurosystem remunerates reserve holdings, but only up to the level of the required minimum reserves.

Box IV.1

THE SINGLE SUPERVISORY MECHANISM (SSM) AND OTHER CURRENTLY PLANNED REFORMS TOWARDS A BANKING UNION

For various important reasons, which were highlighted by the recent euro area sovereign debt crisis,[1] it has been deemed necessary to build an integrated financial framework, i.e. a banking union in the EU, to improve the functioning of the EMU.

This integrated financial framework should, ideally, consist of three main elements: a single supervisory mechanism, common deposit protection and a single bank resolution mechanism. The European Council decided, at its meetings of 28-29 June, 18-19 October and 14 December 2012, to empower the European Stability Mechanism (ESM) to directly recapitalise banks, subject to appropriate conditionality, once the single supervisory mechanism is in place. The conditionality attached to financial assistance will be detailed in a Memorandum of Understanding and will include institution-specific as well as sector- and economy-wide conditionality. Specific supervisory tasks will be conferred on the ECB, which, along with the national competent authorities, will together form the single supervisory mechanism. The extent to which the ECB will be directly involved in prudential supervision will depend on the size and nature of the supervised entities. Other supervisory tasks, such as consumer protection and prevention of money laundering, will remain with national supervisors.

The ECB will carry out the supervisory tasks conferred upon it in full independence, and strictly separately from its tasks relating to monetary policy. To this end, the ECOFIN Council decided,

1 For instance, the fact that the European Stability Mechanism (ESM) will directly inject capital into troubled banks warrants continuous assessment of each bank by EU institutions. Moreover, the national bias in the existing supervisory framework may lead to underestimation of the risk of cross-border spillover effects on the banking systems of other Member States in the event of a banking crisis in a Member State. Against this background, the transfer of prudential supervision to a central European authority could prove more effective in safeguarding financial stability in the euro area and the European Union at large. Finally, to the extent that it promotes financial market integration, the creation of a banking union would also ensure uniform monetary policy transmission across the euro area, leading to similar levels of funding costs for banks, businesses and households, as well as uniform financing conditions in all euro area countries.

on 13 December 2012, to set up a Supervisory Board which will plan and carry out the ECB's supervisory tasks, undertake preparatory work, and propose complete draft decisions for adoption by the ECB's Governing Council. Finally, the European Council of 14 December 2012 called on its co-legislators to finalise the Recovery and Resolution Directive and the Deposit Guarantee Scheme Directive. The European Council stressed that the functioning of the single resolution mechanism should be fiscally neutral over the medium term, by ensuring that public assistance is recouped by means of *ex post* levies on the financial industry.

V MACROECONOMIC DEVELOPMENTS IN GREECE IN 2012 AND PROSPECTS

1 ECONOMIC ACTIVITY: DEVELOPMENTS AND PROSPECTS

- The Greek economy remained in **deep recession** throughout 2012. According to ELSTAT flash estimates, GDP fell by 6.4% on average in 2012. The recession in 2012 was mainly due to a decline in domestic demand (private and public consumption and investment), as well as a dampening of world economic recovery and, in particular, the economic downturn in the euro area, which held back world trade and, therefore, reduced the positive contribution of export growth.

- Cumulatively in 2008-2012, GDP has shrunk by 20.1% and **per capita GDP** (at constant prices) in the third quarter of 2012 stood at the level of the corresponding quarter of 2000.

- In the course of 2012 there have been **signs of a restructuring of the economy**, both on the demand and the supply side, while the economic sentiment indicator has been recording a considerable, albeit not continuous, improvement since November (see Chart V.1B). The Greek economy is currently at a fragile turning point and the important challenge for the years to come is to activate sources of growth, otherwise tax revenues will not be sufficient to cover public expenditure.

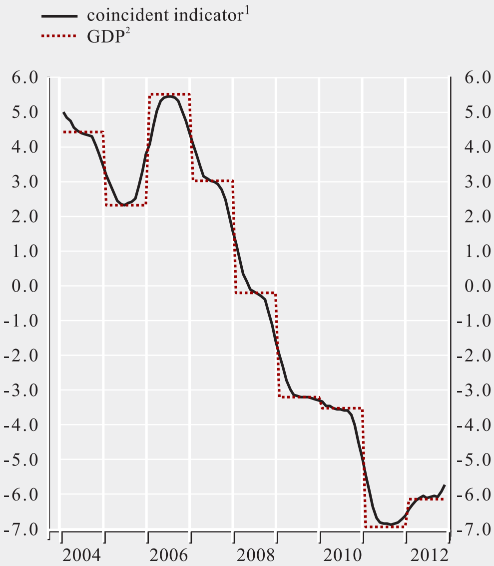
Developments on the demand side

GDP fell at an annual rate of 6.7% in the third quarter of 2012 and 6.0% in the fourth quarter (according to ELSTAT flash estimates). Thus, the average annual GDP rate of decline was 6.4% for 2012 as a whole.

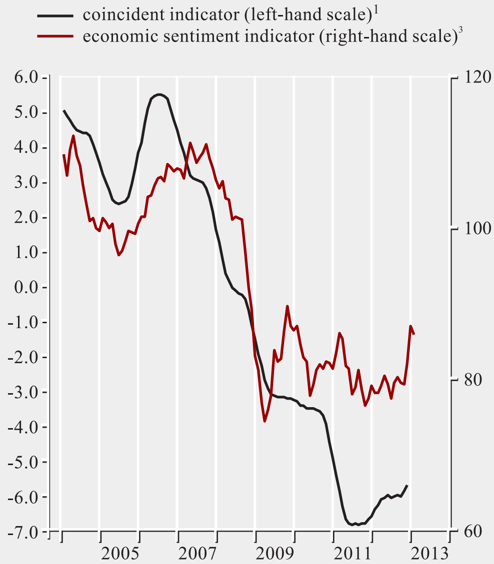
The 6.6% average annual decline in GDP in the first nine months of 2012 (for which detailed data are available) is mainly attributable by 6.5 percentage points to a decline in private consumption (-8.9%) and by 3.3 percentage points to a drop in investment (-20.6%) (see Table V.1). On the contrary, developments in net exports made a positive contribution (of 5.0 percentage points) to the

Chart V.1 Economic activity indicators

A. The coincident indicator of economic activity compiled by the Bank of Greece
(January 2004 - November 2012)



B. The coincident indicator of economic activity compiled by the Bank of Greece and the European Commission's economic sentiment indicator for Greece
(January 2004 - January 2013)



Sources: Bank of Greece (coincident indicator, as well as GDP for 2012), ELSTAT (GDP 2004-2011) and European Commission (economic sentiment indicator).
1 Annualised monthly percentage changes.
2 Annual rate of change.
3 Monthly data.

Table V.1 Gross expenditure of the economy and gross domestic product (2011 and Q2 2011-Q3 2012)[1]

(at constant market prices of 2005)

		Annual percentage changes						
		2011			2012			
	2011	Q2	Q3	Q4	Q1	Q2	Q3	Jan.-Sept.
1. Private consumption	-7.7	-7.3	-3.5	-7.3	-9.5	-8.6	-8.4	-8.9
2. Public consumption	-5.2	-9.0	-3.3	-0.5	0.5	-1.4	-10.7	-4.0
3. Gross fixed capital formation	-19.6	-18.4	-15.3	-23.0	-22.4	-19.8	-19.5	-20.6
3.1 Dwellings	-18.0	-16.4	-18.0	-23.3	-31.2	-31.1	-33.9	-32.0
3.2 Other construction	-25.1	-26.5	-25.3	-22.7	-7.1	-0.2	3.1	-0.9
3.3 Equipment	-18.1	-14.8	-6.8	-23.3	-23.4	-24.4	-24.0	-23.9
3.4 Other investment	-16.9	-18.5	-13.9	-20.4	-4.3	-4.2	-1.0	-3.0
4. Domestic final demand[2]	**-9.3**	**-9.5**	**-5.3**	**-9.0**	**-9.9**	**-9.2**	**-10.3**	**-9.8**
5. Change in inventories and statistical discrepancy (% of GDP)	0.4	-0.2	-1.0	3.4	-2.8	0.0	-2.6	-1.8
6. Domestic demand	**-8.7**	**-8.9**	**-5.9**	**-9.7**	**-11.7**	**-9.1**	**-11.8**	**-10.9**
7. Exports of goods and services	0.3	0.9	4.4	-5.1	4.1	-3.1	-4.5	-1.9
7.1 Exports of goods	4.0	8.0	9.9	-9.1	6.9	-1.0	-0.5	1.3
7.2 Exports of services	-3.0	-5.4	1.0	-1.0	0.3	-5.6	-7.1	-5.0
8. Imports of goods and services	-7.3	-5.2	-2.9	-12.0	-17.5	-13.7	-20.9	-17.4
8.1 Imports of goods	-6.4	-3.9	-0.1	-10.9	-19.3	-15.9	-22.4	-19.2
8.2 Imports of services	-10.9	-10.2	-12.4	-15.7	-10.1	-4.5	-14.9	-9.8
GDP at market prices	**-7.1**	**-7.9**	**-4.0**	**-7.9**	**-6.7**	**-6.3**	**-6.9**	**-6.6**
		Contribution to GDP change (percentage points)						
1. Private consumption	-5.64	-5.22	-2.43	-4.92	-7.48	-6.22	-5.84	-6.51
2. Public consumption	-0.95	-1.66	-0.58	-0.10	0.10	-0.25	-1.91	-0.69
3. Gross fixed capital formation	-3.61	-3.46	-2.43	-4.24	-3.91	-3.30	-2.73	-3.31
3.1 Dwellings	-1.00	-0.87	-0.91	-1.36	-1.79	-1.51	-1.46	-1.59
3.2 Other construction	-1.05	-1.25	-0.95	-1.14	-0.19	-0.01	0.09	-0.03
3.3 Equipment	-1.36	-1.14	-0.39	-1.50	-1.89	-1.74	-1.34	-1.66
3.4 Other investment	-0.20	-0.20	-0.18	-0.24	-0.04	-0.04	-0.01	-0.03
4. Domestic final demand[2]	**-10.21**	**-10.33**	**-5.43**	**-9.48**	**-11.34**	**-9.84**	**-10.41**	**-10.53**
5. Change in inventories and statistical discrepancy	0.70	0.69	-0.59	-1.13	-2.02	0.13	-1.43	-1.11
6. Domestic demand	**-9.52**	**-9.64**	**-6.02**	**-10.61**	**-13.35**	**-9.71**	**-11.84**	**-11.63**
7. Exports of goods and services	0.05	0.19	1.20	-1.12	0.79	-0.74	-1.34	-0.43
7.1 Exports of goods	0.40	0.82	1.11	-1.09	0.70	-0.12	-0.07	0.17
7.2 Exports of services	-0.36	-0.63	0.16	-0.10	0.03	-0.66	-1.21	-0.61
8. Imports of goods and services	-2.32	-1.56	-0.85	-3.82	-5.83	-4.19	-6.27	-5.43
8.1 Imports of goods	-1.58	-0.89	-0.03	-2.68	-5.08	-3.84	-5.33	-4.75
8.2 Imports of services	-0.75	-0.68	-0.84	-1.15	-0.71	-0.30	-0.92	-0.64
9. External balance of goods and services (net exports)	2.37	1.75	2.05	2.69	6.62	3.45	4.94	5.00
GDP at market prices	**-7.1**	**-7.9**	**-4.0**	**-7.9**	**-6.7**	**-6.3**	**-6.9**	**-6.6**

Source: ELSTAT, quarterly national accounts, 7 December 2012, non-seasonally adjusted data.
1 According to ELSTAT estimates published on 14 February 2013, annual GDP growth rates for the second and third quarters of 2012 are revised to 6.4% and 6.7%, respectively.
2 Excluding inventories and statistical discrepancy.

change in GDP. Compared with 2011 as a whole, the negative contribution of private consumption is higher in 2012, while that of public consumption is lower.

The **fall in private consumption** is explained by a decrease in households' disposable income, as a result of reduced wages (see Chapter VII), a significantly lower number of employed persons (see Chapter VI) and increased tax burden, as well as shrinking consumer credit (see Table V.2 and Chapter X.4) and prevailing uncertainty. In more detail, according to the quarterly non-financial accounts of institutional sectors published by ELSTAT, between January and September 2012 the *gross disposable income of the sector of households and non-profit institutions serving households (NPISHs)* declined by 9.6% year-on-year, mainly due to a 12.2% fall in wages, a 6.5% decline in social benefits received by households and a 1.5% fall in property revenue, as well as an 18.5% increase in income and property taxes paid by households. Moreover, taking into account the 11.1% reduction in social transfers in kind, households' "adjusted gross disposable income" shrank by 9.8%.

In addition, on the basis of national accounts data, in the January-September 2012 period total **compensation of employees** (at current prices) declined by 12.8% on an annual basis (Q1: -12.8%; Q2: -12.2%; Q3: -13.6%), reflecting a 3.5% fall in compensation per employee (Q1: -3.9%; Q2: -2.8%; Q3: -3.8%) and —even more so— a 9.7% decline in the number of employees[1] (Q1 -9.2%; Q2: -9.6%; Q3: -10.2%). The fall in average compensation per employee in the entire economy would have been even higher had the structure of employment not changed, marking a shift away from unskilled employment.[2] In the January-September 2012 period, the **gross operating surplus** of the economy decreased by 3.3% (Q1: -2.7%;

1 On a national accounts basis.
2 IKA (Social Insurance Institute) data show that in 2011 the percentage of unskilled workers dropped from 16.6% to 15.4%, while their average wages correspond to 67% of the average wage of all employees.

Table V.2 Indicators of consumer demand (2009-2013)

(annual percentage changes)

	2009	2010	2011	2012	2013 (available period)
Volume of retail trade (general indicator)	-11.4	-6.2	-10.2	-12.6 (Jan.-Nov.)	...
Volume of retail trade (excluding fuel and lubricants)	-9.3	-6.9	-8.7	-12.1 (» »)	...
Food-beverages-tobacco[1]	-6.1	-5.5	-6.0	-9.3 (» »)	...
Clothing-footwear	1.4	-11.4	-18.8	-21.2 (» »)	...
Furniture-electrical appliances-household equipment	-15.3	-12.7	-15.7	-17.7 (» »)	...
Books-stationery-other	-24.0	-4.3	-5.2	-12.5 (» »)	...
Revenue from VAT (at constant prices)	-10.2	0.1	-5.9	-12.8	...
Retail trade business expectations index	-21.4	-26.4	-0.5	-3.1	11.9 (Jan.)
New private passenger car registrations	-17.4	-37.2	-29.8	-41.7	-25.5 (»)
Tax revenue from mobile telephony[2]	13.2	37.1	-16.8	-8.4	...
Outstanding balance of consumer credit[3]	1.8 (Dec.)	-4.2 (Dec.)	-6.4 (Dec.)	-5.1 (Dec.)	...

Sources: ELSTAT (retail trade, cars), Ministry of Finance (VAT revenue, tax revenue from mobile telephony), IOBE (expectations), Bank of Greece (consumer credit).
1 Comprising big food stores and specialised food-beverages-tobacco stores.
2 Monthly service fee per subscription until July 2009. As of August 2009, new progressive rates apply to mobile telephony contracts and different fees to prepaid mobile telephony.
3 Comprising bank loans and securitised loans. The rates of change are adjusted for loan write-offs, foreign exchange valuation differences and a transfer of loans by one bank to a domestic subsidiary finance company in 2009.

Q2: -3.6%; Q3: -3.5%). This slight decline in the gross operating surplus is in contrast with corporate balance sheet data, which show substantial losses that have been increasing over the past few years.[3] This difference can be explained by the fact that the gross operating surplus (which comprises not only corporate profits, but also the income of the self-employed and farmers) also includes capital depreciation. Characteristically, again according to quarterly non-financial accounts of institutional sectors, while in the January-September 2012 period the *gross operating surplus of non-financial corporations* declined by a mere 2.0% year-on-year, the net operating surplus, which is derived by deducting capital consumption (i.e. depreciation), dropped by 14.3%, given that depreciation increased by 10.6%.[4]

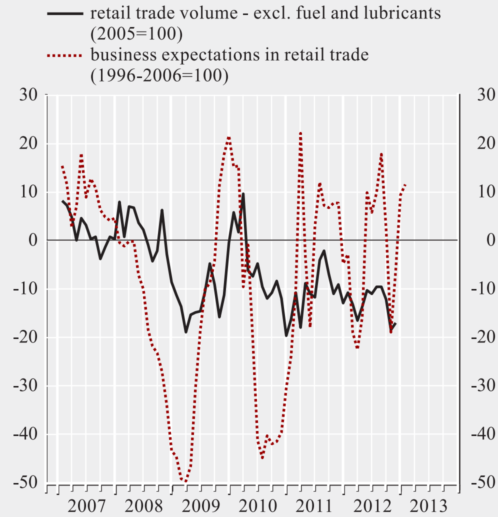
The fall in private consumption during the first nine months of 2012 is reflected, inter alia, in the declining volume of **retail sales** (which fell by 12.6% over the first eleven months of 2012 year-on-year) and a reduction in the number of **new passenger car registrations** (overall by 41.7% in 2012; see Chart V.2).

According to national accounts data, the decline in **gross fixed capital formation** recorded in 2011 (-19.6%) continued at roughly the same rate (-20.6%) in the first nine months of 2012 (Q1: -22.4%; Q2: -19.8%; Q3: -19.5%), mainly reflecting a continued sharp fall in investment in **transport equipment** (-34.2%, contributing -6.9 percentage points to the total decrease in investment) and **housing** (-32.0%, contributing -10.0 percentage points to the total drop in investment). A further shrinking of the **Public Investment Programme** in 2012 (€6.1 billion, against €6.5 billion in 2011) also had a negative impact on investment (see also Table V.3).

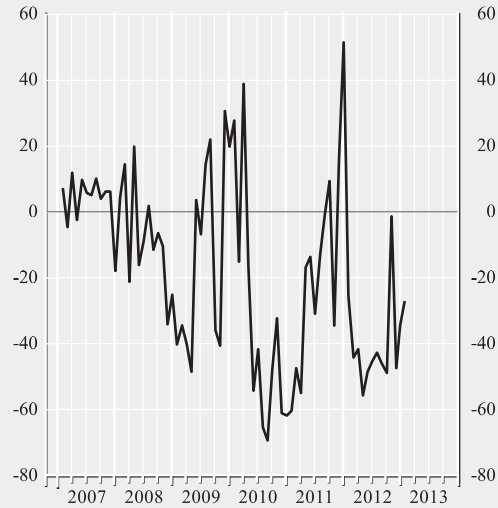
As a result of the fiscal consolidation measures detailed in Chapter IX, in the first nine months of 2012 **public consumption** declined by 4.0% year-on-year (Q1: +0.5%; Q2: -1.4%; Q3: -10.7%).

Chart V.2 Consumer demand indicators

A. Retail trade volume and business expectations[1]
(January 2007 - January 2013)



B. New private passenger car registrations[1]
(January 2007 - January 2013)



Sources: ELSTAT (retail trade and cars) and IOBE (expectations). The index of business expectations is based on firms' estimates of sales and inventories as well as on their forecasts on business activity over the next three months.
1 Year on year percentage changes.

3 According to an ICAP study, the consolidated financial results of 22,573 enterprises showed losses of €3.83 billion in 2010 and €7.62 billion in 2011. For the first nine months of 2012, see Chapter VII.4.
4 In 2011 the net operating surplus declined by 11%, while the gross operating surplus fell by only 5%.

Table V.3 Indicators of investment demand (2009-2013)

(annual percentage changes[1])

	2009	2010	2011	2012	2013 (available period)
Capital goods output	-22.5	-22.1	-9.7	-14.8	...
Capacity utilisation rate in the capital goods industry	73.4	66.1	62.7	58.2	63.2 (Jan.)
Bank credit to domestic enterprises[2]	5.1 (Dec.)	1.1 (Dec.)	-2.0 (Dec.)	-4.3 (Dec.)	...
Disbursements under the Public Investment Programme[3]	-2.8	-11.3	-17.1	-10.5	35.5 (Jan.)
Production index in construction (at constant prices)	-17.5	-29.2	-28.1	-26.3 (Jan.-Sept.)	...
Volume of private construction activity (on the basis of permits issued)	-26.5	-23.3	-37.7	-30.5 (Jan.-Nov.)	...
Cement production	-21.4	-14.3	-37.8	-12.8	...
Business expectations index in construction	-31.4	-27.4	-27.8	26.1	5.9 (Jan.)
Outstanding balance of total bank credit to housing[4]	3.7 (Dec.)	-0.3 (Dec.)	-2.9 (Dec.)	-3.3 (Dec.)	...

Sources: ELSTAT (capital goods output, volume of private construction activity, cement production, production in construction), IOBE (capacity utilisation rate, business expectations index), Bank of Greece (bank credit to domestic enterprises and housing, disbursements under the Public Investment Programme).
1 Except for the capacity utilisation rate in the capital goods industry, which is measured in percentages.
2 Comprising loans and corporate bonds, securitised loans and securitised corporate bonds but excluding (as of June 2010) loans to sole proprietors. The rates of change are adjusted for loan write-offs, foreign exchange valuation differences, as well as loans and corporate bonds transferred by domestic MFIs to their subsidiaries operating abroad and to one domestic subsidiary finance company in 2009.
3 As of January 2012 actual cash payments and not appropriations under the public investment budget.
4 Comprising loans and securitised loans. The rates of change are adjusted for loan write-offs, foreign exchange valuation differences and the transfer of loans by one bank to a domestic subsidiary finance company in 2009.

The fall in consumption and investment led to a contraction of **goods and services imports**, which in the first nine months of 2012 were 17.4% lower than the corresponding period of 2011 (Q1: -17.5%; Q2: -13.7%; Q3: -20.9%). This is due both to a 19.2% decline in imports of goods (which contributed 15.2 percentage points to the total import decline) and to a 9.8% decline in imports of services (which contributed 2.1 percentage points to the total import decline). **Exports of goods**, having increased by 4.0% in 2011 and 6.9% in the first quarter of 2012, *fell* in the second and third quarters (at an annual rate of 1.0% and 0.5%, respectively). Overall, in the first nine months of 2012 exports of goods (at constant prices) were only 1.3% higher than in the corresponding period of 2011. Exports of services started declining in the first quarter of 2011 and have continued to follow a downward path ever since; in the first nine months of 2012 they were on average 5.0% lower than in the corresponding period of 2011 (Q1: +0.3%; Q2: -5.6%; Q3: -7.1%). This reflects a drop in travel and transport receipts (see Chapter VIII). Overall, exports of goods and services declined by 1.9% in the first nine months of 2012 (making a -0.4% percentage point contribution to total GDP change).[5] However, due to a sharp fall in imports, the **contribution of the external sector** to GDP change in the first nine months of 2012 was 5.0 percentage points, i.e. higher than in all previous years.[6] *Characteristically, in the third quarter of 2012 goods and services exports were for the first time higher than the corresponding imports, both at constant and at current prices – therefore, the external balance of goods and services was in surplus.*

5 Differences between the percentage changes of exports and imports, as recorded on a national accounts basis, and the external balance compiled by the Bank of Greece (for a breakdown at current prices, see Chapter VIII) can be partially explained by changes in prices (the breakdown in this section is made at constant prices) and differences in the methodology of recording transactions, which are smoothed out at the end of the year.
6 Apart from the fact that the rate of decline in imports was higher than that in exports, the value of imports of goods and services continues to be about 13% higher than the value of exports of goods and services in the first nine months of 2012.

Developments on the supply side

In the first nine months of 2012, gross value added in the domestic economy declined by 6.3% (see Table V.4).[7] In more detail, value added in the tertiary sector fell by 6.8%, in industry by 3.2%, in construction by 15.1% and in the primary sector by 3.2%.

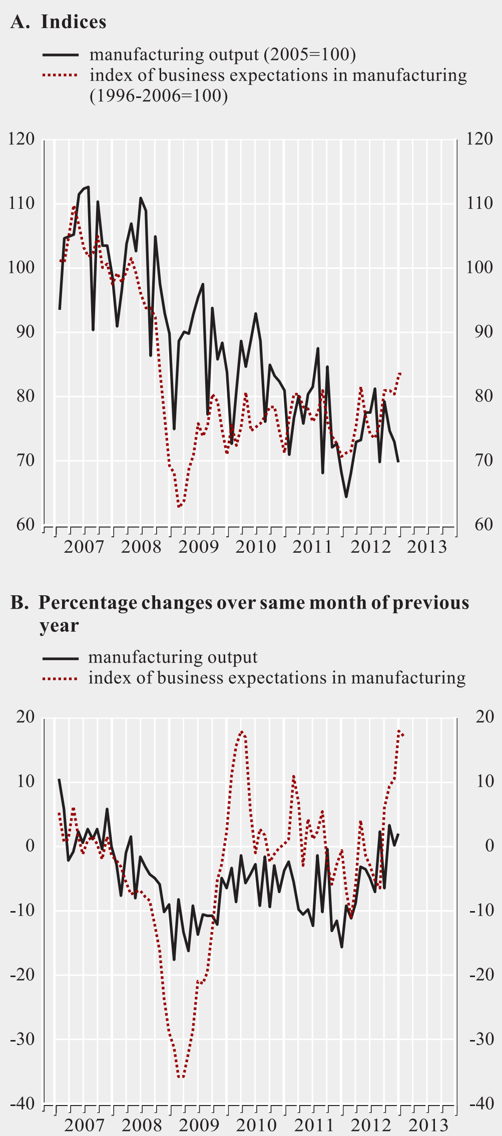
Specifically, in the first nine months of 2012 gross value added in **industry** declined at an annual rate of 3.2% (Q1: -6.9 %, Q2: -2.0%, Q3: -0.8%), compared with an almost double decline (-6.2%) in the corresponding period of 2011 (and -7.4% for 2011 as a whole). In the last quarter of the year, industrial output remained almost unchanged compared with the last quarter of 2011 and, as a result, the decline in value added in industry for the year as a whole is not expected to exceed 3.2%. Therefore, there are signs of stabilisation of the sector, which however are largely attributable to the performance of the oil refinery sector (+24.3% between January and December 2012, making a positive contribution of about 3 percentage points to the annual change of the industrial output index). On the contrary, basic metals production, which had made a positive contribution in 2011, fell by 6.1% in 2012 (see Table V.6). Output also declined in most other manufacturing sectors, as also reflected in the very low level of the PMI – 41.2 on average in 2012, against 43.6 in 2011 (see Chart V.4). Industrial activity seems to be dampened both by insufficient demand – albeit to a lesser extent than in 2011 – and by inadequate working capital – to a greater extent than in 2011.

For 2013, **industrial firm's expectations**, as recorded by the IOBE/European Commission business surveys, show that industrial activity is expected to stabilise (see Chart V.3). In the first eight months of 2012, the industrial confidence indicator was on average lower (75.1 points) than in the corresponding period of 2011 (78.6 points). Since September, however, it has noticeably improved, to stand at 83.6 points in December (2012: 77.2 points on average, against 76.9 points in 2011), while in January 2013 it remained at roughly the same level

Chart V.3 Manufacturing output and business expectations (January 2007 - January 2013)

A. Indices

B. Percentage changes over same month of previous year



Sources: ELSTAT (output) and IOBE (expectations). The index of business expectations is based on manufacturing firms' assessments regarding aggregate demand and inventory levels as well as output forecasts for the next 3-4 months.

7 Excluding value added in the property management sector (which seems to have increased both in 2012 and 2011), the decline is greater (-7.4%).

Table V.4 Gross value added at basic prices and GDP at market prices (2011 and Q2 2011-Q3 2012)[1]

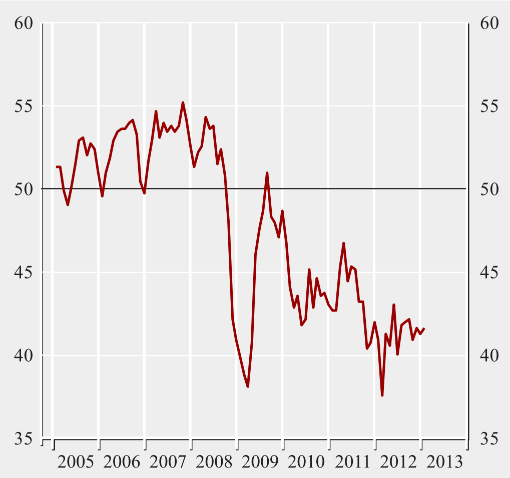
(at constant prices of 2005)

		Annual percentage changes						
		2011			2012			
	2011	Q2	Q3	Q4	Q1	Q2	Q3	Jan.-Sept.
1. Agriculture, forestry and fishing	**-5.4**	**-4.8**	**-7.7**	**-1.2**	**-3.4**	**-0.8**	**-5.3**	**-3.2**
2. Secondary sector	**-12.6**	**-14.2**	**-9.2**	**-15.1**	**-9.4**	**-4.2**	**-3.2**	**-5.6**
2.1 Industry including energy	-7.4	-9.5	-4.2	-11.1	-6.9	-2.0	-0.8	-3.2
2.2 Construction	-28.4	-28.4	-26.3	-28.2	-18.8	-12.4	-13.7	-15.1
3. Tertiary sector	**-5.7**	**-5.8**	**-3.1**	**-5.8**	**-6.0**	**-6.8**	**-7.4**	**-6.8**
3.1 Trade, hotels and restaurants. transport and communications	-10.9	-10.5	-5.3	-13.8	-15.1	-14.7	-11.8	-13.6
3.2 Information and communication	-8.1	-5.9	-4.4	-9.0	-9.0	-7.0	-3.3	-6.5
3.3 Financial and insurance activities	-8.0	-10.7	-6.5	-5.3	-7.3	-7.0	-10.9	-8.4
3.4 Real estate services	2.4	2.3	4.6	5.1	0.4	0.3	0.2	0.3
3.5 Professional, scientific and technical activities	-18.1	-17.3	-14.9	-19.5	-6.3	-1.3	2.2	-1.8
3.6 Public administration and defence	-0.8	-1.8	-1.0	0.3	0.8	-1.8	-7.1	-2.7
3.7 Arts, entertainment and recreation	-0.2	2.4	-1.1	-2.2	-12.0	-14.1	-12.4	-12.8
4. Gross value added at basic prices	**-6.6**	**-6.9**	**-3.9**	**-7.0**	**-6.5**	**-6.1**	**-6.4**	**-6.3**
5. Taxes on products	-10.8	-14.7	-4.1	-14.2	-8.2	-7.2	-10.3	-8.6
6. Subsidies on products	-10.3	-16.8	-11.7	5.1	-8.1	-6.9	-7.7	-7.6
7. Gross domestic product at market prices	**-7.1**	**-7.9**	**-4.0**	**-7.9**	**-6.7**	**-6.3**	**-6.9**	**-6.6**
	Contributions to the annual change in value added (percentage points)							
1. Agriculture, forestry and fishing	**-0.23**	**-0.21**	**-0.34**	**-0.04**	**-0.16**	**-0.04**	**-0.22**	**-0.14**
2. Secondary sector	**-2.03**	**-2.29**	**-1.41**	**-2.48**	**-1.49**	**-0.62**	**-0.46**	**-0.86**
2.1 Industry including energy	-0.90	-1.14	-0.50	-1.39	-0.86	-0.24	-0.10	-0.40
2.2 Construction	-1.12	-1.15	-0.91	-1.09	-0.64	-0.38	-0.36	-0.46
3. Tertiary sector	**-4.56**	**-4.63**	**-2.44**	**-4.59**	**-4.76**	**-5.44**	**-6.01**	**-5.40**
3.1 Trade, hotels and restaurants, transport and communications	-2.78	-2.66	-1.54	-3.14	-3.19	-3.59	-3.39	-3.39
3.2 Information and communication	-0.43	-0.30	-0.21	-0.50	-0.47	-0.37	-0.15	-0.33
3.3 Financial and insurance activities	-0.46	-0.66	-0.36	-0.29	-0.46	-0.41	-0.59	-0.49
3.4 Real estate services	0.31	0.29	0.57	0.69	0.05	0.04	0.03	0.04
3.5 Professional, scientific and technical activities	-1.03	-1.03	-0.67	-1.31	-0.30	-0.07	0.09	-0.09
3.6 Public administration and defence	-0.16	-0.37	-0.19	0.07	0.19	-0.37	-1.42	-0.53
3.7 Arts, entertainment and recreation	-0.01	0.11	-0.05	-0.10	-0.58	-0.67	-0.57	-0.61
4. Gross value added at basic prices	**-6.6**	**-6.9**	**-3.9**	**-7.0**	**-6.5**	**-6.1**	**-6.4**	**-6.3**

Source: ELSTAT, quarterly national accounts, 7 December 2012, non-seasonally adjusted data.
1 For the revised GDP growth rates published on 14 February 2013, see footnote 1, Table 1.

Chart V.4 Purchasing Managers' Index (PMI) in manufacturing (January 2005 - January 2013)

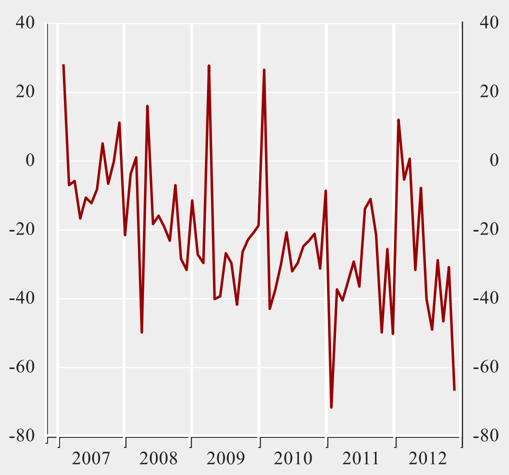
(seasonally adjusted; values over 50 indicate expansion)



Sources: Markit Economics and Hellenic Purchasing Institute.

Chart V.5 Volume of new buildings and extensions on the basis of permits issued (January 2007 - November 2012)

(year-on-year percentage changes)



Source: ELSTAT.

(83.7). In more detail, business expectations about the **volume of exports**, despite fluctuations, remained steadily positive throughout the year (having improved by 12 points on average). **Capacity utilisation** (see Table V.5), which in January-September 2012 stood, on average, at lower levels (64%) than in the same period of 2011 (68%), improved in the fourth quarter of 2012 (65.5%), approaching the level recorded in the fourth quarter of 2011 (66%). The months of secured production in 2012 also remained at the levels seen in 2011 (i.e. 4.0 months on average).

Gross value added in the **construction industry** declined further in 2012 (by 15.1% in the first nine months), for the sixth consecutive year, and its level stood at about 1/4 of the corresponding level in 2006, when the sector's value added had peaked. Weak construction activity and the unfavourable outlook for the industry are reflected in the continued substantial fall in the **volume of private construction activity for which permits have been issued** – at an annual rate of 30.5% in the first nine months of 2012 (see Chart V.5). In the last quarter of 2012 construction activity continued to fall, as recorded by the IOBE/EC business indicators for the volume of activity. This development mainly stemmed from subdued activity in public works. According to data collected from the IOBE/EC surveys, the sector's enterprises are faced, to a much greater extent than in other sectors, with financing constraints, while housing construction is also hampered by insufficient demand. At the end of 2012, business expectations in housing construction were rosier than at the end of 2011, but gloomier for public construction. Although public works activity will probably be sluggish in the first quarter of 2013, construction works on the four major motorways[8] are expected[9] to be resumed, possibly in the second quarter of 2013, although the relevant projects will be scaled down. Following the conclusion of negotiations between the government and the construction firms in December 2012, negotiations must now be conducted with the 43 banks involved in the financing of the projects and then with the European Commission, before the new contracts are approved by Par-

8 See the statements of 12 December 2012 by the Greek Ministry of Development, Competitiveness, Infrastructures, Transport and Networks (http://www.mindev.gov.gr/?p=9168).
9 Olympia Odos, Aegean Motorway, Central Greece Motorway E65 and Ionia Odos.

Table V.5 Indicators of industrial activity (2009-2013)

(annual percentage changes[1])

	2009	2010	2011	2012	2013 (available period)
1. Industrial turnover index[2]	**-23.2**	**6.0**	**7.1**	**3.7 (Jan.-Nov.)**	
Domestic market	-22.2	-0.7	-2.3	-4.1 (» »)	
External market	-25.6	21.6	0.0	18.0 (» »)	
2. Industrial new orders index[3]	**-28.1**	**4.2**	**1.8**	**-8.0 (» »)**	
Domestic market	-23.4	-3.4	-23.7	-11.8 (» »)	
External market	-34.7	28.2	22.3	-5.0 (» »)	
3. Index of business expectations in industry	**-21.5**	**5.1**	**1.4**	**0.4**	**17.2 (Jan.)**
4. Industrial capacity utilisation rate	**70.5**	**68.5**	**67.6**	**64.4**	**65.3 (» »)**
5. Purchasing Managers' Index (PMI)[4]	**45.3**	**43.8**	**43.6**	**41.2**	**41.7 (» »)**

Sources: ELSTAT (industrial turnover and new orders), IOBE (expectations, industrial capacity utilisation rate), Markit Economics and Hellenic Purchasing Institute (PMI).
1 Except for the industrial capacity utilisation rate, which is measured in percentages, and the PMI index.
2 The index refers to the sales of industrial goods and services in value terms.
3 The index reflects developments in demand for industrial goods in value terms.
4 Seasonally adjusted index; values over 50 indicate expansion.

liament. Meanwhile, tender procedures for other projects are currently underway, such as the construction of co-financed projects in various fields (e.g. waste management facilities), the modernisation of airports, the expansion of the subway network in Athens and Thessaloniki, etc.

The decline in value added in the **services** sector, at an annual rate of 6.8% in the first nine months of 2012, contributed 5.4 percentage points to the change in total gross value added in the same period. A substantial decline was recorded in trade, hotels-restaurants and transport-communications (-13.6%), information and communication (-6.5%), financial and insurance activities (-8.4%) and arts-entertainment-recreation (-12.8%). National accounts data do not allow for a more detailed recording, but turnover data at current prices (see Table V.7) show that the downturn in the services sector did not extend to legal-accounting and management consulting activities, which rose by 3.0% in the first nine months of 2012. This development, coupled with a sharp drop in private consumption and a relatively moderate decline in industrial activity, probably shows differences in services performance depending on the end-customer: business-to-business services perform better than services to end-consumers.

Estimates by tertiary-sector firms for 2013, as reflected in their January 2013 expectations about demand in the coming quarter, show that the climate is gradually improving. There seems to be increased optimism about **exports of services** – the Association of Greek Tourism Enterprises (SETE) forecasts a 6% increase in arrivals and a 10% rise in revenue in 2013. Tourism is also expected to benefit from the simplification of procedures for the licensing of travel agents and the recognition of new tourist products (e.g. villa rentals, utilisation of Olympic facilities), the rationalisation of tourist product promotion, the settlement of the status of unauthorised tourist ports, all being arrangements comprised in the draft law released for public consultation in mid-January 2013.[10]

10 "Restructuring of the Greek National Tourism Organisation, reduction of administrative burdens, simplification of procedures to support tourist business, and other provisions". The consultation will be conducted between 16 and 29 January 2013.

Table V.6 Industrial production

(2005=100)

	Weights 2005		Average annual percentage changes 2010	2011	2012	Level 2012 (2005=100)
Industry	**100.0**		**-5.9**	**-7.8**	**-3.2**	**75.4**
1. Mining and quarrying	***6.1***	***100.0***	***-6.5***	***0.6***	***0.6***	***77.1***
Mining of coal and lignite		56.6	-13.1	5.9	8.6	92.8
Extraction of crude petroleum and natural gas		1.9	42.5	-24.3	-2.2	87.2
Mining of metal ores		9.1	16.2	18.5	-13.9	75.8
Other mining and quarrying		32.4	-0.1	-13.7	-13.7	49.5
2. Manufacturing	***69.8***	***100.0***	***-5.1***	***-8.5***	***-3.9***	***73.6***
Food		18.2	-4.1	-0.9	-3.8	92.1
Beverages		6.0	-7.6	-9.3	-8.3	80.1
Tobacco		1.9	-17.5	10.5	-8.9	75.1
Textiles		3.1	-20.6	-22.0	-17.4	27.0
Wearing apparel		3.4	-23.1	-25.2	-7.0	33.6
Leather and footwear		0.6	-36.9	-15.6	-31.6	28.9
Wood and cork		1.2	9.4	24.9	-11.1	67.1
Paper and paper products		2.3	-3.4	-8.9	-10.6	76.6
Printing and reproduction of recorded media		1.9	-14.1	-24.5	-18.6	46.6
Coke and refined petroleum products		11.3	5.7	-14.5	24.3	117.7
Chemicals and chemical products		5.3	1.5	-4.4	-11.9	71.3
Basic pharmaceuticals		2.5	2.4	-0.4	-5.5	144.5
Rubber and plastic products		4.2	-7.0	-7.7	-9.5	71.3
Non-metallic mineral products		10.3	-14.2	-35.7	-15.8	32.1
Basic metals		8.0	12.0	6.4	-6.1	92.5
Metal products		5.1	0.2	-4.4	-9.8	68.7
Computers, electronics and optical products		1.2	-26.6	-23.6	-11.0	20.8
Electrical equipment		3.0	-4.1	-11.0	-6.0	66.2
Machinery and equipment n.e.c.		2.1	-21.0	-8.0	-13.3	51.7
Motor vehicles, trailers and semi-trailers		0.8	-1.6	-30.5	-14.7	42.5
Other transport equipment		1.6	-35.1	-32.4	-26.5	27.2
Furniture		1.5	-19.0	-22.1	-28.6	35.0
Other manufacturing activities		0.5	-10.5	-13.3	-13.2	48.5
Repair and installation of machinery and equipment		4.1	-22.8	-1.4	-14.6	48.9
3. Electricity	***20.8***	***100.0***	***-9.2***	***-8.8***	***-3.0***	***76.0***
4. Water supply	***3.3***	***100.0***	***0.7***	***-1.6***	***0.9***	***103.0***
Industry	***100.0***		***-5.9***	***-7.8***	***-3.2***	***75.4***
Main industrial groupings						
Energy	36.8		-4.9	-8.4	5.3	89.3
Intermediate goods	28.0		-0.9	-8.8	-10.1	63.8
Capital goods	8.6		-22.1	-9.7	-14.8	42.8
Consumer durables	2.3		-13.4	-15.6	-17.8	46.6
Consumer non-durables	24.3		-7.2	-4.8	-6.1	81.6

Source: ELSTAT, 8 February 2013.

Table V.7 Activity indicators in the services sector (2009-2013)

(annual percentage changes)

	2009	2010	2011	2012	2013 (available period)
A. Services turnover indicators					
1. Trade					
Wholesale trade	-8.9	-5.9	-13.5	-13.9 (Jan.-Sept.)	
Retail trade	-10.2	-1.1	-7.2	-11.3 (Jan.-Nov.)	
Motor trade	-15.7	-36.5	-26.5	-31.8 (Jan.-Sept.)	
2. Transport					
Land transport	-31.5	-18.1	-1.7	-2.8 (» »)	
Sea transport	-22.8	-8.5	-2.7	-17.2 (» »)	
Air transport	-11.7	-7.0	-0.9	-3.7 (» »)	
Storage and supporting transport activities	-32.2	-10.8	-7.9	-5.9 (» »)	
3. Hotels and restaurants					
Accommodation and food service activities	-9.1	-8.2	-7.4	-16.5 (» »)	
4. Information and communication					
Telecommunications	-8.9	-11.3	-8.9	-0.3 (» »)	
Film, video, and TV programme production, recordings and music products	1.4	-6.6	-28.4	-5.7 (» »)	
Programming and broadcasting activities	-6.7	-2.1	-27.1	-17.3 (» »)	
5. Professional-scientific-technical activities					
Legal, accounting and management consulting services	-12.4	-7.3	-0.3	3.0 (» »)	
Architectural and engineering services	-18.6	-20.4	-19.6	-11.7 (» »)	
Advertising and market research	-18.4	-23.8	-21.2	-17.2 (» »)	
Travel agencies and related activities	-9.9	-24.5	-35.3	-28.2 (» »)	
B. Passenger traffic					
Athens International Airport	-1.5	-5.0	-6.3	-10.4	
Aegean Airlines[1]	9.9	-5.1	4.2	-6.4 (Jan.-Sept.)	
Piraeus port (OLP)	-3.8	-6.0	-0.8	-17.5	
C. Business expectations index in the services sector	-28.3	-9.3	-2.9	-11.2	8.7 (Jan.)

Sources: ELSTAT (services turnover), Athens International Airport, Aegean Airlines, Piraeus Port Authority (OLP) and IOBE (expectations).
1 Including charter flights.

Finally, **primary production** declined by 3.2% in the first nine months of 2012, i.e. at a weaker pace than in the corresponding period of 2011 (-6.5%) and at a rate similar to that of the decline in employment in the sector (-3.8% according to Labour Force Survey data). Eurostat flash estimates published in December 2012 show that real (deflated) farming revenue per full-time worker fell in Greece by 2.0% in 2012.[11]

The recession is expected to continue in **2013**, albeit at a slower pace than in 2012. The decline in output will mainly stem from a further fall in consumption and the extent of the recession will depend on the degree of elimination of the already declining uncertainty, on the enhancement of liquidity in the economy, as well as on the progress made in privatisa-

11 See Eurostat press release, 12 December 2012.

tions, which may also encourage foreign direct investment. In more detail, liquidity will be boosted by the repatriation of deposits, the improvement in business financing with the assistance of the European Investment Bank and the favourable environment to be created following the completion of the bank recapitalisation process, as well as the further improvement in the rates of absorption and utilisation of EU funds. There are already encouraging signs of easing uncertainty, as shown by the consumer and business expectations mentioned above and by responses in a Eurobarometer survey,[12] as well as by a commonly used measure of uncertainty (daily yield standard deviation in the Athens Exchange composite index). What is important now is to support the recovery of investment activity and continue the efforts to restructure the economy by interventions promoting productivity and enhancing the openness of domestic activity, since the investment-to-GDP ratio has fallen to an extremely low level: about 13% in the first nine months of 2012, against 22.6% between 2000 and 2007, while depreciation seems to exceed gross investment in 2011-2012. There are, however, signs of a restructuring of the economy. There has been a marginal rise in the share of marketable goods in total output (see Annex to Chapter VIII), the share of persons employed in large firms has risen (see Chapter VI) and labour productivity has begun to increase, although such increase has stemmed from drastic cuts in the number of employees (see Chapter VII.3).

2 DEVELOPMENTS AND PROSPECTS IN THE REAL ESTATE MARKET

• Repeated real estate tax hikes over the past few years, high transaction costs (including mandatory charges on real estate transfers), as well as a constantly shifting tax framework are most probably the major obstacles to a recovery of the Greek real estate market.[13] The deepening recession in the real estate market and the difficulties in achieving a rebound are certainly attributable, *inter alia*, to the unfavourable economic environment, households' shrinking disposable income and their concerns about the prospects of incomes and employment, as well as to a tightening of banks' credit standards.

• Since the onset of the current crisis, market prices as well as demand and transaction volumes for residential and commercial properties have been falling, with some evidence of stabilisation of market conditions in the second half of 2012, according to data from the quarterly survey of real estate agencies and property advisors conducted by the Bank of Greece.[14] In the past few years, the Greek real estate market has been characterised by excess supply and a sizeable stock of properties for sale, very low demand, and an extremely limited number of transactions.

• Substantial fluctuations in real estate market professionals' expectations seem to be directly associated with current economic and political developments and the announcement or implementation of real estate market-related policy measures. It should be noted, however, that an analysis of the latest data of

12 According to the latest survey, the expectations of Greek respondents have ceased to deteriorate or have even marginally improved. See *Standard Eurobarometer 78 – First results*, conducted in November 2012 and published in December 2012; available at http://ec.europa.eu/public_opinion/archives/eb/eb78/eb78_anx_en.pdf.

13 Notably, under Law 3842/2010 introducing a large property tax, the tax-free amount was €400,000 in terms of objective real estate value for 2010. As from 2011, this amount was reduced to half and applicable tax rates were raised, in an effort to push ahead with fiscal consolidation and boost public revenues. Nevertheless, the targeted revenues failed to be collected, as the adjustments required to complete the property register that served as a basis for this tax were not made. Given a shortfall in revenue from real estate taxation, a special tax paid through electricity bills (EETHDE) was imposed on residential and commercial properties at the end of 2011 (under Law 4021/2011), delivering remarkable results, since more than €740 million was collected in December 2011 and about €2.75 billion in 2012, despite the fact that this tax was not paid on some 500 thousand properties. Moreover, Law 4110, passed in December 2012, imposed a 20% tax on capital gains (difference between the acquisition price and the selling price) from property transfers as from 1 January 2013. Finally, as regards the problems caused by the constant changes in the tax framework, a potential adjustment in objective values is a significant source of tax uncertainty for the market.

14 The survey of real estate agencies and property advisors is conducted by the Real Estate Market Analysis Section of the Bank of Greece on a quarterly basis and aims at documenting the current condition of the Greek real estate market, as assessed by the participants, as well as at recording their expectations for the coming quarter and collecting primary price data. Its results are available on the Bank's website.

Table V.8 Summary table of key short-term indicators for the real estate market

Indicators	Average annual percentage changes					
	2007	2008	2009	2010	2011	2012
1. Indices of prices of dwellings (BoG) and rents (ELSTAT)						
1.1 Indices of apartment prices[1]						
a. All apartments (Greece)	5.9	1.7	-3.7	-4.7	-5.5	-11.7
a1. By age						
a. New (up to 5 years)	7.2	2.3	-2.0	-4.2	-5.0	-11.8
b. Old (over 5 years)	5.2	1.3	-4.8	-5.0	-5.8	-11.6
a2. By geographical area: Total						
a. Athens	6.2	0.9	-4.6	-3.2	-6.4	-11.8
b. Thessaloniki	7.0	1.5	-6.0	-7.4	-6.8	-13.7
c. Other cities	6.3	1.8	-2.7	-5.3	-4.1	-10.9
d. Other areas	4.6	3.3	-1.9	-5.8	-4.4	-11.4
a2.1 By geographical area: New (up to 5 years)						
a. Athens	9.6	0.0	-3.5	-2.7	-6.5	-12.7
b. Thessaloniki	3.7	3.5	-5.3	-6.8	-8.2	-11.2
c. Other cities	7.8	2.4	-2.1	-4.3	-3.4	-11.3
d. Other areas	4.1	5.4	1.0	-5.7	-3.6	-11.1
a2.2 By geographical area: Old (over 5 years)						
a. Athens	4.5	1.4	-5.2	-3.5	-6.3	-11.3
b. Thessaloniki	8.4	0.6	-6.3	-7.6	-6.2	-14.8
c. Other cities	5.3	1.4	-3.2	-6.1	-4.7	-10.6
d. Other areas	5.0	1.4	-4.4	-5.9	-5.2	-11.6
1.2 Indices of prices of dwellings in urban areas excluding Athens[2]	3.8	2.6	-2.9	-6.7	-7.5	-10.1 (Q3)
1.3 Price index of rents	4.5	3.9	3.6	2.4	0.8	-2.1
1.4 House price-to-rent ratio (2007=100)[3]	100.0	97.9	91.0	84.7	79.4	71.6
2. Indices of residential property transactions						
2.1 Indices of residential property transactions with MFI intermediation (BoG)[1]						
a. Number of transactions	36.8	-21.7	-35.7	-0.2	-42.5	-34.2
b. Volume of transactions (in square metres)	36.6	-23.5	-38.9	-0.1	-39.8	-33.6
c. Value of transactions	41.1	-20.0	-40.0	-6.2	-40.1	-41.4
2.2 Indices of contracts of real estate transactions signed in the presence of a lawyer: Athens (DSA)						
a. Number of contracts	1.4	-10.0	-18.0	-16.3	-34.1	-48.0
b. Value of contracts	12.5	-2.3	-28.3	-20.8	-43.0	-45.5
2.3 Number of residential property transfers recorded at the Land Registry of Athens	-	-	-	-15.5	-30.5	-40.3

Sources: BoG: Bank of Greece, ELSTAT: Hellenic Statistical Authority, DSA: Athens Bar Association, IOBE: Foundation for Economic and Industrial Research, Land Registry of Athens.

1 The indices of residential property transactions are based on appraisal reports by banks' engineers regarding the value and qualitative characteristics of the residential properties underlying loan agreements. It cannot be excluded that part of such appraisals are not connected with transactions in residential property, but concern renegotiation of existing loans, registration of a mortgage to back non-housing loans, debt transfers from one bank to another, etc.

2 Data collected by Bank of Greece branches, mainly from real estate agencies.

3 In absolute terms.

Table V.8 Summary table of key short-term indicators for the real estate market *(continued)*

Indices	Average annual percentage change					
	2007	2008	2009	2010	2011	2012
3. Other indices						
3.1 Construction cost indices of (new) residential buildings (ELSTAT)	4.6	5.1	-0.3	1.8	1.0	-0.1
3.2 Volume of private building construction activity (ELSTAT, in cubic metres)	-5.8	-17.3	-26.5	-23.7	-37.7	-30.5 (11 mon.)
3.3 Production indices in construction (ELSTAT)	14.3	7.8	-17.5	-29.2	-28.1	-35.3 (Q3)
3.4 Cement production (ELSTAT)	-9.2	-3.1	-21.4	-14.3	-37.8	-15.6 (11 mon.)
3.5 Number of persons employed in construction (ELSTAT)	8.9	0.1	-6.6	-12.7	-22.5	-15.3 (Q3)
3.6 Investment in construction (ELSTAT)[4]						
a. Total construction	19.9	-21.2	-12.8	-19.2	-21.0	-19.0 (Q3)
b. Residences	25.6	-33.6	-20.7	-21.6	-18.0	-33.9 (Q3)
3.7 Index of business expectations in construction (IOBE)						
a. Total private construction	1.9	-8.4	-43.2	9.3	-18.1	-33.3
b. Months of assured production[3]	16.8	17.3	15.9	12.9	11.1	8.4
c. Activity relative to previous quarter[5]	10.2	10.0	-16.1	-39.0	-52.7	-44.8
d. Planned future activity[5]	-33.2	-28.8	-42.8	-63.2	-80.9	-76.4
e. Prospects of employment over the next 3-4 months[5]	9.6	10.4	-32.1	-46.4	-53.8	-41.3
3.8 Outstanding balances of loans from domestic MFIs (BoG)[6]						
a. Outstanding balances of loans to households	22.2	12.6	3.1	-1.2	-3.9	-3.8
b. Outstanding balances of housing loans to households	21.5	11.2	3.7	-0.3	-2.9	-3.3
3.9 Non-performing housing loan ratio (BoG)[6]	3.6	5.3	7.4	10.0	15.0	20.2 (Q3)

Sources: BoG: Bank of Greece, ELSTAT: Hellenic Statistical Authority, DSA: Athens Bar Association, IOBE: Foundation for Economic and Industrial Research.
3 In absolute terms.
4 In constant terms.
5 Weighted percentage balances of positive and negative answers.
6 End-of-period balances.

the real estate agencies and property advisors survey conducted at the end of the third quarter of 2012 shows a marginal stabilisation trend of market conditions for both residential and commercial properties. A similar stabilisation trend is also reflected in the responses relating to the participants' expectations about the condition of the real estate market in the coming quarter.[15]

- The drop in residential property prices continued at a stronger pace in 2012, after a relative resilience in house prices in the early years of the crisis.[16] In more detail, on the basis of data collected from credit institutions (see

15 In more detail, processed data (covering the third quarter of 2012) showed that real estate market conditions have deteriorated further for 31% of the participants, compared with the previous quarter. Nevertheless, for the second consecutive quarter, the majority of participants perceived a stabilisation in the market (69% and 57% in the third and second quarters of 2012, respectively) and in professionals' expectations about future transactions and market prices. It should be noted, however, that the real estate agencies' survey data do not confirm the continuous and substantial improvement recorded since mid-2010 by the IOBE index of business expectations in construction.

16 Prices were more resilient for newly-built apartments that are normally sold by the constructors, which however seem to have embarked on a downward path since the first quarter of 2012, on the basis of the latest data. This relative resilience of house prices was supported by the high percentage of owner-occupancy, the large number of very small (family) businesses involved in house construction which, before the current crisis, had gained substantial profits that enabled them to steer away from bank loans, the low frequency of real estate resale, the high cost of transactions that complicates the replacement of the existing stock of houses, the traditionally high confidence of Greek households in real estate, etc.

Table V.8), apartment prices fell by 11.7% in 2012 (10.2%, 10.8%, 12.6% and 13.2% in the first, second, third and fourth quarters of 2012, respectively), compared with 5.5% in 2011, 4.7% in 2010 and 3.7% in 2009. From the onset of the current crisis (third quarter of 2008) to the fourth quarter of 2012, the total nominal decline in apartment prices was 27.9%. The breakdown of data by age and geographical location shows that this decline was stronger for "old" apartments (over 5 years old: -30.1%) than for "new" apartments (up to 5 years old: -24.5%) and more pronounced in Thessaloniki (-34.7%) than in Athens (-27.9%) and other areas (-26.4%). It should be noted however that, compared with previous data, *a greater fall in house prices is recorded* on the basis of information collected from real estate agencies during the crisis.[17]

• During the current crisis, households' purchasing interests shifted towards smaller, older and, mainly, more affordable properties in medium-cost areas. Moreover, the percentage of cash transactions and the required down-payment for real estate purchase has increased.

• In the light of households' expectations and continued uncertainty, which however seems to decline, as suggested by the first signs of improvement in the economic climate, it is estimated that downward pressures on real estate prices may persist in the coming quarters, albeit with a low risk of abrupt changes.[18] After a continuous fall in prices over the past few years, the Greek real estate market most probably does not show any signs of significant overpricing, since, among other things, in the past five years a sharp decline was observed in the house price-to-rent ratio, which is usually assessed in conjunction with other factors such as valuation indicators of the real estate market.[19]

• The commercial real estate market (offices, retail stores, industrial buildings, warehouses, etc.) has dramatically shrunk in the past few years, coming under strong pressure to renegotiate and cut rents, especially for uptown commercial properties, warehouses and less competitive office buildings. Throughout the current crisis, along with a sharp decline in business activity, a weakening demand for commercial properties is observed, with businesses shifting towards cheaper and smaller premises. Moreover, the market is characterised by excess supply and an increased number of vacant commercial stores and offices, a dramatic fall in transactions and a downward trend in prices. Financing constraints, coupled with the overall uncertainty surrounding the economic environment, continue to feed a relative reluctance to develop new investment plans and discourage foreign investment inflows.

• The recovery prospects in the real estate market depend, *inter alia*, on improving business' and households' expectations, easing bank financing conditions, reducing uncertainty, boosting the recovery prospects of the Greek economy, stabilising the tax framework and reducing real estate taxation.

• Another crucial factor for a recovery in the real estate market is the successful imple-

17 As shown by international experience, indicators based on credit institutions' primary appraisals of real estate value, such as the Bank of Greece indices, may lag behind the actual decline in prices during the crisis. This is mainly due to the fact that the number of transactions during the crisis is usually very limited and, therefore, comparable data on transactions that are available to appraisers often refer to previous periods. In the medium term, however, these indicators fully capture the actual decline in prices.

18 A further decline in prices in the Greek housing market in 2013 was also projected in a recent report by Fitch (see *Fitch Residential Mortgage Briefing, Global Market Outlook for Housing and Mortgage Lending*, Special Report, January 2013). This estimate came as a result of the factors expected to prevail in 2013, namely the reduced number of housing loans, high unemployment rates, pressures on households' income and low consumer confidence, high percentage of bad loans, etc. According to Fitch, concerns about the euro area periphery markets (Spain, Portugal, Greece, Ireland and Italy) will persist in 2013, with an anticipated decline in housing credit and continued downward trends in residential property prices. A similar fall in house prices for a longer period (until 2016) is expected for Greece according to a recent Deutsche Bank report, given that the existing stock of over 150,000 newly-built houses is almost impossible to be absorbed in the next four years, since wages are compressed and unemployment is reaching extremely high levels (see *Euro area property prices: Germany versus the rest*, Deutsche Bank AG, DB Research, Current Issues, Real Estate, 29 June 2012).

19 The Rent Price Index is compiled and published by ELSTAT on a monthly basis for rented houses. Oddly enough, despite the marked recession of the Greek economy and the widespread view that rents have fallen sharply, the ELSTAT rent index did not decline substantially during the current crisis and maintained positive growth rates until the end of 2011 (average annual rate of change in house rents: 2009: 3.6%, 2010: 2.4%, 2011: 0.8%, but 2012: -2.1%).

mentation of the privatisation and public property utilisation programmes announced by the government. Once the significant problems that hinder the effective use of public property are addressed, with top priority given to legal and technical issues relating to urban planning and building permits' issuance, sizeable gains will be drawn from public property, most notably by attracting foreign investors to the Greek real estate market, with additional growth benefits for local communities and economies.[20] It is very important to obtain successful results in the tenders to be conducted in the coming months, as they are expected to reverse the negative climate and trigger the interest of international investors. Speeding up procedures and enhancing their transparency will convey the proper message to interested investors and markets that the Greek State is proceeding with the utilisation of its property with great resolve.

20 To accommodate an effective use of public property, the procedures for the issuance of the necessary administrative decisions must be accelerated, as these decisions are expected to tackle some serious and lasting problems. These problems include the deficient recording of public property, the lack of a complete and accurate cadastre, pending matters relating to the redetermination of land uses and the delineation of seashores and beaches, the large number of required building, environmental and land use permits, chronic trespassing of public land and long-standing litigations relating to a substantial part of public property, the lack of a land rights market, as well as multiple commitments and restrictions (e.g. protection of the environment or of the local architectural identity, archaeological restrictions, legislation on bequests). Other problems that stand in the way of the overall effort to effectively utilise public property include multiple inspections (by the European Commission and the Court of Audit), the coordination of many competent bodies involved in strategy- and policy-making, limited interest on the part of investors, as well as serious financial constraints. Furthermore, the deep recession of the Greek real estate market in recent years and the prevailing economic uncertainty (which, however, is declining) do not facilitate attempts made to utilise public property.

VI EMPLOYMENT AND UNEMPLOYMENT

1 SUMMARY OF DEVELOPMENTS

- Over the January-September 2012 period, **employment continued to fall and unemployment continued to rise** at a strong pace. The employment rate for those aged 20-64 declined to 55.7% in the first nine months of 2012, compared with 66.5% in the corresponding period of 2008. The **unemployment rate** reached 24.8% in the third quarter of 2012, and is the second highest in EU-27 after Spain (25.0%), according to the European Union Labour Force Survey (EU-LFS).

- As a consequence of the still very limited job creation, individuals that lost their jobs at the onset of the crisis are unable to find employment; this results in a considerable increase in **the duration of unemployment**.

- However, according to both LFS and OAED data, the rate of decrease in employment and the rate of increase in unemployment have started to decelerate in 2012, possibly due to legislation that appears to work through a moderation in the rate of dismissals.

- The contraction in the total number of employed persons is accompanied by a shift **of employment in favour of larger units** – a development particularly evident in retail trade.

Chart VI.1 Employment (1999-2012)

(year-on-year percentage changes; quarterly data)

Source: ELSTAT, Labour Force Surveys.
Note: New revised data for 1998-2003, published in January 2005. No changes are shown for 2004, as data are not fully comparable due to a change in the survey sample.
* Other employed persons = self-employed with employees (employers) + self-employed without employees + unpaid family workers.

2 DEVELOPMENTS AND PROSPECTS IN DETAIL

According to ELSTAT Labour Force Survey (LFS) data, in the first nine months of 2012 **the average number of employed persons** declined by 353,300 people (or 8.5%) year-on-year (see Chart VI.1). The annual rate of decline did not present any quarter-on-quarter fluctuations in 2012 (Q1: 356,500 people or 8.5%, Q2: 363,200 people or 8.7%, Q3: 340,300 people or 8.3%), but was much stronger compared with the first nine months of 2011 (275,200 people or 6.2%). In 2012, as in the period from 2009 onwards, the downward trend in employment is so steep that it offsets any rise typically recorded in branches related to tourism in the third quarter. It is, nevertheless, encouraging that during 2012 the **monthly rate of decline in employment** is lower than in 2011 for most of the ten-month period for which data are available.

The **cost of recession in terms of employment** is immense: from the third quarter of 2008 until the third quarter of 2012, 850,800 jobs were lost. As a result, the **employment rate** for those aged 20-64 declined to 55.7% in the first nine months of 2012, compared with 66.5% over the corresponding period of 2008 and against a Greek target of 70% for 2020 (the target is 75% for EU-27). (For the impact of the crisis on employment and unemployment in the euro area countries, see Section 1.B, Chapter III.)

The large decrease of 9.7% (165,200 persons) in the number of **private sector employees** was the main contributor (4 percentage points) to the decline in employment between the first nine months of 2011 and the first nine months

Table VI.1 Population, labour force and employment

	Q2 2012 (in thousand)	Annual percentage changes				
		Q2[4]				
		2008	2009	2010	2011	2012
Population aged 15+[1]	9,370	0.2	0.3	0.4	0.4	0.3
Population aged 15-64[1]	7,223	0.3	-0.1	0.2	0.0	-0.1
Labour force[1]	4,962	0.4	0.7	0.9	-1.1	-0.1
Employment[1]	3,793	1.4	-1.1	-2.3	-6.1	-8.7
– Primary sector[1]	494	-0.7	2.1	4.2	-7.6	-3.1
– Secondary sector[1]	630	1.1	-6.4	-7.4	-16.5	-15.0
– Tertiary sector	2,670	1.9	0.1	-1.9	-2.8	-8.2
Labour force participation rate[2]		67.2	67.7	68.3	67.6	67.8
Employment rate[3]		62.2	61.6	60.1	56.4	51.7
Unemployment as a percentage of the labour force		7.2	8.9	11.8	16.3	23.6

Source: ELSTAT, Labour Force Surveys.
1 Second quarter-on-second quarter.
2 Labour force participation rate of population aged 15-64.
3 Employed persons aged 15-64 as a percentage of population aged 15-64.
4 Average changes and average levels for the first nine months of 2012 are reported in the main text.

of 2012. The number of **self-employed with personnel** decreased at an exceptionally high rate (15.7% or 50,200 persons), thus contributing 1.2 percentage points to the fall in total employment. A slightly lower decrease in absolute terms was seen in the number of **unpaid family workers** (38,000 persons or 16.8%), contributing 0.9 percentage point to the fall in total employment. The number of **self-employed without personnel**, who represent a much larger share in total employment than the self-employed with personnel, dropped at a lower rate (2.1% or 20,400 persons) and contributed 0.5% percentage point to the decline in employment.

In the first nine months of 2012, the average number of persons employed in the **broader public sector** declined by 8.4% against the corresponding figure in the first nine months of 2011, and contributed 1.9 percentage points to the fall in total employment.[1] Compared with the first nine months of 2008, the number of persons employed in the broader public sector has decreased by 15.1%. This development is attributed to the slashing of recruitments and to the non-replacement of those exiting the labour force (either due to retirement[2] or due to the expiry of a fixed-term contact[3]), whose number has also increased. The wave of retirements from the public sector is expected to continue over the coming years, since 7% of civil servants have over 30 years of tenure in this sector, without ruling out any additional years of previous employment in other sectors. The recent exits from the broader public sector have changed the distribution of employed persons per sector of employment, and as a result the percentage of those employed in state-owned enterprises (SOEs) decreased considerably. This will result in eliminating the

1 It should be pointed out that the LFS data are derived from a sample survey and, therefore, they do not coincide with the data of the public sector census. They are useful, however, for recording trends.
2 For example, in public administration and in education, the number of retirees rose by 80% in the period 2009-2012.
3 The number of persons working in the public sector on fixed-term contracts fell from 80,000 on average in 2000-2009 to around 60,000 in 2012.

difference with other OECD member countries, as Greece had the largest share of persons employed in SOEs.[4]

In the **private sector**, as well as in the public sector, those employed under fixed-term contracts were the ones most affected.[5] In the private sector, the number of people retiring increased much less than in the public sector, while terminations of contracts have increased to a great extent. In addition, the absence of recruitments has contributed considerably to the drastic reduction in the number of employed persons.

In many instances, the decline in employment resulted from the **cessation of the operation of enterprises** and not just from the reduction in the number of employees. It should be mentioned that, according to data of IKA, the main social security fund, in the first quarter of 2012, the number of enterprises decreased by 19.8% against the corresponding period of 2011 and by 32.8% against the first quarter of 2008.[6]

Comparing employment in the first nine months of 2012 with the corresponding period of 2011 shows job losses in **trade** (-87,300 persons), **manufacturing** (-61,600 persons), **construction** (-44,700 persons) and **public administration** (-36,100 persons). In trade and in construction, (annual) losses in the third quarter of 2012 were less than the average losses in the first two quarters of 2012.

The non-uniform distribution of change in employment by occupational status (employees, self-employed, etc.) reflects the **greater resilience of the self-employed without personnel** against the self-employed with personnel (employers), as they are possibly less burdened with operational costs (e.g. maintenance of business premises), since it is not obligatory for them to operate offices, retail stores, etc. (e.g. if they are working from home), or they have greater flexibility in cutting back expenses (since they are not burdened with fixed salary costs). Besides, the fact that the number of employees recorded a smaller decrease than the number of the self-employed with personnel is likely to reflect the greater resilience of **large enterprises**: *so, in certain sectors —but not in the economy as a whole— the percentage of employees*[7] *(in total employment) as well as the percentage of private sector employees working in large enterprises (of over 50 persons) increased.*

The greatest changes are observed in **trade**. While in January-September 2008 12.7% of those employed in the sector were self-employed with personnel and 53.1% were employees, these percentages are 10.1% and 56.0%, respectively, in the corresponding period of 2012. In addition, while in January-September 2008 almost 47% of employees were working in businesses with 10 persons or less and 8% in businesses with 50 persons or more, in the first nine months of 2012 the corresponding percentages are 42% and 13%.[8]

The decrease in the **employment rate** was greater for those aged **25-29**, for which the employment rate fell by 6.9 percentage points, i.e. from 61.0% in the first nine months of 2011 to 54.2% in the corresponding period of 2012. In all age groups, the decline in the employment rate was *greater for men than for women*, resulting in the narrowing of the employment

4 OECD (2011), *OECD Public Governance Reviews: Greece – Review of the Central Administration*, Paris.

5 The percentage of persons employed under fixed-term contracts in the private sector has fallen to around 11.8% in the first nine months of 2012, from 12.4% over the corresponding period of 2008.

6 If construction works are not taken into account, the change is 18.2% between 2011 and 2012 and 26.1% between 2008 and 2012.

7 In the private sector (including the primary sector), the percentage of employees decreased to 52.3% in the first nine months of 2012, compared with 53.0% over the corresponding period of 2011. Excluding the primary sector, this figure declined from 61.3% in 2011 to 60.9% in 2012.

8 In **manufacturing**, the percentage of those employed in enterprises with more than 50 persons increased from 22% in the first nine months of 2008 to 27% in the corresponding period of 2012. In the same sector, however, the percentage of employees decreased from 74% to 72%, while the percentage of the self-employed without personnel increased from 11% in 2008 to 13.8% in 2012. The percentage of employees in the **primary sector** registers a slight increase from 7.6% in the first nine months of 2008 to 9.8% in the corresponding period of 2012. Finally, a slight increase is also recorded in the percentage of persons employed in large enterprises engaging in **accommodation and food service activities** (from 12% in the first nine months of 2008 to 14% in the corresponding period of 2012). In addition, there is a decrease in the percentage of self-employed with personnel, an increase in the percentage of self-employed without personnel and a marginal increase in the percentage of employees.

Table VI.2 Population, labour force, employment and unemployment: Q2

(thousand persons)

	Population					Labour force					Employed persons					Unemployed persons					Unemployment rate (%)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Men and women																									
– total (aged 15+)	9,230	9,262	9,302	9,338	9,370	4,939	4,974	5,021	4,967	4,962	4,582	4,532	4,427	4,156	3,793	357	443	594	811	1,169	7.2	8.9	11.8	16.3	23.6
– 15-64 years	7,228	7,220	7,231	7,231	7,223	4,854	4,887	4,940	4,889	4,901	4,497	4,445	4,347	4,080	3,735	357	442	593	809	1,166	7.3	9.0	12.0	16.6	23.8
– 15-24 years	1,151	1,123	1,103	1,088	1,077	349	343	333	313	314	277	259	229	179	145	72	84	105	135	169	20.6	24.5	31.4	43.0	53.9
– aged 25+	8,079	8,140	8,198	8,249	8,293	4,591	4,632	4,688	4,654	4,648	4,305	4,273	4,199	3,978	3,648	285	358	490	676	999	6.2	7.7	10.4	14.5	21.5
Men																									
– total (aged 15+)	4,503	4,518	4,539	4,559	4,577	2,925	2,915	2,918	2,879	2,847	2,789	2,730	2,645	2,485	2,256	137	185	273	394	592	4.7	6.3	9.4	13.7	20.8
– 15-64 years	3,615	3,613	3,622	3,626	3,626	2,862	2,854	2,862	2,826	2,805	2,726	2,670	2,589	2,432	2,215	136	184	272	393	591	4.8	6.5	9.5	13.9	21.0
– 15-24 years	579	564	554	546	540	197	192	186	171	167	167	157	140	108	89	30	34	46	63	78	15.1	18.0	24.8	36.7	46.8
– aged 25+	3,924	3,954	3,985	4,013	4,037	2,728	2,723	2,732	2,707	2,680	2,622	2,573	2,505	2,376	2,166	107	150	227	331	514	3.9	5.5	8.3	12.2	19.2
Women																									
– total (aged 15+)	4,728	4,744	4,762	4,778	4,793	2,014	2,059	2,103	2,089	2,115	1,794	1,802	1,782	1,672	1,538	221	258	321	417	577	10.9	12.5	15.3	20.0	27.3
– 15-64 years	3,613	3,607	3,608	3,605	3,598	1,991	2,033	2,078	2,064	2,096	1,771	1,776	1,757	1,648	1,520	221	258	321	416	576	11.1	12.7	15.4	20.2	27.5
– 15-24 years	572	559	549	542	537	152	151	147	142	147	110	101	89	70	56	42	50	59	72	91	27.7	32.9	39.7	50.7	62.1
– aged 25+	4,155	4,186	4,213	4,236	4,256	1,862	1,908	1,956	1,946	1,968	1,684	1,700	1,693	1,602	1,482	178	208	263	345	486	9.6	10.9	13.4	17.7	24.7

Source: ELSTAT, Labour Force Surveys.

rate differential between the two sexes. Changes in the employment rate differ considerably also by **educational level** (those with a low educational level are in a more disadvantaged position) and by **geographical region of residence** (those living in urban centres are in a more disadvantaged position than those living in rural areas and on the islands).

In the first nine months of 2012, for the first time since 1994, the employment rate (53.9%) of **immigrants** aged 20-64 is lower than that of Greek natives (55.8%), despite the significant outflow of immigrants over the past few years. The differential is greater for men than for women (possibly suggesting that the professions in which female immigrants are employed —such as provision of household services, care of the elderly and, to a lesser extent, tourist services— are more resilient to the crisis).

In 2012, data from the Labour Inspectorate reflect the ongoing **extension in the use of flexible forms of employment**. More specifically, in the January-September 2012 period, 43.2% of new employment contracts concerned part-time employment or job rotation, which represented a slight increase in relation to the corresponding period of 2011 (41.1%). A considerable rise (of 49.3%) was recorded in the shift of existing employment contracts from full-time to part-time employment or to job rotation.[9]

Recent studies by IOBE[10] and the Bank of Greece[11] show that changes in the extent and characteristics of **undeclared work** are difficult to document. The fact that, from the onset of the crisis until the first quarter of 2012, the decrease in the number of persons insured in the Social Insurance Institute (IKA), according to available data from IKA, exceeds by almost 120,000 workers the respective losses estimated by ELSTAT, implies that there has been an associated increase in undeclared work. However, it seems that, over the past two years, the decrease in employment has spread to undeclared work as well, especially in branches that favour this form of employment (construction, domestic help).

In January 2013, despite the fact that employment had already recorded a significant decline, **business estimates** on the **short-term employment plans**, as reflected in IOBE business surveys (see Chart VI.2), remain negative for all sectors and particularly for retail trade and construction. However, as far as retail trade and construction are concerned, business estimates are better than in January 2012. A negative outlook for employment during the first quarter of 2013 is also reflected in a survey by *Manpower*,[12] although it does not record any deterioration in business expectations in relation to the corresponding period of 2012.

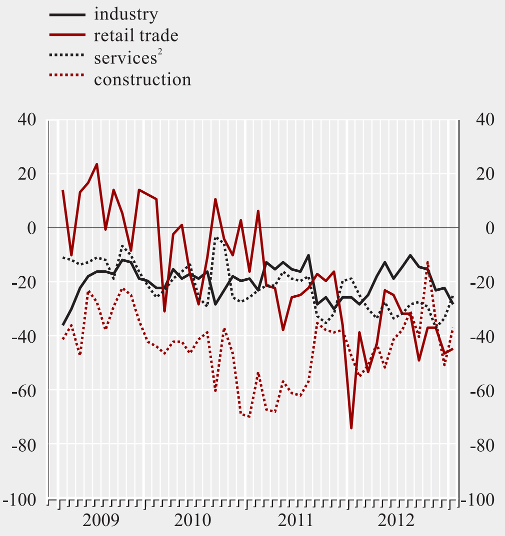
The concern of employed persons about their employment prospects is evidenced by the fact that even those who are working are **searching for a job** (140,100 persons in the first nine months of 2012 —i.e. 3.7% of employed persons, compared with 126,100 persons in the first nine months of 2011— i.e. 3.0% of employed persons), because, among other things, they are either looking for a better job, or they are afraid/certain that they will lose their job. This percentage is higher in the case of private sector employees (5.2% in the first nine months of 2012 against 4.4% in the corresponding period of 2011). Business surveys by IOBE/the European Commission show that in December 2012 and January 2013 consumers believe that the unemployment rate will rise over the following 12 months, although their concerns have eased compared with the previous 12-month period.

The decrease in employment led to a year-on-year increase in the number of unemployed by 346,000 persons over January-September 2012. The average **unemployment rate** in the first nine months of 2012 stood at 23.6%

9 However, it should be pointed out that the rate of change is very high as it starts from particularly low figures.
10 IOBE (2012), *The definition of undeclared work and its characteristics*, Athens (in Greek).
11 Kanellopoulos, C. (2012), "The size and structure of uninsured employment", Bank of Greece, *Economic Bulletin*, 37.
12 http://files.shareholder.com/downloads/MAN/2293456866x0x619903/AABDC280-D9D1-4A14-A5E2-4839FB5F68DE/GR_EN_MEOS_Q1-2013.pdf.

Chart VI.2 Employment expectations[1] (March 2009 - January 2013)

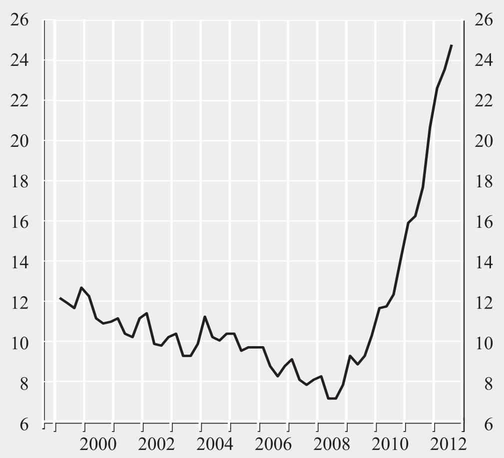
(net percentage balances)



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

Chart VI.3 Total unemployment rate (1999-2012)

(percentage of labour force)



Source: ELSTAT, Labour Force Surveys.

(1,173.3 thousand persons), while in the third quarter it reached 24.8% (1,230.9 thousand persons) and 26.8% (1,340.1 thousand persons) in the two-month period of October-November. In the third quarter of 2012, the unemployment rate was 7.1 percentage points higher than in the corresponding quarter of 2011 and 17.6 percentage points higher than in the third quarter of 2008 (see Chart VI.3).

In the first nine months of the year, the increase in the number of unemployed was slightly lower than the decrease in employment over the same period, as from the third quarter of 2012 the **labour force participation rate** appears to be rising again,[13] after having temporarily declined between 2011 and the first half of 2012. At the beginning of the recession and up until 2010, the participation rate in the labour market had increased. From 2011 and until the first half of 2012, the participation rate declined slightly before starting to rise again in the third quarter of 2012, implying that the income effect prevails despite the decrease in wages.[14] It is quite indicative that Greek youth, unlike in other European countries which are subject to an adjustment programme, have not turned to education, but try to enter the labour market so as to contribute to the household income – the participation rate of young aged 25-29 has risen from 84.3% in the first nine months of 2008 to 85.7% over the corresponding period of 2012, while there has also been a marginal decrease in the percentage of young persons that remain inactive (they are not economically active and they do not receive any kind of education) from 8.4% in the first nine months of 2008 to 7.6% in the corresponding period of 2012.

The male unemployment rate stood at 20.7% in the first nine months of 2012 against 14% in the corresponding period of 2011, while for women the unemployment rates were 27.6% and 20.3%, respectively. For the age group 25-

13 The participation rate in the age group of 15-64 (20-64) was 67.7% (72.7%) in the first nine months of 2011 and stood at 67.9% (72.8%) in the first nine months of 2012.

14 An increase is observed in the number of persons stating that before starting to look for a job they were homemakers. See also Bakas, D. and E. Papapetrou, "The Greek labour market during the current crisis: unemployment, employment and participation" (a paper presented at the conference entitled *The Greek labour market during the crisis*, held by the Bank of Greece on 27 November 2012) (in Greek).

29, the unemployment rate increased by 8.7 percentage points, reaching 36.8% from 28.1%. For the age group 15-24 —whose participation rate in the labour force is low (29.2%)— the unemployment rate came to 54.4%, from 42.5%.

In addition to the number of unemployed persons, according to the definition of the International Labour Organization (ILO), an increase is also registered in the number (a) of persons who are not looking for a job because they believe they will not find one (from 13,000 persons in the first nine months of 2011 to 20,300 persons in the first nine months of 2012), (b) of those who want to work but are not looking for a job for any reason (from 49,700 to 69,600 persons)[15] and (c) of those who work part-time because they cannot find a full-time job (from 154,300 to 171,900 persons).

The number of persons who contacted a public employment agency in order to find a job increased between the first nine months of 2011 and the first nine months of 2012 by 41.3%, i.e. almost as much as the number of unemployed persons.

At geographical region level, differentiations in unemployment rates remained and intensified further. The greatest differential observed during the first nine months of 2012 was almost 16 percentage points between Western Macedonia (29.8%) and Southern Aegean (14.2%).

The increasing difficulty in finding employment (as also reflected in LFS data, according to which the percentage of persons that were inactive in a given year and managed to find a job in the following year declined from 12.3% in 2011 to 8.3% in 2012) leads to a longer **duration of unemployment**. In particular, in the first nine months of 2012, the share of the long-term unemployed (those who remain out of work for a period of over 12 months) in the total number of unemployed increased by 9 percentage points, reaching 59.4% (against an increase of 3.4 percentage points over the corresponding period of 2011). The percentage of individuals who are unemployed for two years or more also rose to 34.1% (an increase of 7.3 percentage points compared with the first nine months of 2011).

According to the latest available data of the Manpower Employment Organisation (OAED), in December 2012, **the number of registered unemployed** seeking work amounted to 797,600 persons, showing a year-on-year increase of 9.2%. Of these persons 29.4% were receiving an unemployment benefit in the same month. Given the increased participation of the long-term unemployed, the number of those receiving an unemployment benefit decreased compared with 2011.

OAED data on **salaried employment flows** show a decline in the *monthly* net decrease in jobs from 10,500 in 2011 to 6,000 in 2012. This decline reflects a decrease in the number of layoffs (including terminations of employment relationships and expiry of fixed-term contracts) compared with 2011 (monthly average number of layoffs: 58,500 in 2011, 55,800 in 2012, i.e. -4.6% annual change), while the monthly number of recruitments remained almost stable at 70,800 (marginal increase of 1.2%).

It is expected that in 2013 unemployment will increase further, while most international organisations estimate that the decline in unemployment will lag behind positive growth rates.

To combat unemployment and to prevent it from turning structural, the Ministry of Labour, Social Security and Welfare, in cooperation with the Ministries of Education and of Development, has prepared a **special action plan for combatting youth unemployment**. The plan, presented in early 2013, is co-financed by the European Social Fund (ESF) and the European Regional Development Fund (ERDF), has a

15 These individuals, however, report that if they find a job they can start working immediately.

total budget of €600 million and aims at helping 350,000 persons through job creation and by enhancing vocational education and training, by establishing systematic education-to-work transition programmes, by supporting counselling and career guidance, by fostering youth entrepreneurship and by implementing measures to reduce school drop-out rates.

Box VI.1

RECENT INSTITUTIONAL CHANGES IN THE GREEK LABOUR MARKET

Improving labour market efficiency is one of the key prerequisites for modernising the Greek economy and boosting its growth potential. Certainly, the very high unemployment rate, in particular youth unemployment, is partly due to the recession of the Greek economy since 2008. Several other features of the labour market, however, constitute symptoms of labour market dysfunctions, such as the extent of undeclared work, low job mobility, the lagged response of wages to the recession, as a result of which labour cost adjustment was achieved through a sizeable reduction of the number of employees, or low labour productivity. Important institutional interventions have been made since 2010 with a view to reducing unemployment, enhancing productivity and improving labour market adaptability to swings in economic activity at the national, sectoral or enterprise level. The most recent changes in the labour market were introduced in November 2012 (under Law 4093/2012), while the new Memorandum, which was signed at the end of December 2012, provides for additional reforms, in the same direction, which will be implemented in 2013-2014.

The main changes introduced by Law 4093/2012 are the following:

1. Distinction between minimum wages set by legislation and wages set through collective bargaining

Law 4093/2012 introduces a distinction between statutory minimum wages and negotiated wages under the national general collective labour agreement (NGCLA).

The wages determined by the NGCLA should not be lower than the statutory minimum salary and wage, but if they are more favourable, they only apply to those employed by employers that are members of the employers' associations that are signatories to the agreement. These are the Hellenic Federation of Enterprises (SEV), the Hellenic Confederation of Professionals, Craftsmen & Merchants (GSEVEE), the National Confederation of Hellenic Commerce (NCHC) and, more recently, the Association of Greek Tourism Enterprises (SETE) – as announced on 8 January 2013.

Under the current NGCLA, the minimum wage is topped up by the seniority allowance and the marriage allowance.[1] Agreements at both sectoral and occupational level provide for more allowances, depending on the employee's education level, work-related hazards, etc. By contrast, the statutory minimum wage —as set by Law 4046/2012 and Cabinet Act 6/2012— is topped up only by the seniority allowance and, until 2016 due to the particularly high unemployment rate, only for working experience acquired until 14 February 2012.[2]

1 The marriage allowance provided for in the NGCLA is granted to married employees irrespective of gender, but —pursuant to Article 20, para. 2 of Law 1849/1989— also to *single parents*, as well as to widowers/widows and divorced employees.

2 The amount of the statutory minimum wage up until end-2016 is set at €586.08 for employees aged 25 and above. This amount rises in line with working experience: by 10% for every three years of working experience (up to 3 three-year periods) gained until February 2012. Any experience gained after 14 February 2012 is not taken into account and wage increases for length of service will be granted only when the unemployment rate falls below 10%. For employees below 25 years of age, the minimum monthly wage is 12.8% lower and amounts to €510.95. In this case too, the above amount may only rise due to working experience: by 10% for working experience of over 3 years. For any experience gained after 14 February 2012, the aforementioned scheme will apply.

2. Minimum wage setting regime[3]

In the first quarter of 2013, a Cabinet Act is expected to specify the procedure whereby the government will set statutory minimum salaries and wages for all those employed on private-law contracts in Greece, in consultation with social partners and specialised scientific, research and other bodies. Their opinion, in conjunction with an informed assessment of the situation and the prospects of the Greek economy and the Greek labour market (in particular regarding unemployment and employment rates), will henceforth be taken into account in the setting of minimum wages. The regime will be reviewed in the first quarter of 2014 as to its simplicity, efficiency and contribution to reducing unemployment, increasing employment and improving competitiveness.

3. Limiting retirements from the labour market

Retirement age limits have been raised by 2 years.

4. Reducing contract termination costs

In the case of dismissal without notice, maximum severance pay is reduced to 12 monthly salaries, from 24. Specifically, severance pay is equal to 12 monthly salaries when the length of service exceeds 16 years – irrespective of the number of years of working experience beyond 16.[4] So far compensation was equal to 12 monthly salaries for those having 16 years of working experience, increasing by one monthly salary for each additional year of working experience up to 28 years. This provision will help to bring into line severance pay with current practice in the other euro area countries.

The new provisions also set a shorter notice period for the dismissal of employees with multiannual working experience, at half the amount of severance pay due. Specifically, the contract of individuals working for the same employer for 15 years or more can be terminated with a 4-month notice, while previously the notice period was 5 months for those who had worked for 15-20 years and 6 months for those who had worked for a period exceeding 20 years.

Furthermore, the obligation of merging enterprises to pay part of the unemployment benefit to employees made redundant as a result of the merger is abolished. Under Article 6 of Law 435/1976, employers that merged with other enterprises were obliged to pay to dismissed workers remaining unemployed 35% of their previous salary for a period of 7 months.[5]

5. Enhancing flexibility in the operation of enterprises by cutting red tape that hindered changes in working hours

Employers' obligation to notify in advance the Labour Inspectorate of any changes in working hours or in the organisation of working time as well as of overtime hours is abolished. The requirement to notify the Labour Inspectorate remains in place, but notice of any changes should be given within 2 days after implementation or on the next day regarding overtime work.

Taking paid annual leave in two or more periods during the year, due to business needs of the enterprise,[6] is no longer subject to approval by the Labour Inspectorate (as provided for in Article 6 of Law 3846/2010).

3 For a recent empirical assessment of minimum wage setting regimes, see, *inter alia*, Boeri, T. (2012), "Setting the minimum wage", *Labour Economics*, 19: 281-290.
4 Those already having 17 years or more of working experience when Law 4093/2012 was adopted are excluded from the scope of the new provision. For them, severance pay is equal to 12 monthly salaries incremented by one monthly salary for each year of working experience above 16 and up to 12 monthly salaries. However, extra monthly pay is capped at €2,000, even if regular monthly earnings exceeded €2,000.
5 Another 35% of the previous salary was paid by the Manpower Employment Organisation.
6 At any rate, no authorisation from the Labour Inspectorate was required if leave was taken piecemeal upon the employee's request.

6. Arrangements to improve matching between labour supply and demand
The scope of business of private employment agencies is broadened to include counselling and vocational guidance activities.

7. Raising employee and employer social security contributions for high-paid employees
As regards the social security earnings ceiling for contributions, the distinction between employees first employed before and after 1993 is abolished. Specifically, the ceiling for those first employed before 1993 is raised to €5,543.55, from €2,432.25. At the same time, employer contributions to the Working People's Welfare Association (0.35%) and the Workers' Housing Organisation (0.75%) are abolished.

8. Extending the long-term unemployment benefit to a broader age group and establishing an unemployment benefit for the self-employed
The long-term unemployment benefit is now extended to individuals aged 20-66, instead of 45-65, albeit on the basis of stricter income criteria.[7] Moreover, it is expected that as from spring 2013 the self-employed will also be entitled to unemployment benefit, although the exact amount and the eligibility requirements (previous years of contribution payments, family income) have yet to be announced.

Further actions to be taken

The restructuring and external assessment of the Hellenic Labour Inspectorate (SEPE) should have been completed by end-2012.

The codification of labour law and other rules governing industrial relations must be finalised by end-2013. By the first quarter of 2013, the government must prepare the structure of the codified text.[8]

Furthermore, by the end of the first quarter of 2013 an action plan comprising active employment policies must be adopted. The objectives are the following:

(a) To upgrade Employment Promotion Centres in order to achieve a better matching of the unemployed with available job vacancies.

(b) To enhance the effectiveness of training programmes for the unemployed and promote on-the-job training of unemployed.

(c) To compensate for working hours with training.

7 Payment of the benefit is conditional on family income not exceeding €10,000, compared with €12,000 until now.
8 The cost that the ambiguity of labour law implies for businesses and the employed has been underlined also in economic literature; see, *inter alia*, Blanchard and Tirole (2003), "Contours of employment protection", *MIT Discussion Paper 35.*

VII INFLATION, WAGES, BUSINESS PROFITS, COST COMPETITIVENESS – INCOME INEQUALITY AND POVERTY

1 INFLATION

• In 2012, average annual HICP inflation fell sharply to 1.0%, down from 3.1% in 2011 and 4.7% in 2010 (levels reflecting large indirect tax hikes), while the year-on-year rate came to only 0.3% in December 2012 (see Tables VII.1 and VII.2 and Chart VII.1). Besides, average annual core inflation (i.e. excluding energy and unprocessed food prices) turned slightly negative (-0.1%) in 2012, after hovering in positive territory throughout 2011 (1.7%) and 2010 (3.0%). Already in August, core inflation was 0%, while it moved between -0.8% and -1.0% in the last quarter of 2012 (see Chart VII.2).

• In 2013, average HICP inflation is expected to turn negative (-0.1%), while average annual core inflation is expected to remain well into negative territory (-1.0%).

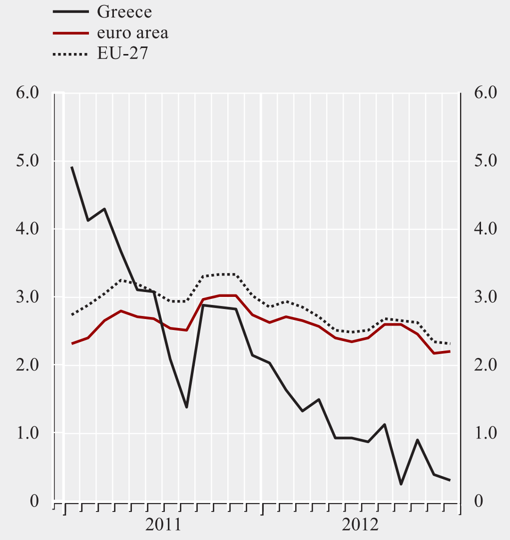
• *Without the impact of higher indirect taxes*, (a) average HICP inflation came to only 0.1% in 2012 (compared with 1.1% in 2011) and is expected to turn negative in 2013 (-0.6%), while (b) average core inflation was negative (-0.7%) in 2012 (in 2011 it was slightly positive, i.e. 0.2%).

• The **inflation differential** between Greece (1.0%) and the euro area (2.5%) turned negative for the first time in 2012 (-1.5 percentage point), after having declined considerably in 2011 to 0.4 percentage point, from 3.1 percentage points in 2010 and 1.0 percentage point in 2009. In 2012, this negative differential is expected to widen further and exceed 1.5 percentage points (as inflation in the euro area is projected to range between 1.1% and 2.1%[1]). The *negative* **core inflation differential between** Greece (-0.1%) and the euro area (1.8%), which had come to zero in 2011, widened further (to -1.9 percentage points), down from 2.0 percentage points in 2010 and 0.9 percentage point in 2009 – see Tables VII.3 and VII.4, as well as Chart VII.3.

1 Eurosystem staff macroeconomic projections for the euro area, 6 December 2012.

Chart VII.1 Harmonised index of consumer prices in Greece, the euro area and the European Union (January 2011 - December 2012)

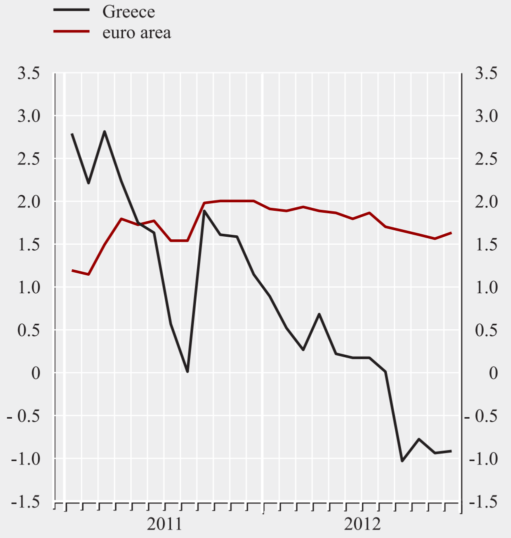
(year-on-year percentage changes)



Sources: ELSTAT and Eurostat.

Chart VII.2 Core inflation in Greece and the euro area on the basis of the HICP excluding energy and unprocessed food (January 2011 - December 2012)

(year-on-year percentage changes)



Sources: ELSTAT and Eurostat.

Table VII.1 Price indicators

(annual percentage changes)

Year or quarter	Consumer Price Index								Industrial Producer Price Index					Import price index in industry	
	General index	Sub-indices							Domestic market				External market		
										Sub-indices					
		Goods	Services	CPI excl. fuel & fresh fruit and vegetables	CPI excluding food & fuel	Food and non-alcoholic beverages	Fresh fruit and vegetables	Fuel	General index	General index excl. energy	Interme-diate goods	Consumer goods	General index	General index	General index excl. energy
2006	3.2	3.4	3.0	2.7	2.5	3.7	3.3	10.9	7.3	6.5	7.3	6.2	4.8	4.2	2.7
2007	2.9	2.5	3.5	2.9	3.0	3.2	5.6	1.3	4.1	2.7	6.1	-0.3	3.0	2.6	3.0
2008	4.2	4.3	3.9	3.4	3.0	5.4	4.6	14.7	10.0	6.4	8.4	4.5	6.4	7.1	2.5
2009	1.2	-0.5	3.6	2.4	2.6	1.9	5.3	-15.7	-5.8	-0.1	-1.2	0.9	-6.0	-1.8	0.5
2010	4.7	5.6	3.6	3.0	3.4	0.1	-4.3	36.2	6.1	0.9	2.3	-0.3	8.8	6.6	1.4
2011	3.3	4.2	2.3	1.5	1.3	3.1	5.1	18.8	7.4	2.7	4.8	1.1	8.8	7.6	1.5
2012	1.5	2.2	0.5	0.3	0.1	1.5	1.5	12.0	4.9	0.8	0.6	1.1	4.1	4.5	0.6
2009 Q1	1.5	-0.5	4.3	3.2	3.3	3.6	8.2	-22.6	-5.2	1.1	0.5	1.5	-7.8	-2.4	1.4
Q2	0.7	-1.5	3.7	2.3	2.5	2.7	11.0	-23.0	-8.8	-0.7	-2.2	0.5	-9.5	-4.4	0.5
Q3	0.7	-1.2	3.3	2.1	2.3	2.1	8.3	-18.5	-9.1	-1.0	-2.9	0.8	-8.2	-3.7	-0.2
Q4	2.0	1.0	3.2	2.0	2.4	-0.7	-5.8	4.8	0.4	0.4	0.1	0.7	2.0	3.7	0.1
2010 Q1	3.0	2.8	3.3	1.7	2.1	-1.7	-9.4	33.0	6.4	1.1	1.5	0.8	9.4	8.3	0.8
Q2	5.2	6.2	3.8	3.3	3.8	-0.9	-9.3	42.9	7.5	1.1	2.3	0.0	10.2	8.0	1.4
Q3	5.5	6.7	4.0	3.7	4.1	1.4	1.2	35.3	4.9	0.6	2.3	-0.9	7.5	5.2	1.4
Q4	5.1	6.6	3.1	3.3	3.6	1.6	2.1	33.5	5.6	1.0	3.2	-0.9	8.3	5.1	1.9
2011 Q1	4.7	5.9	3.2	2.5	2.5	2.5	3.4	29.2	7.6	2.6	6.3	-0.3	10.2	7.4	2.1
Q2	3.5	4.5	2.4	1.7	1.6	3.4	10.2	17.1	7.1	3.0	5.7	1.0	8.4	7.1	1.8
Q3	2.4	2.9	1.8	0.7	0.3	2.8	2.0	16.1	8.1	2.8	4.7	1.6	9.3	7.8	1.5
Q4	2.8	3.6	1.9	1.3	0.8	3.7	4.7	14.3	6.9	2.2	2.8	1.9	7.5	8.1	0.7
2012 Q1	2.0	2.5	1.4	0.9	0.6	2.5	2.2	12.6	7.1	1.1	0.8	1.6	6.2	7.7	0.5
Q2	1.5	2.0	0.9	0.7	0.5	1.8	1.0	8.9	4.5	0.7	0.5	1.0	3.8	4.3	0.6
Q3	1.3	1.9	0.6	0.3	0.1	1.6	4.7	10.1	5.3	0.7	0.5	1.0	4.2	5.0	0.6
Q4	1.1	2.5	-0.7	-0.5	-0.7	0.2	-1.6	16.6	2.9	0.6	0.6	0.7	2.2	1.1	0.8

Source: ELSTAT.

Table VII.2 Price developments in Greece and the euro area

(annual percentage changes)

	2011	2012	2012 March	2012 Apr.	2012 May	2012 June	2012 July	2012 Aug.	2012 Sept.	2012 Oct.	2012 Nov.	2012 Dec.
A. Euro area												
Harmonised Index of Consumer Prices (HICP) and its components												
Overall index	**2.7**	**2.5**	**2.7**	**2.6**	**2.4**	**2.4**	**2.4**	**2.6**	**2.6**	**2.5**	**2.2**	**2.2**
Goods	3.3	3.0	3.3	3.2	2.9	2.8	2.8	3.2	3.2	3.0	2.6	2.5
Food	2.7	3.1	3.3	3.1	2.8	3.2	2.9	3.0	2.9	3.1	3.0	3.2
Processed food[1]	3.3	3.1	3.9	3.7	3.4	3.2	2.9	2.7	2.5	2.4	2.4	2.4
Unprocessed food	1.8	3.0	2.2	2.1	1.8	3.1	2.9	3.5	3.7	4.3	4.1	4.4
Industrial goods	3.7	3.0	3.4	3.2	3.0	2.6	2.8	3.3	3.4	3.0	2.4	2.2
Non-energy industrial goods	0.8	1.2	1.4	1.3	1.3	1.3	1.5	1.1	1.2	1.1	1.1	1.0
Energy	11.9	7.6	8.5	8.1	7.3	6.1	6.1	8.9	9.1	8.0	5.7	5.2
Services	1.8	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.7	1.7	1.6	1.8
Industrial producer prices	***5.9***	***2.7***	***3.5***	***2.6***	***2.3***	***1.8***	***1.7***	***2.7***	***2.7***	***2.6***	***2.1***	***2.1***
B. Greece												
Harmonised Index of Consumer Prices (HICP) and its components												
Overall index	**3.1**	**1.0**	**1.4**	**1.5**	**0.9**	**1.0**	**0.9**	**1.2**	**0.3**	**0.9**	**0.4**	**0.3**
Goods	4.0	1.9	2.0	2.4	1.5	1.5	1.4	1.7	1.2	2.4	1.7	1.9
Food	4.2	1.3	1.9	1.3	1.4	1.6	1.4	1.8	0.9	0.4	-0.3	-0.7
Processed food[1]	4.7	1.2	2.0	1.9	1.7	1.5	1.6	1.3	-0.3	-0.5	-0.6	-0.7
Unprocessed food	3.4	1.4	1.8	0.5	0.8	1.8	1.1	2.5	2.9	2.0	0.3	-0.6
Industrial goods	3.9	2.3	2.1	3.1	1.6	1.4	1.3	1.7	1.3	3.7	2.8	3.5
Non-energy industrial goods	-0.2	-0.6	-1.0	0.6	-0.6	-0.7	-0.7	-1.1	-1.6	-0.4	-0.7	0.3
Energy	16.7	12.6	12.7	12.0	9.2	8.4	9.0	12.6	11.7	18.2	15.2	14.9
Services	1.9	-0.2	0.5	0.3	0.2	0.3	0.2	0.2	-0.9	-1.1	-1.2	-1.8
Industrial producer prices	***7.4***	***4.9***	***6.7***	***5.2***	***5.1***	***3.2***	***4.1***	***6.8***	***5.1***	***4.2***	***2.6***	***2.1***

Source: Calculations based on ECB and ELSTAT data.
1 Including alcoholic beverages and tobacco.

Table VII.3 Harmonised index of consumer prices: Greece and the EU (2010-2012)

(annual percentage changes)

Country	December 2011	2011 (year average)	December 2012	2012 (year average)
Austria	3.4	3.6	2.9	2.6
Belgium	3.2	3.5	2.1	2.6
Bulgaria	2.0	3.4	2.8	2.4
Cyprus	4.2	3.5	1.5	3.1
Czech Republic	2.8	2.1	2.4	3.5
Denmark	2.4	2.7	1.9	2.4
Estonia	4.1	5.1	3.6	4.2
Finland	2.6	3.3	3.5	3.2
France	2.7	2.3	1.5	2.2
Germany	2.3	2.5	2.0	2.1
Greece	**2.2**	**3.1**	**0.3**	**1.0**
Hungary	4.1	3.9	5.1	5.7
Ireland	1.4	1.2	1.7	1.9
Italy	3.7	2.9	2.6	3.3
Latvia	3.9	4.2	1.6	2.3
Lithuania	3.5	4.1	2.9	3.2
Luxembourg	3.4	3.7	2.5	2.9
Malta	1.5	2.5	2.8	3.2
Netherlands	2.5	2.5	3.4	2.8
Poland	4.5	3.9	2.2	3.7
Portugal	3.5	3.6	2.1	2.8
Romania	3.2	5.8	4.6	3.4
Slovakia	4.6	4.1	3.4	3.7
Slovenia	2.1	2.1	3.1	2.8
Spain	2.4	3.1	3.0	2.4
Sweden	0.4	1.4	1.1	0.9
United Kingdom	4.2	4.5	2.7	2.8
European Union - 27	3.0	3.1	2.3	2.6
Euro area	**2.7**	**2.7**	**2.2**	**2.5**

Source: Eurostat.

Table VII.4 Contributions to the inflation differential between Greece and the euro area (2007-2012)

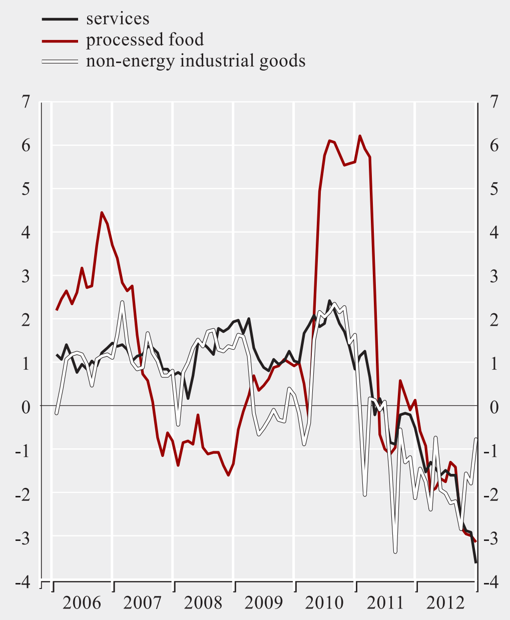
(percentage points)

	2007	2008	2009	2010	2011	2012
HICP inflation differential	**0.9**	**1.0**	**1.1**	**3.1**	**0.4**	**-1.5**
Contributions:						
Core inflation	1.00	0.77	0.91	1.60	-0.04	-1.64
of which						
Services	0.50	0.56	0.64	0.71	0.01	-0.86
Processed food	0.13	-0.14	0.14	0.52	0.21	-0.29
Non-energy industrial goods	0.35	0.35	0.13	0.37	-0.26	-0.49
Unprocessed food	-0.06	0.03	0.39	-0.12	0.08	-0.16
Energy	-0.03	0.24	-0.25	1.66	0.40	0.35

Source: Calculations based on Eurostat and ECB data.

Chart VII.3 Annual inflation differentials between Greece and the euro area (2006 - 2012)

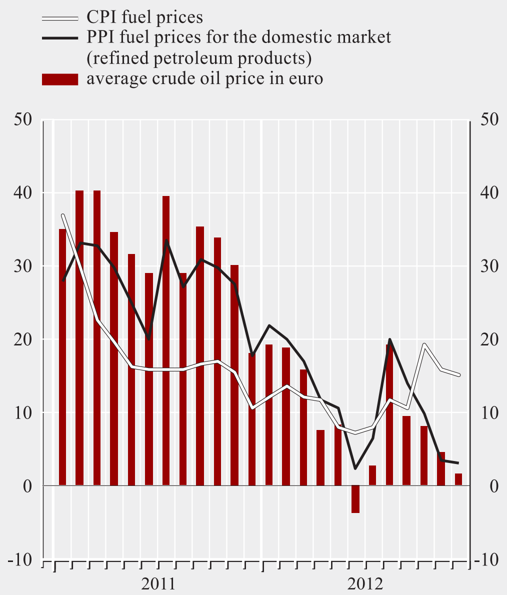
(selected price indicators; differentials in percentage points)



Source: Calculations based on Eurostat and ECB data.

Chart VII.4 Evolution of CPI/PPI fuel prices and of Brent crude oil prices (in euro) (January 2011 - December 2012)

(year-on-year percentage changes)



Source: Calculations based on ELSTAT data and, for crude oil prices (UK Brent), on ECB data.

• The decline in inflation was much stronger in 2012 than in 2011, given that:

– the impact of indirect taxes (which contributed just 0.9 percentage point to average annual inflation, compared with 2 percentage points in 2011) eased faster,

– the rate of decline in unit labour costs in the business sector more than tripled (compared with 2011),

– the decline in consumer demand continued at a faster pace,

– a marked slowdown was observed in the rates of increase in (a) international Brent crude oil prices (in euro) to 8.7% in 2012, from 31.3% in 2011 and 36.1% in 2010, and (b) the Import Price Index in Industry excluding energy prices (measured by ELSTAT) to 0.6%, from 1.5% in 2011 (see Charts VII.4, VII.5 and VII.6).

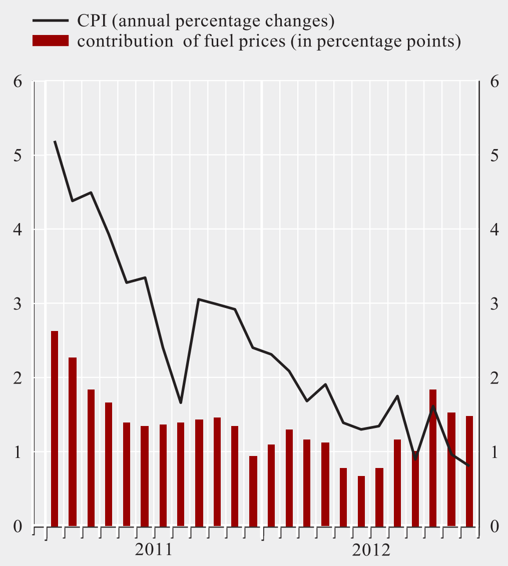
• Forecasts of negative inflation in **2013** take into account that the impact from indirect tax hikes will be smaller than in 2012, unit labour costs in the business sector will continue to *fall* at a fast rate, and the marked decline in consumer demand will persist. Moreover, the price of crude oil in US dollars is anticipated[2] to fall by 5.1%-6.0% (possibly slightly less in euro terms), following the sharp *increases* in recent years. The prices of other raw materials and commodities (in US dollars) are expected to continue to fall in 2013, although at a markedly lower rate than in 2012.[3]

• Current trends in consumer prices and the outlook up to the end of 2013 can be summarised as follows:

2 Eurosystem staff macroeconomic projections for the euro area, 6 December 2012, and IMF projections (*World Economic Outlook Update*), 23 January 2013.

3 Eurosystem staff macroeconomic projections for the euro area: -1.5% in 2013, compared with -7.5% in 2012; IMF projections: -3.0%, compared with -9.8%.

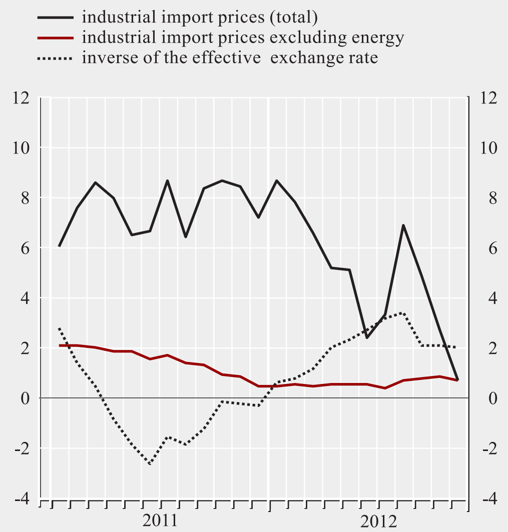
Chart VII.5 Contribution of fuel prices to inflation
(January 2011 - December 2012)



Source: Calculations based on ELSTAT data.

Chart VII.6 Industrial import price index and the inverse of the effective exchange rate of the euro, weighted on the basis of Greece's external trade
(January 2011 - November 2012)

(year-on-year percentage changes)



Sources: ELSTAT and Bank of Greece.

– Weak demand and falling unit labour costs are mostly reflected in the rate of change in the prices of "non-energy industrial goods (excluding processed food)", which has been negative or close to zero already since October 2012 and is expected to remain negative up to the end of 2013. These factors are also reflected in services prices (including residential rents, which have dropped dramatically), whose annual rate of change turned negative in September (December: -1.8%) and is also expected to remain in negative territory throughout 2013.[4]

– The annual rate of change of *processed food prices* slowed down in 2012 as a whole, turned negative in September and is expected to remain negative in the first months of 2013. It is estimated, however, that thereafter the downward trend will be reversed and prices will gradually rise at a rate of close to 3%. Processed food prices will be affected by the rising cost of imported inputs, which reflects, albeit with a considerable time lag, past large hikes in international food commodity prices.

– Finally, the growth rate of the HICP energy component remained at double-digit levels in 2012 (December: 14.9%), but is expected to slow down markedly in the course of 2013, possibly reaching a low level in the last quarter of 2013, reflecting lower crude oil prices and a moderate increase in electricity prices.

1.A FACTORS INFLUENCING THE RATE OF DECLINE IN PRICES

A previous report (*Monetary Policy 2012 – Interim Report*, November 2012) addressed the question why the drop in consumer prices has not been more pronounced, against a backdrop of prolonged and sharp declines in both consumer demand and unit labour costs. The main reasons cited include:

4 The downward path of producer prices in services (according to ELSTAT) is also relevant, as it reflects not only demand conditions and cost factors, but also the opening up of some markets. In particular, in the third quarter of 2012 producer prices fell in freight transport by road and removal services at an annual rate of 4.0%, in warehousing and storage services at a rate of 5.1% and in accounting, bookkeeping, auditing and tax consulting services at a rate of 4.1%.

• **Imperfect competition in sectors that are key to consumer prices, such as distributive trades.**[5] In particular, **distortions of competition** in the food sector are recorded in a recent report by the European Competition Network[6] concerning infringements of competition rules in the EU over the period 2004-2011. The conclusions of this report are *indirectly confirmed* by a relative consumer price rigidity (as shown by the detailed CPI data) observed between 2009 and 2012 in certain product groups (food, beverages, tobacco).

• Distortions of competition are also seen in the practices of multinational corporations in their intra-group transactions and pricing policies (transfer pricing) or restrictions they impose on their subsidiaries concerning the suppliers of their products (parallel importing).[7]

• Imperfect competition is also possibly mirrored in the **relative *levels* of consumer prices** (although price level discrepancies may well reflect differences in the conditions of competition, they do not necessarily imply different inflation rates). According to data published in June 2012 by Eurostat (Price Level Indices) on the basis of a common programme with OECD (Purchasing Power Parities Programme),[8] in 2011 the average level of consumer prices in Greece was only slightly lower than in the EU-27 (95 compared to 100). However, price levels were higher than 100 (the EU-27 average) in the groups "food and non-alcoholic beverages" (103), clothing (103), footwear (108), consumer electronics (108), communication (128). The food price index possibly confirms the above findings (although it could also reflect other factors), while the indices for clothing, footwear and electronics seem to suggest serious distortions in the pricing policy of both importers and retailers.

• According to the *Monetary Policy Interim Report* of November 2012, the index for communications is surprisingly high, which may suggest that price collusion is at play, despite seemingly fierce price competition among telephony companies, although a more likely explanation would be the significant hikes in indirect taxes on services and particularly on mobile telephony services during the 2010-2011 period. Nevertheless, it should be made clear that "communications" include both postal and (mobile and fixed) telephony services, as well as telefax services and telephone and telefax equipment – that is, not only mobile telephony. With regard to the methodology used in compiling data on mobile telephony prices, it should be noted that the Greek Mobile Operators Association (EEKT) has strongly criticised ELSTAT in the past two years and, relying on studies conducted by the Department of Management Science and Technology of the Athens University of Economics and Business together with ICAP, it claims that:[9]

(a) the continued fall in mobile telephony prices over the 2007-2010 period has not been recorded by ELSTAT, as the latter failed to take into account the large differentiation of prices in the various packages offered to subscribers, as well as offers and discounts, and

(b) prices for mobile telephony services fell significantly in 2010-2011, despite a sharp increase in indirect taxes.

5 See also *Structural features of distributive trades and their impact on prices in the euro area*, September 2011, ECB Structural Issues Report. A summary of this report has been presented in Box VI.1 ("Structural features of trade in Greece and the euro area"), Bank of Greece, *Monetary Policy – Interim Report 2011*, November 2011, pp. 133-136.

6 See European Competition Network (ECN), *ECN activities in the food sector*, May 2012. Full text: http://ec.europa.eu/competition/ecn/food_report_en.pd. Press release: http://europa.eu/rapid/press-release_IP-12-502_en.htm.

7 See also the relevant references in two press releases of the National Confederation of Hellenic Commerce (17.9.2012 and 23.1.2013 "The National Confederation of Hellenic Commerce explains why prices have not fallen in line with wages in the Greek market" [in Greek]).

8 Eurostat press release, 22.6.2012, and Statistics in Focus No 26/2012, "Major dispersion in consumer prices across Europe".

9 AUEB and ICAP, "Revised Methodology for Calculating the Index of Consumer Prices in the Mobile Telephony Sector", February 2011 [in Greek], and EEKT, AUEB, and ICAP, "The mobile communications sector of Greece within the new environment", September 2012.

On its part, ELSTAT replied that in compiling the HICP, it fully implements the relevant Eurostat regulations and guidelines.

• Currently, the increased burden on businesses from both direct taxation (e.g. imposition of extraordinary levies) and indirect taxation (e.g. the government's delay to refund VAT and pay other arrears to businesses) is tantamount to an increase in the cost of production. Indeed, given that unit labour costs in the business sector are estimated to have fallen by 1.1% in 2010, 3.5% in 2011 and 12.4% in 2012 and that the GDP deflator rose by 1.1% in 2010 and by 1.0% in 2011, while it fell by 0.7% in 2012,[10] it follows that profit margins in the business sector as a whole have risen *(when measured —as is often the case— only on the basis of the ratio of the GDP deflator to unit labour costs)*, despite the recorded decline in the profit margins of Athex-listed non-financial corporations (see Section 4 of this chapter). This suggests that businesses do not further reduce the prices of their products in order to cope with their increased tax obligations. In other words, businesses rely on reduced labour costs to meet their tax obligations, as well as tight credit conditions and high energy costs.[11]

• The above analysis is corroborated by recent remarks made by the European Commission (December 2012),[12] according to which the decline in prices is expected to be lower than the decline in unit labour cost in 2013 and 2014, since prices are also affected by non-labour costs of production as well as by changes in administered prices and indirect taxes.

2 EARNINGS – UNIT LABOUR COSTS

• In 2012 average nominal pre-tax earnings of employees in the total economy are estimated to have declined by 6.6%, while average real earnings shrank by 7.5% (compared with 1.7% and 4.7%, respectively, in 2011). *Compensation per employee*, including employers' social security contributions and civil servants' pension costs, is estimated to have declined by 6.0%. The decline in average earnings is estimated to have been stronger in the business sector (-8.4% in nominal terms, -9.3% in real terms). More detailed estimates are presented in Table VII.5 (see also Table VII.6).

• Taking also into account the average annual increase in productivity (2.2%), it is estimated that unit labour costs fell for the third consecutive year, by 8.0% in the total economy and by 12.1% in the business sector.

• It should be pointed out that the above estimates regarding the fall in labour costs in 2012 are generally consistent with the estimates resulting from the "quarterly non-financial accounts by institutional sector" published by ELSTAT for the first three quarters of 2012.[13] Also, according to data from the Labour Force Survey conducted by ELSTAT, monthly labour costs in euro (per employee, not per unit of output) declined at an annual rate of 12.9% from January to September 2012 (i.e. more than average earnings according to Table VII.5), following annual declines of 6.1% in 2011 and 2.7% in 2010. Finally, according to the Labour Cost Index published by Eurostat (17.12.2012), "nominal hourly labour costs for the business economy" in Greece decreased at an annual rate of 8.9% in the first quarter of 2012 and 3.4% in the second quarter, while for the non-business economy they declined at an annual rate of 15.7% in the first quarter and 16.9% in the second quarter. The respective annual rates for the total economy were -11.5% in the first quarter and -8.7% in the second quarter of 2012, compared with -8.1% in the fourth quarter of 2011.

10 Similarly, (non-energy) producer prices for the domestic market rose by 0.9% in 2010, 2.7% in 2011 and 0.8% in 2012.
11 See also a relevant Memo by the Hellenic Federation of Enterprises (SEV) to the Minister of Development, 24 September 2012.
12 European Commission, *The Second Economic Adjustment Programme for Greece – First review December 2012*, Occasional Paper No 123, p. 16. The factors affecting inflation are also analysed in a study prepared by the National Bank of Greece ("Rapid labor cost adjustment versus consumer price inertia: The asymmetric adjustment puzzle reflects one-off factors as well as structural rigidities", *Greece: Economic & Market Analysis*, November 2012.
13 ELSTAT press release, 25.1.2013.

Table VII.5 Earnings and labour costs (2006-2013)

(annual percentage changes)

	2006	2007	2008	2009	2010	2011	2012	2013 (forecast)
Average gross earnings (nominal):								
– total economy	5.7	5.2	6.2	4.6	-4.6	-1.7	-6.6	-7.7
– central government[1]	3.1	3.8	7.1	5.2	-7.7	-0.5	-3.8	-6.7
– public utilities	7.0	7.1	8.2	7.7	-5.5	-7.9	-9.5	-10.0
– banks	10.8	8.9	0.0	3.7	-1.8	0.1	-7.5	-10.0
– non-bank private sector	6.8	6.1	6.5	2.8	-2.9	-1.7	-9.3	-7.8
Minimum earnings	**6.2**	**5.4**	**6.2**	**5.7**	**1.7**	**0.9**	**-19.6[3]**	**...**
Average gross earnings (real)	**2.4**	**2.2**	**1.9**	**3.3**	**-8.9**	**-4.7**	**-7.6**	**-7.3**
Total compensation of employees	**7.8**	**8.2**	**8.5**	**3.2**	**-6.9**	**-8.1**	**-13.9**	**-11.5**
Compensation per employee	**5.9**	**5.6**	**6.8**	**4.9**	**-4.0**	**-0.7**	**-6.0**	**-7.9**
Unit labour costs:								
– total economy	2.2	4.5	8.7	6.4	-2.1	-1.1	-8.0	-7.3
– business sector[2]	2.8	5.3	7.9	4.4	-1.1	-3.5	-12.1	-8.0

Sources: ELSTAT (GDP 2006-2011), Bank of Greece estimates/forecasts (GDP for 2012-2013 and the other annual aggregates for 2006-2013).
1 Average compensation per employee.
2 The business sector includes private and public enterprises and banks.
3 Average annual change, based on the cut of minimum earnings by 22% (for persons aged 25+) and 32% (for persons under 25), as of 15 February 2012.

Table VII.6 Average earnings and unit labour costs in total economy: Greece and the euro area (2001-2013)

(annual percentage changes)

	Average earnings		Unit labour costs	
Year	**Greece**	**Euro area**	**Greece**	**Euro area**
2001	4.7	2.8	3.9	2.4
2002	6.6	2.7	5.5	2.5
2003	5.6	2.9	2.3	2.2
2004	7.2	2.6	4.3	1.0
2005	4.4	2.2	3.4	1.3
2006	5.7	2.5	2.2	1.1
2007	5.2	2.5	4.5	1.4
2008	6.2	3.4	8.7	3.8
2009	4.6	1.8	6.4	4.3
2010	-4.6	1.9	-2.1	-0.7
2011	-1.7	2.2	-1.1	0.9
2012	-6.6	1.9	-8.0	1.4
2013 (forecast)	-7.7	2.0	-7.3	1.2

Sources: For Greece, Bank of Greece estimates; for the euro area: European Commission, *Economic Forecasts*, Autumn 2012.

• National accounts (ELSTAT) data show that over the 2010-2012 period the **compensation of employees as a percentage of GDP fell at market prices**. In particular, this ratio averaged 35.1% in the 2001-2009 period, reaching a peak in 2009 (36.7%), to later decline to 36.2% in 2010, 35.1% in 2011 and —even further— to 31.7% in the period from January to September 2012.

• The decline in unit labour costs is expected to continue into 2013 (by 7.3% in the total economy and 8.0% in the business sector), while in 2014, as the economy starts to recover, unit labour costs are likely to increase by 0.5% in the total economy and by 1.8% in the business sector (a decrease cannot be ruled out, should productivity grow more than currently anticipated).

• *The cumulative decline in unit labour costs between 2010 and 2012* is estimated at 10.9% in the total economy and at 16.1% in the business sector.

Finally, the target set in the Memorandum that was passed by Parliament in February 2012 (under Law 4046) namely, a reduction of 15% in unit labour costs over the 2012-2014 period – is expected to be overshot, on the basis of the above calculations, as the cumulative reduction over this period is expected to reach 17.6%.

2.A REDUCED WAGES IN THE BUSINESS SECTOR AND IN THE BROADER PUBLIC SECTOR REFLECT REFORMS IN THE LABOUR MARKET AND THE PUBLIC SECTOR, AS WELL AS THE ECONOMIC RECESSION

In 2012 and in 2013 the reduction in wages has been driven, on the one hand, by the significant policy measures adopted in October 2011 and in February and November 2012 targeting the level of wages and the wage-setting legal framework and, on the other hand, by the economic recession and its impact on the labour market.

In more detail: (a) at end-October 2011, Law 4024 (Article 37) substantially facilitated the conclusion of enterprise-level agreements, by eliminating any remaining obstacles; (b) in February 2012, Law 4046/2012 (Memorandum of Understanding) envisaged an immediate cut of 22% in the minimum wage for those over 25 and of 32% for those under 25, a suspension of automatic wage increases due to seniority, limitation of the continued effect of collective agreements after they expire and establishment of a maximum duration for collective agreements, conversion of long-term employment contracts with definite duration (quasi-permanency) for the staff of enterprises (currently or formerly) within the public sector into contracts with indefinite duration, a 10% reduction (on average), during 2012, in special wage regimes (applying to judges, diplomats, doctors, university professors, the military and the police); (c) in November 2012, Law 4093/2012 (approving the Medium-Term Fiscal Strategy Framework 2013-2016 and taking emergency measures to implement Law 4046/2012) and Law 4095/2012 (2013 State Budget) included measures envisaging further wage cuts in the public sector and introduced additional provisions to increase flexibility in the labour market.

• In this regard, since the onset of the crisis, private companies have sought to adapt labour costs to lower demand in various ways: reduction/elimination of overtime work, suspension of personnel, introduction of reduced weekly working hours, conversion of full-time work contracts to part-time or short-time, cuts in salaries on the basis of individual work contracts, staff layoffs. During 2012, companies resorted to individual employment contracts to a greater extent than in the past and continue to do the same in 2013.

In most cases, **enterprise-level collective agreements** provide for downward adjustments of actual wages in the order of 10%-40% —relative to the level of wages in sectoral and occupational agreements for each individual case— to the levels of the minimum wage and the corresponding allowances. Significant wage cuts are also envisaged in the enterprise-level collective agreements entered into in banks and public utilities. Already, between end-October 2011 (adoption of Law 4024/2011) and end-December 2012, more than *1,010 enterprise-level collective agreements* were signed. These agreements involve more than 140,700 employees, of which 88,050 are employed in banks, public utilities and large private enterprises in the manufacturing and services sectors, while the remaining 52,650 are employed in micro, small and medium-sized enterprises. Furthermore, in the course of 2012 important **sectoral collective agreements** were also signed. The most important agreement among them (which applies to those employed in retail and wholesale trade, numbering more than 300,000 people) provides for 6.3% wage cuts, while the other agreements (including those applicable to hotel and foreign air carrier employees) envisage wage cuts of up to 15%. Also, according to data from the Labour Inspectorate (SEPE), in the period from 14 February to 31 August 2012, 178,058 **individual work contracts** were signed (in 40,297 firms), providing for wage cuts of 21.7% on average.

Taking into account the above data, it is estimated that the wage cuts implemented so far through enterprise-level collective agreements and individual work contracts involve at least 19% of employees in the business sector, while wage cuts implemented through sectoral collective agreements affect 20%-25% of employees.

The downward adjustment of wages has continued into **2013**, as any sectoral or occupational collective agreements that did not expire in 2012 will expire this year.

3 INTERNATIONAL COST COMPETITIVENESS: RECOVERING THE LOSSES OF THE 2001-2009 PERIOD

• The simplest approach to examine the impact of changes in labour costs on productivity would be to measure the change in relative unit labour costs in a common currency, the so-called "real effective exchange rate based on relative unit labour costs in the total economy". This indicator is calculated *vis-à-vis Greece's 28 main trading partners*, including euro area countries. According to revised estimates of the Bank of Greece, this indicator rose by 31.5% in the 2001-2009 period, which suggests an equal loss of cost competitiveness, and then fell by 7.2% between 2010 and 2011, which suggests an improvement in competitiveness (see Table VII.7). Thus, the cumulative loss over the 2001-2011 period came to 22.1%. When calculating the loss of cost competitiveness only vis-à-vis Greece's trading partners in the euro area, the exchange rate is irrelevant, as there is a single currency; therefore, changes in the competitiveness indicator reflect solely changes in relative labour costs. According to estimates of the Bank of Greece, the cumulative loss of competitiveness vis-à-vis Greece's trading partners in the euro area, on the basis of relative labour costs, reached 22.3% between 2001 and 2009, but is estimated to have improved by 3.5% between 2010 and 2011, thus coming down to 18.0% for the 2001-2011 period.

• Estimates of unit labour costs in 2012 and projections for 2013 imply that competitiveness based on relative labour costs should improve by 12.05% in 2012 and by 8.7% in 2013 vis-à-vis the country's 28 major trading partners, and by 9.7% in 2012 and 8.1% in 2013 vis-à-vis its euro area partners.

• The above suggest that in 2010-2011 19.3% of cost competitiveness losses vis-à-vis the euro area and 29.8% vis-à-vis the country's 28 trading partners were recovered. *Cumulatively, over the 2010-2012 period*, 70.5% of the losses vis-à-vis the euro area and 76.5% of the losses vis-à-vis the 28 trading partners were recovered. Finally, *it is estimated that, in the course of 2013, the losses incurred in 2001-2009 will be fully recouped vis-à-vis both the euro area and the 28 trading partners; actually, cost competitiveness will improve by around 2% compared with its 2000 levels.*

Table VII.7 Greece: nominal and real effective exchange rate (EER) indices[1]

(annual percentage changes in year averages)

		Real EER	
	Nominal EER	On the basis of relative consumer prices	On the basis of relative unit labour costs in total economy
2000	-6.3	-6.9	-5.0
2001	1.7	1.1	0.4
2002	2.3	2.6	4.3
2003	5.0	5.5	4.0
2004	1.7	1.9	4.4
2005	-1.0	-0.1	0.5
2006	0.0	0.8	0.9
2007	1.3	1.6	3.7
2008	2.4	2.5	6.6
2009	1.2	1.6	3.4
2010	-2.8	-0.5	-5.2
2011	0.5	0.4	-2.1
2012*	-2.0	-3.3	-12.05
Cumulative percentage change between 2001 and 2012	10.5	14.6	7.4

Sources: Exchange rates: ECB, euro reference exchange rates. Consumer prices: CPI, HICP where available: ECB. Unit labour costs in total economy: Bank of Greece estimates for Greece, ECB for the other countries.
* Provisional data and estimates.
1 These indices are compiled by the Bank of Greece and include Greece's 28 main trading partners. Weights were revised on the basis of imports and exports of manufacturing goods (SITC 5-8) in the years 1998-2000 for the period 1993-2000 and in the years 2004-2006 for the period 2001-2011. Weights take account of third-market effects.

- These conclusions are corroborated by the ECB's harmonised competitiveness indicators. The "real harmonised competitiveness indicator based on unit labour costs indices for the total economy"[14] for Greece rose (implying competitiveness losses) by 21.0% in the 2001-2009 period and fell (implying competitiveness gains) by a total of 18.9% between 2009 and the third quarter of 2012. As a result, between 2001 and the third quarter of 2012, this indicator dropped cumulatively (signifying improved competitiveness) by 1.9%, which suggests that the losses of the 2001-2009 period have already been fully recovered.

- This is further confirmed by the real effective exchange rate indices based on relative unit labour costs, as calculated by the European Commission.[15] The corresponding index for Greece fell by 4.65% in the 2010-2011 period, which implies an equal *improvement* in cost competitiveness, while a further sharp decline (i.e. an improvement) of 11.8% is expected for 2012 and of 6.3% for 2013. Therefore, the estimated/projected cumulative improvement in the period 2010-2013 reaches 21.2% and should more than offset the cumulative deterioration of 8.6% over the 1998-2009 period, as cost competitiveness in 2013 is expected to improve by 14.4% compared with 1997.

- It is necessary to stress once again[16] that a sustainable improvement in competitiveness

14 Last updated by the ECB on 14.1.2013. This indicator is calculated against Greece's 36 trading partners, including all other euro area countries.
15 See European Commission, *European Economic Forecast – Autumn 2012*, 7.11.2012.
16 *Monetary Policy – Interim Report 2011*, November 2011, p. 22, *Monetary Policy 2011-2012*, March 2012, p. 68, *Monetary Policy – Interim Report 2012*, November 2012, p. 104.

cannot —after a necessary initial phase of "correction"— be based on a combination of nominal wage reductions and falling or stagnant productivity, as the negative effects on domestic demand of the continued wage decreases would more than offset the positive effects on external demand. The improvement in cost competitiveness must therefore also be based on *productivity* gains. The structural reforms directed at the more efficient functioning of product and labour markets are designed to produce precisely this result and will make possible both a higher rate of potential growth and an improvement in *structural competitiveness* (see also Annex to Chapter VIII "Outwardness and competitiveness of the Greek economy"). Furthermore —on the basis of quarterly national accounts data— productivity (GDP per person employed) has been rising since the third quarter of 2011 at an average rate of about 2.0%-2.3% over the period from July 2011 to September 2012.[17] **However, this development reflects the fact that employment declined more rapidly than output, while what is needed is an increase in both these aggregates, coupled with an improvement in productivity.**

4 BUSINESS PROFITS

As already mentioned in Section 1.A of this chapter, a comparison between the decline in unit labour costs (by 12.4% in the business sector and by 8.4% in the total economy) and the much smaller decline in the GDP deflator (by 0.7%) in 2012 at first sight indicates that profit margins in the business sector and in the total economy have widened (as the ratio of GDP deflator to unit labour costs is often used as an indicator of profit margins in the economy). The same conclusion arises from the fact that, according to national accounts data, "compensation of employees" declined in 2012 faster than either nominal GDP or the "gross operating surplus/mixed income" in the total economy (which includes both business profits and the income of the self-employed and farmers, as well as income from property, such as rents). However, the above conclusion takes into account only one cost item, namely labour costs, disregarding the cost of other inputs (raw materials and intermediate products, energy consumption), financial costs and the tax burden on businesses.

By contrast, a more accurate picture can be drawn if account is taken of data from the quarterly non-financial accounts by institutional sector compiled by ELSTAT and, in particular, data concerning the gross and net operating surplus of non-financial corporations (see Chapter V.1). Furthermore, if profit margins are measured as the ratio of profits to turnover of Athex-listed non-financial corporations, the conclusion is that gross profit margins continued to decline in 2012, although a development in the opposite direction also occurred – namely, *negative* profit margins (in other words, "net loss" margins) narrowed slightly. According to the published financial statements of 168 Athex-listed non-financial firms,[18] in the period from January to September 2012, sales dropped by 10.3% and gross profits by 12.7%, while net pre-tax losses were recorded, although these were 30.4% lower than in the corresponding period of 2011. Thus, gross profit margins fell by 0.5 percentage point (17.5%, from 18.0%), while net profit margins remained negative (-0.9%, compared with -1.2% in the period from January to September 2011). Besides, return on equity remained negative (-0.8%, compared with -1.0% in the first nine months of 2011), as did return on assets (-0.3%, compared with -0.5% in the first nine months 2011).

5 INCOME INEQUALITY, POVERTY AND KEY INDICATORS OF LIVING CONDITIONS IN GREECE

• Looking into the problems of inequality, poverty and social exclusion is of particular importance during the current crisis and the

17 Depending on whether productivity is calculated on the basis of GDP per person employed or Gross Value Added per person employed.
18 These 168 firms do not include the two refineries.

deep economic recession, as cuts in social and other public expenditure (in the context of fiscal adjustment efforts) have a strong impact on crucial social indicators (unemployment, poverty, inequality, etc.), undermining social cohesion. The findings of available relevant surveys are useful for public debate and for adopting the economic and social policy measures needed to ensure and strengthen social cohesion. The most important of these findings are summarised below, mainly with regard to aspects of inequality and poverty in Greece and the change in the relevant indicators during the recent financial and fiscal crisis.

- On the basis of the latest data from the survey on households' income and living conditions (European Union Statistics on Income and Living Conditions – EU-SILC)[19] for the year 2011, announced by ELSTAT with 2010 as income reference period, 21.4% of the Greek population or 901,194 households numbering 2,341,400 people in total live below the "relative-at-risk-of-poverty" threshold.[20] This poverty risk indicator for Greece rose by 1.7 percentage points in the first two years of the current crisis (2008 incomes: 19.7%, 2009: 20.1%, 2010: 21.4%) and remains significantly higher than in most EU countries (EU-27: 16.9%, see Table VII.8). It should be pointed out that in the 2011 survey, the relative poverty threshold was set at €6,591 per year for a single-member household (€7,178 in 2010) and at €13,842 for a four-member household with two adults and two children (2010: €15,073).[21] Furthermore, *the average annual disposable income of total Greek households in 2010 amounted to €21,590, down by 12.2% in comparison with the previous year (2009: €24,224).*

- A much higher rate is seen in the 2011 survey with regard to people at risk of poverty or people facing social exclusion (that is, people living in households with material deprivation and/or low work intensity): 31.0%, or 3,403,000 persons (EE-27: 24,2%).[22] Moreover, people living in households with no working members or whose working members work less than 3 months per year totalled 837,300 persons, up by 53.7% compared with the previous year (2010: 544,800 persons).

- **During the current crisis, poverty indicators deteriorated dramatically in absolute terms**, i.e. with the poverty threshold remaining stable over time in terms of real purchasing power. Indeed, the poverty rate, calculated using the poverty threshold for 2005 (60% of the median income for 2005 expressed in 2010 prices on the basis of the harmonised index of consumer prices), rose from 16.0% in 2010 to 22.9% in 2011. In other words, in only one year during the current crisis, poverty increased by 6.9 percentage points in absolute terms (or by 43.1%). Similar conclusions are drawn in a study by researchers at the Athens University of Economics and Business.[23]

- Developments in income inequality during the current crisis have been less negative, although the same survey (EU-SILC 2011,

19 EU-SILC is the main source of comparable statistics on income distribution, the risk of poverty and social exclusion in EU countries. *It should be noted, however, that the surveyed population does not include groups which are poor by inference, including homeless or institutionalised persons, a large number of illegal economic immigrants, Roma, etc.* See ELSTAT Press Release of 2 November 2012.

20 See next footnote.

21 This approach implies that the poverty line changes with the average standard of living, while, under the concept of absolute poverty, it remains stable over time in terms of real purchasing power. The relative poverty threshold has been set at 60% of the median equivalised disposable income of all households (Eurostat definition). The equivalised disposable income is calculated by assigning a weight of 1 to the household head, of 0.5 to each additional adult and 0.3 to each child aged under 14. Thus, economies of scale in households' consumption, the composition of households and the different needs between children and adults are taken into account.

22 The above definition takes into account three indicators: (a) the at-risk-of-poverty rate (see previous footnote), (b) the rate of people living in material deprivation, i.e. people who lack at least four out of nine items from a list of goods and services (telephone, colour television set, washing machine, private car, adequate heating, etc.), and (c) the rate of people living in households with low work intensity, i.e. the rate of the population aged 18-59 living in households whose members worked less than 20% of their total work potential during the past year.

23 See Matsaganis, M., C. Leventi and E. Kanavitsa, "Poverty amidst the crisis in Greece", Policy Analysis Research Unit – Athens University of Economics and Business, Newsletter 1/2012. This study calculated the relative and absolute poverty rates using alternative measures and presented estimates for 2012. The study concluded that absolute poverty rose sharply between 2009 (before the crisis) and 2012: "*The evolution of the relative poverty rate in the past three years depends on the indicator used. On the basis of the conventional (variable) threshold, a small decline can be observed (to 18.6% in 2012, from 19.4% in 2009). On the other hand, on the basis of a fixed threshold (the poverty threshold for 2009 adjusted for inflation) there has been a dramatic increase (to 35.4%)*" (in Greek).

Table VII.8 Selected indicators of social cohesion

Indicator	Greece							EU-15[1]	EU-27[1]
	2005	2006	2007	2008	2009	2010	2011		
I. Risk of poverty									
1 At-risk-of-poverty rate									
1.1 Total population	*19.6*	*20.5*	*20.3*	*20.1*	*19.7*	*20.1*	*21.4*	*16.7*	*16.9*
a. People aged 65+	27.9	25.6	22.9	22.3	21.4	21.3	23.6	16.4	16.0
b. Children aged 0-15	19.3	21.5	22.8	22.7	23.4	22.3	23.3	19.5	20.3
c. Single-parent households	43.5	29.6	34.2	27.1	32.1	33.4	43.2	34.7	34.5
d. Two adults with 3 or more children	32.7	38.0	29.7	27.2	28.6	26.7	20.8	24.0	25.9
1.2 In-work poverty	*12.9*	*13.9*	*14.3*	*14.3*	*13.8*	*13.8*	*11.9*	*8.5*	*8.9*
a. Part-time employment	24.1	26.1	27.2	26.0	26.9	29.4	21.4	12.1	13.5
b. Temporary employment	17.4	18.2	19.0	15.9	15.1	13.4	8.9	13.7	13.2
1.3 Unemployed	32.6	33.3	35.9	37.0	37.9	38.6	44.0	45.1	45.1
2 At-risk-of-poverty gap[2]									
Total population	23.9	25.8	26.0	24.7	24.1	23.4	26.1	22.5	23.3
a. People aged 65+	23.7	24.4	24.2	20.8	14.7	14.6	21.1	16.4	16.6
b. Children aged 0-15	22.5	25.7	30.0	26.5	26.4	27.3	27.8	23.5	24.4
3 At-risk-of-poverty line (in euro)									
a. Single-member households	5,650	5,910	6,120	6,480	6,897	7,178	6,591	...	...
b. Two adults with two children	11,866	12,411	12,852	13,608	14,484	15,073	13,842	...	...
II. Inequality indicators									
1. Gini coefficient	33.2	34.3	34.3	33.4	33.1	32.9	33.6	30.8	30.7
2. S80/S20 ratio[3]	5.8	6.1	6.0	5.9	5.8	5.6	6.0	5.1	5.1
III. Social welfare									
1. Social expenditure, % of GDP									
Total	24.9	24.7	24.8	26.3	28.0	29.1	...	30.3	29.5
a. Pensions	12.2	12.1	12.3	12.7	13.4	13.9	...	13.3	13.1
b. Social transfers	12.7	12.6	12.5	13.6	14.6	15.2	...	17.0	16.4
2. Reduction in the at-risk-of-poverty rate:									
Social expenditure (total)	19.6	20.0	21.6	21.4	22.3	22.7	23.5	25.8	26.3
a. Pensions	16.6	17.1	18.2	18.2	19.3	19.0	20.1	16.1	17.1
b. Social transfers	3.0	2.9	3.4	3.2	3.0	3.7	3.4	9.7	9.2

Source: Eurostat.
1 Data for the EU-15 and the EU-27 refer to the latest available year (2011 data referring to the earnings of 2010).
2 Distance of the income of the poor from the poverty line as a percentage of the poverty line.
3 Income quintile share ratio, calculated as the ratio of total income received by 20% of the households with the highest income (the top quintile) to that received by 20% of the households with the lowest income (the bottom quintile).

incomes for 2010) indicates that Greece is among the highest ranking EU countries in terms of inequality (Gini coefficient, Greece: 33.6%, EU-27: 30,7). Moreover, the wealthiest 20% of the country's population holds a 6.0 times higher income share than the poorest 20% (S80/S20 indicator), against a ratio of 5.1 for the EU-27 as a whole. However, in the first two years of the current crisis, for which data are available, the above inequality indicators did not change significantly, as they remained virtually stable in the first year (2009 incomes) and changed only slightly in the following year (2010, see Table VII.8).[24]

• Groups at high risk of poverty in Greece during the current crisis include principally the unemployed (the relative poverty rate in this group stands at 44.0% in the 2011 survey), particularly unemployed men (poverty rate: 48.4%, up by 10 percentage points from 38.5% in 2010), single-parent households with at least one dependent child (43.2%, up from 33.4%), households with one adult over 65 years of age (29.7%), economically inactive persons excluding pensioners (housewives, etc., 30.0%), women (usually elderly) living alone (25.8%), households with three or more adults with dependent children (24.7%), households living in rented accommodation (25.9%), as well as children up to 18 years of age (23.7%). In recent years, however, poverty in Greece seems to have shifted away from the elderly towards younger couples with children and young workers. In particular, the percentage of children up to 15 years of age who live below the relative poverty threshold rose to 23.3% in 2011 (EU-27: 20.3%), from 19.3% in 2005. It is more than two percentage points higher than the corresponding percentage for the general population. **Protecting children against the most severe implications of the economic crisis[25] should be one of the top priorities of public policy in Greece.**[26]

An examination of the indicators of living conditions in Greece shows that material deprivation (difficulties in meeting basic needs, poor housing conditions, housing costs, inability to repay loans or instalments for purchases, difficulty in paying bills and in meeting ordinary needs, quality of life) affects not only the poor, but also a significant part of the non-poor population. For example, the percentage of the population living in overcrowded dwellings is 25.9% of the total population, 23.2% of the non-poor population and 35.8% of the poor population. Moreover, 24.9% of the non-poor population cannot afford unexpected but necessary expenses of about €600, while the respective rate of the poor population is estimated at 69.5%.

Finally, the redistribution impact of social benefits in Greece, despite improving in recent years, remains limited compared to other EU countries. The reduction of poverty on account of total social expenditure came to just 23.5 percentage points (20.1 on account of pensions and only 3.4 on account of social transfers) in Greece, compared with an EU average of 27.3 percentage points (17.9 attributable to pensions and 9.4 to social transfers). It should be pointed out, however, that the above efficiency ratio in Greece had improved in the last few years before the onset of the crisis (from 19.6 percentage points in 2005 to 23.5 in 2011). This mainly stemmed from the poverty-mitigating effect of pensions (from 16.6 percentage points in 2005 to 20.1 in 2011, see Table VII.8), as a result of the increases in minimum pensions and the introduction of the Pensioners' Social Solidarity Supplement (EKAS).

To sum up, during the current crisis some negative developments, mainly the dramatic rise in unemployment (from 7.2% in the second and third quarters of 2008 to 26.8% in October 2012), are estimated to have contributed to an exacerbation of relative poverty and social exclusion in Greece. A more dramatic deterioration was observed in the indicators of absolute poverty, which are calculated by keeping the poverty threshold, adjusted for inflation, at its pre-crisis levels. It should be pointed out that the significant increase in the number of unemployed persons (from 355 thousands in the third quarter of 2008 to 1,345.7 thousands in October 2012) comes on top of other, even more alarming parameters – mainly the fact that **unemployment has now hit the core of the labour force**, as the share of unemployed persons that identify themselves

24 Relative poverty has been broadly stable over 1994-2010 (for which comparable data are available) .

25 See "Introducing school meals in Greece", Newsletter 4/2012, Policy Analysis Research Unit, Athens University of Economics and Business (in Greek).

26 By way of illustration, the Municipal Nursery of Athens has undertaken to supply meals for some 8,000 children attending the day-care centres of the Municipality of Athens. In addition, as of December 2012, the Bank of Greece and the Bank of Greece Employees Union have jointly responded to a call of the Municipal Nursery for sponsoring the meals of some 650 poor children attending all-day elementary schools and kindergartens.

as "heads of households" has increased by about 10 percentage points in the past three years. As only 29.4% of the unemployed persons registered with OAED (Greek Manpower Employment Organisation) in December 2012 received some kind of unemployment benefit,[27] extending the eligibility period for unemployment pay and, most importantly, expanding the group of beneficiaries by including other unemployed persons, e.g. self-employed and merchants who shut down their businesses as a result of the crisis, are among the measures that could contribute to preserving social cohesion.[28]

27 Out of a total of 797,578 persons registered with OAED in December 2012, the number of subsidised unemployed persons was 234,455. Among all subsidised unemployed persons, 30.2% were seasonal workers in tourism, 8.2% other seasonal workers (agriculture), 1.8% construction workers, 0.8% teachers, 0.3% other workers and 58.7% other subsidised unemployed persons. See OAED press release, 21.1.2013, OAED Statistics: December 2012 (in Greek).

28 A Ministerial Decision that would activate the Special Unemployment Account for the benefit of the self-employed is about to be issued. This account was established by Article 44 of Law 3986/2011 and is funded by additional contributions of the insured with the aim of providing unemployment benefits to merchants and self-employed persons who shut down their businesses.

VIII EXTERNAL BALANCE, OPENNESS AND COMPETITIVENESS

1 INTRODUCTION

The drastic reduction of the current account deficit in 2012 came as a result of the combined effects of several factors, both domestic and international. Thus, in 2012 this deficit dropped to only 1/4 of the 2011 figure, i.e. to €5.6 billion, from €20.6 billion (see Table VIII.1). The deficit fell to 2.9% of annual GDP in 2012 (from 9.9% in 2011 and 14.9% in 2008) and is expected to continue to decline in both 2013 and 2014. What is more, excluding the net oil import bill and net interest payments on public debt, the current account balance showed a sizeable surplus (4.5% of GDP in 2012). A surplus was also recorded in the goods and services balance excluding oil and ships (3.3% of GDP in 2012).

The sharp decline in the current account deficit in 2012 reflects mainly (a) a decrease in net interest payments on public debt, due to the PSI and deferred interest payments on loans under the financial support mechanism owing to interest rate changes (the latter decline was recorded in June); and (b) a fall in imports of consumer, intermediate and capital goods as a result of the continued recession and the slump in consumption and investment. To a lesser extent, the contraction of the deficit reflects a rebound in exports excluding oil and ships, as in 2012 the relevant receipts were only a little lower (by just 0.9%) than the 2008 high. This rebound, which started in mid-2010, was associated with both the (then) recovery of the European economy and cost competitiveness gains (first recorded in 2010). However, the pickup in goods exports was not accompanied by a commensurate rebound in services exports (i.e. mainly travel and transport receipts), which in 2012 continued to fall short of the 2008 highs by 13.9% and 30.8%, respectively.

The factors that have helped drive down the current account deficit up to 2012 and are expected to support its further reduction until 2014 are not enough to make this low level sustainable over the long term. In order for this to be achieved, certain structural problems should be tackled, such as the Greek economy's foreign energy dependence, the reduced potential for import substitution, as well as the relatively high import content of Greek exports.[1] Failing this, the trend for a widening current account deficit would be rekindled once the economy picks up, and any difficulty in financing this deficit would generate serious imbalances.[2] This risk could be averted if recovery were based on foreign direct investment (FDI), which would galvanise domestic production and lead to import substitution. In such case, FDI would drive down the current account deficit and contribute to its financing, at the same time helping boost growth and reduce unemployment. However, if FDI is to be attracted, an investment-friendly climate should be fostered – therefore, product and labour market dysfunctions should be addressed, export firms should have easier access to credit, and red tape, a source of wide extensive spread corruption, should be cut.[3]

Yet it should be stressed that, while tackling such structural weaknesses usually takes long, in the case of Greece time is now limited, because the economy is in recession for the sixth consecutive year. Because of this protracted recession and the ensuing long withdrawal of inputs from economic activity, compounded by rapid technological developments in many sectors of the economy, there is a risk

1 According to OECD data for 2005, this is calculated at 35% for manufacturing, excluding imports of capital equipment used for the production of exported goods.

2 This view is supported by the conclusions of the OECD (*Economic Outlook* No. 92, December 2012, Box 1.4, chart on p. 45), according to which in conditions of zero output gap (not negative, as today), the cyclically adjusted current account deficit for 2012 would be higher by 2.5 percentage points.

3 The problem of red tape in Greece and the ensuing problem of corruption, which discourage investment, are reflected in the very low ratings awarded to Greece by international organisations like Transparency International ("Money, Politics, Power: Corruption Risks in Europe", June 2012), which ranks Greece 125th among 142 countries, and the World Economic Forum (*Global Competitiveness Report 2012-2013*), according to which Greece fell to the 96th position among 144 countries. In both reports Greece occupies the last rank in the EU. By contrast, the World Bank (*Doing Business 2013*) ranks Greece 78th among 185 countries, noting that the country has achieved considerable progress in facilitating and encouraging business (see also the Annex to this chapter).

Table VIII.1 Balance of payments

(million euro)

	January-December		
	2010	2011	2012*
I CURRENT ACCOUNT BALANCE (I.A+I.B+I.C+I.D)	**-22,506.0**	**-20,633.5**	**-5,583.7**
I.A Trade balance (I.A.1 – I.A.2)	**-28,279.6**	**-27,229.1**	**-19,582.7**
Oil trade balance	-8,627.2	-11,126.9	-10,220.0
Non-oil trade balance	-19,652.4	-16,102.1	-9,362.8
Ships balance	-3,672.7	-3,370.9	-1,042.6
Trade balance excl. oil and ships	-15,979.7	-12,731.2	-8,320.1
I.A.1 Exports of goods	*17,081.5*	*20,230.6*	*22,017.6*
Oil	4,950.0	6,187.7	7,426.4
Ships (receipts)	858.1	695.1	737.8
Other goods	11,273.4	13,347.8	13,853.5
I.A.2 Imports of goods	*45,361.0*	*47,459.6*	*41,600.4*
Oil	13,577.1	17,314.6	17,646.3
Ships (payments)	4,530.8	4,066.0	1,780.4
Other goods	27,253.1	26,079.0	22,173.7
I.B Services balance (I.B.1 – I.B.2)	**13,248.5**	**14,629.6**	**14,719.4**
I.B.1 Receipts	*28,477.8*	*28,609.2*	*27,105.6*
Travel	9,611.3	10,504.7	10,024.1
Transport	15,418.4	14,096.6	13,286.4
Other services	3,448.1	4,007.9	3,795.2
I.B.2 Payments	*15,229.4*	*13,979.6*	*12,386.3*
Travel	2,156.0	2,266.5	1,848.7
Transport	8,155.4	7,234.4	6,322.0
Other services	4,917.9	4,478.7	4,215.5
I.C Income balance (I.C.1 – I.C.2)	**-7,673.8**	**-8,594.8**	**-2,164.8**
I.C.1 Receipts	*4,009.3*	*3,322.1*	*3,272.8*
Wages, salaries	199.7	188.0	200.0
Interest, dividends, profits	3,809.6	3,134.1	3,072.7
I.C.2 Payments	*11,683.1*	*11,916.9*	*5,437.5*
Wages, salaries	377.6	470.0	468.0
Interest, dividends, profits	11,305.5	11,447.0	4,969.6
I.D Current transfers balance (I.D.1–I.D.2)	**198.9**	**560.8**	**1,444.4**
I.D.1 Receipts	*4,654.3*	*4,435.0*	*5,124.6*
General government (mainly receipts from the EU)	3,188.5	3,254.9	4,060.2
Other sectors (emigrants' remittances, etc.)	1,465.8	1,180.1	1,064.4
I.D.2 Payments	*4,455.4*	*3,874.2*	*3,680.2*
General government (mainly payments to the EU)	2,860.4	2,485.4	2,647.9
Other sectors	1,595.0	1,388.8	1,032.3
II CAPITAL TRANSFERS BALANCE (II.1–II.2)	**2,071.5**	**2,671.8**	**2,327.6**
II.1 Receipts	**2,356.2**	**2,932.7**	**2,564.6**
General government (mainly receipts from the EU)	2,239.3	2,798.5	2,486.0
Other sectors	116.9	134.2	78.6
II.2 Payments	**284.7**	**260.8**	**237.1**
General government (mainly payments to the EU)	15.8	12.7	13.7
Other sectors	268.9	248.1	223.3
III CURRENT ACCOUNT AND CAPITAL TRANSFERS BALANCE (I+II)	**-20,434.5**	**-17,961.7**	**-3,256.1**
IV FINANCIAL ACCOUNT BALANCE (IV.A+IV.B+IV.C+IV.D)	**20,853.9**	**17,838.1**	**3,556.0**
IV.A Direct investment[1]	**-927.0**	**-452.6**	**2,322.4**
By residents abroad	-1,176.2	-1,274.9	30.4
By non-residents in Greece	249.2	822.3	2,292.0
IV.B Portfolio investment[1]	**-20,855.0**	**-19,778.3**	**-100,503.9**
Assets	13,278.7	4,139.0	-58,686.1
Liabilities	-34,133.6	-23,917.3	-41,817.8
IV.C Other investment[1]	**42,538.8**	**38,050.0**	**101,742.6**
Assets	7,658.7	7,638.7	13,976.2
Liabilities	34,880.2	30,411.3	87,766.4
(General government borrowing)	29,978.18	39,873.869	109,093.94
IV.D Change in reserve assets[2]	**97.0**	**19.0**	**-5.0**
V ERRORS AND OMISSIONS	**-419.4**	**123.6**	**-299,9**
RESERVE ASSETS	**4,777**	**5,332**	**5,500**

Source: Bank of Greece.
* Provisional data.
1 (+) net inflow, (-) net outflow.
2 (+) decrease, (-) increase.

that the fixed and human capital of the Greek economy will gradually become obsolete.

2 CURRENT ACCOUNT BALANCE

2.1 TRADE BALANCE

The €7.6 billion decline in the trade deficit during 2012 reflects a €4.4 billion contraction in the deficit excluding oil and ships and a €2.3 billion drop in net payments for purchases of ships, while the net oil import bill, representing a little more than half the overall trade deficit, fell by €907 million. The improvement in the non-oil trade deficit accounts for 44.8% of the overall amelioration in the current account balance.

In 2012, the import bill excluding oil and ships continued to decrease by 15.0%, i.e. faster than in 2011 (4.3%). At the same time, export receipts excluding oil and ships kept increasing, although at a considerably weaker pace (3.8%, from 18.4% in 2011); as a result, the coverage ratio of payments by receipts reached 62.5% (compared with 51.2% in 2011).

The drastic reduction of the trade deficit came as a result of the protracted recession in the domestic market, since the import bill fell mainly due to cutbacks in consumption and investment. The trade deficit dropped faster also as a result of further decreases in households' disposable income and Greek firms' liquidity. The year 2012 saw a stronger fall in imports of consumer non-durables, while the corresponding import bill —as well as the import bill for raw materials (excluding oil)— had dampened the drop in the overall import bill in 2011.

The rise in exports is explained by the efforts of Greek firms to gain or deepen their access to foreign markets and thus offset weak domestic demand. However, export growth slowed, partly as a result of lower external demand, mainly from the EU, which is still the major market for Greek exports, while exporters face serious liquidity constraints, which hinder the supply of raw materials and intermediate products.

Available ELSTAT trade data show, already since 2011, a gradual shift of Greek exports from EU to non-EU countries. This migration trend strengthened in 2012 due to lower demand since the start of the year, affecting even exports to Bulgaria and Romania, the major export destinations for Greek products in South-Eastern Europe. As a result, underlying the continued rise in exports are exports to non-EU countries, which already absorb a sizeable share of Greek exports, such as the United States, Russia, Turkey and the Middle East and North Africa countries, as well as Japan, China and India. Although expansion to non-EU markets is impressive and augurs well for Greek exports, the share of these markets in overall Greek export receipts is still small.

Despite the above developments, the main recipients of Greek exports continue to be the EU markets, which attract 60.8% of total exports according to January-November 2012 data, compared with 65.8% in the same period of 2011 (ELSTAT – non-oil exports). The major markets for Greek exports are Germany and Italy, as well as Cyprus, Bulgaria and the United Kingdom, while the United States, Turkey and Russia now rank among the top ten destinations of Greek exports.

Regarding the geographical breakdown of imports, there has been no remarkable change, although the value of imports from the EU, which receives the bulk of the import bill, fell slower than the value of imports from non-EU countries.

According to disaggregated annual balance of payments data, "other manufacturing products" (excluding chemicals, metallurgical products, machinery and vehicles)[4] and agri-

4 Mainly non-metallic minerals, cotton (cotton goods and threads) and clothing (mainly woven garments).

cultural products[5] were the key drivers of the rise in export receipts (accounting for 45% and 33% of the overall change, respectively).[6] By contrast, receipts from metallurgical product exports having performed strongly in 2011, fell in 2012, partly due to a decrease in international prices for these products. Regarding chemicals-plastics, receipts from plastics exports edged up, while pharmaceutical export receipts fell. In any case, the breakdown of exports by product category did not change considerably.

The drop in the import bill excluding oil and ships, which had slowed in 2011, started to pick up in 2012, while the oil import bill rose in 2012, but at a slower rate than in 2011. According to disaggregated balance of payments data, in 2012 the steepest fall was observed in the import bill for raw materials and intermediate products (21.6%), which had risen in 2010 and 2011, while the import bill for capital goods continued to fall (20.8%) due to the decline in investment and production activity. In more detail, the reduction in the import bill mainly stems from chemicals (to a great extent, pharmaceuticals), metallurgical products and mechanical equipment.[7] Likewise, 2012 saw a decrease also in the import bill for consumer goods, in particular consumer non-durables (of which 1/3 is food, the import bill for which remained virtually unchanged), actually at a much faster pace than in 2011 (16.3% in 2012, from 6.7% in 2011).

2.2 SERVICES BALANCE

In 2012, the services balance showed a surplus of €14.7 billion, slightly up (by 0.6%) over 2011. This increase stems mainly from higher net transport receipts and, secondarily, lower net payments for "other" services, while net travel receipts fell marginally.

The drop in net travel receipts[8] is chiefly attributable to a 4.6% (or €481 million) decline in travel spending in Greece by non-residents compared with 2011, while non-residents' arrivals fell at an average annual rate of 5.5%[9] to 15.5 million visitors (according to data from the Bank of Greece border survey). Travel spending abroad by residents contracted by 18.4% or €418 million; as a result, net receipts decreased by a mere €63 million. Although tourist traffic appeared lower after last year's considerable increase,[10] it showed signs of normalisation after the first half of 2012,[11] as the termination of the protracted election period restored confidence, boosting arrivals.[12] Actually, losses in both arrivals and gross receipts on an annual basis moderated considerably, while 2012 saw an increase in arrivals from traditional markets, such as the United Kingdom, as well as from new markets, such as Russia[13] and China. It should be noted, however, that due to the adverse economic environment, the turnover of the *domestic travel market* suffered heavy losses.[14]

Regarding the cruise sector, a small decline in the number of tourist arrivals was observed, contrasting with the surge that had been recorded in 2011 due to the Arab Spring.[15] However, investment projects to upgrade and build cruise harbours are underway, which —coupled with the elimination of structural

5 Mainly olive oil, vegetable and fruit products, dairy, sugars and flours.
6 The largest share is accounted for by goods that cannot be classified, receipts from which rose in 2012 due to the upward adjustment of the threshold of the value of trade transactions that credit institutions are obliged to report to the Bank of Greece for the compilation of the balance of payment statistics.
7 The import bill for goods that cannot be classified rose during the reviewed period, as in 2011, after the adjustment of the reporting threshold.
8 It should be noted that net travel receipts contributed 55.5% of total services receipts and offset 41.7% of the trade deficit.
9 This fall was partly offset by a 1.0% increase in average spending by travel.
10 Increased tourist traffic in 2011 was attributable to the shift of tourist traffic from North Africa to Greece as a result of social unrest in the region.
11 Arrivals and gross receipts in the first half of 2012 dropped considerably, by 9% and 10%, respectively.
12 According to latest data of the Association of Greek Tourism Enterprises (SETE), non-residents' arrivals in the principal airports of Greece in 2012 declined by 3.3%. These arrivals account for 72% of total arrivals (by any means of transport) of foreign tourists in Greece.
13 Arrivals from Russia (871 thousand visitors) grew by 19% year-on-year in the January-November 2012 period.
14 IOBE, *The Greek Economy*, 4/12, 2012.
15 The number of cruise passengers for 2012 appears 5% higher than in 2010 according to the data of the Technical Committee of the Hellenic Ports Association (ELIME). The 2011 data are not considered statistically comparable due to a change in routes as a result of the turmoil in North Africa.

barriers – will lead to a promotion of Greek harbours from ports of call to home ports, thereby boosting the competitiveness of Greek ports and improving Greece's ranking[16] in both arrivals and receipts.[17]

The outlook for 2013 is benign, as arrivals are expected to exceed 17 million, according to estimates of the Association of Greek Tourism Enterprises (SETE). Sanguine forecasts are based on increased reservations from countries such as the United Kingdom and Germany, while, subject to a speeding-up of visa issuance procedures, Russian tourists are expected to exceed one million this year.

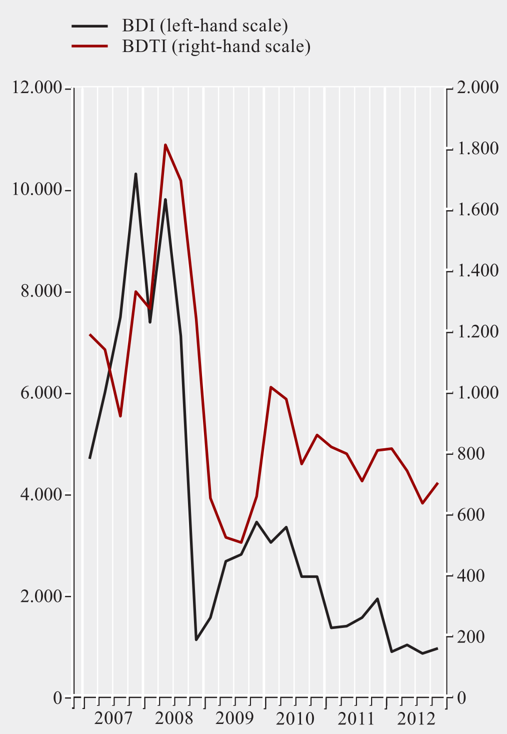
At the same time, net payments for "other" services fell by 10.7%, or €50 million.

In the same note, gross transport receipts (mainly from merchant shipping) shrank by 5.7%, but the corresponding payments fell even more (by 12.6%); as a result, net receipts rose by €102 million. International freight rates continued to fall, by 24%, as the world fleet grew faster than world trade volumes.[18] Dry bulk carriers were the branch to suffer most, as the Baltic Dry Index recorded an annual decrease of 41%. By contrast, the Baltic Dirty Tanker Index fell by only 8% (see Chart VIII.1). However, the decline in freight rates had a marginally adverse impact on (mainly sea) transport receipts, as it was largely offset by the revaluation of the US dollar vis-à-vis the euro, on average, in 2012. In any case, the outlook for 2013 is unfavourable due to an oversupply of capacity, increased operating costs, credit constraints and weak world growth rates.[19]

In particular with respect to the Greek merchant fleet, according to ELSTAT data, its gross registered tonnage grew by 1.6% in November 2012, year-on-year, due to the replacement of old ships with new ones of larger capacity.[20] Equally importantly, the average age of Greek-flagged ships is gradually falling (it now stands at 10.5 years, compared with an international average of around 12.5).

Chart VIII.1 Developments in sea freight indices

(quarterly data)



Source: Clarkson Research Services.

According to an IOBE survey, the annual share of sea-going shipping in added value in the economy can even double, provided that many of the operations related to this sector are con-

16 Greece ranks third in Europe in terms of number of cruise passenger arrivals, but sixth in terms of cruise receipts (European Cruise Council, *The Cruise Industry – Contribution of Cruise Tourism to the Economies of Europe*, 2012 edition).

17 *Cruise industry: A sector with potential revenues of €2bn*, National Bank of Greece Sectoral Report, August 2012. These structural barriers include, among other things, legal obstacles to the conclusion of concession agreements, the lack of a berth allocation system for cruise ships and important shortcomings in terms of infrastructure (mostly berths, passenger terminals, bunkering and ship repair facilities). According to this study, if these obstacles are lifted, annual cruise revenues are forecast to jump to €1.2-€2.0 billion in 2016, from €600 million in 2011, and 30 thousand new jobs would be created. Therefore, 2013 is expected to be a bullish year for cruise, since the port of Piraeus is expected to receive 659 cruise ships and 2.2 million tourists, according to berth allocation data of the Piraeus Port Authority as at 31 October 2012.

18 OECD, *Economic Outlook* No. 92, December 2012.

19 It is estimated that this year ship supply will increase by around 8%, while transport demand will rise by some 4% (estimates by G. Moundreas S.A.).

20 According to ELSTAT data, the number of cargo ships reached 542, down by 2.7%, while the number of tankers dropped by 0.9% to 533, although gross registered tonnage rose by 0.9% and 2.8%, respectively.

ducted in Greece instead of abroad. This could contribute in generating some 350 thousand jobs.[21]

2.3 INCOME ACCOUNT BALANCE

The drastic €6.4 billion reduction of the income account deficit is exclusively accounted for by an almost equal decrease in interest, dividend and profit payments as a result of a substantial fall in net interest payments on Greek government bonds held by non-residents. This is attributable to the PSI, as well as deferred interest payments on loans under the support mechanism through the ECB owing to interest rate changes (which, as already mentioned, led to reduced interest payments in June). Thus, the *decrease* in the income account deficit corresponds to 3.3% of GDP, while interest payments will continue to fall over the next two years.

2.4 CURRENT TRANSFERS BALANCE

In 2012, the current transfers balance showed a surplus of €1.4 billion, up from €561 million in 2011. Specifically, general government net transfer receipts (mainly from the EU)[22] grew to €1.4 billion, from €770 million in 2011.

3 CAPITAL TRANSFERS BALANCE

In 2012, the capital transfers balance came to €2.3 billion, from €2.7 billion in 2011.[23]

According to balance of payments data compiled by the Bank of Greece, inflows of €2.9 billion were recorded under the National Strategic Reference Framework (NSRF) during 2012 (including resources from the European Social Fund, which are recorded under the current transfers balance), while at the same time, according to a statement by the Minister of Development (2 January 2013), resources concerning unfinished projects under Community Support Framework III (2000-2006) were absorbed. As a result, under the NSRF, structural fund inflows to Greece until end-December 2012 amount to €9.9 billion, including advance payments, hence the absorption rate approaches 48.6% of total funds allocated to Greece for the period 2007-2013 (up from 34.5% at end-December 2011). The percentage of legal commitments came to around 83%,[24] while the absorption of Community funds exceeded the EU-27 average.[25]

Therefore, despite delays in the first half of 2012, Greece managed to speed up the rate of absorption of Community funds in the second half of 2012, eventually achieving by 88.39% the annual target of €3.73 billion *on the basis of payment applications* under the Memorandum of Understanding (MoU).[26] Moreover, several of the MoU regulatory and organisation measures aimed at cutting red tape in the implementation of the NSRF were put into effect.[27] Box VIII.1 describes certain measures that led to faster absorption and more efficient use of Community resources in 2012 and will continue to do so in 2013, as well as new

21 IOBE, *The contribution of ocean-going shipping to the Greek economy: Performance and outlook*, Athens, 8 January 2013.

22 Current transfers from the EU mainly include direct aid and subsidies under the Common Agricultural Policy (CAP), receipts from the European Social Fund (ESF), as well as certain other receipts, while current transfers to the EU include principally Greece's contributions (payments) to the Community Budget (CB). The bulk of CAP funds are received, according to the relevant procedures, within the first two months of every year. In 2012, general government current receipts included €349.1 million interest receipts pursuant to the Eurogroup's decision of 21 February 2012.

23 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 Framework (CSF) and the National Strategic Reference Framework (NSRF).

24 Legal commitments refer to obligations undertaken during the course of the year for actions implemented over a period exceeding one financial year.

25 See the statement of the Minister of Development of 2 January 2013 and European Commission, Task Force for Greece, *Quarterly Report*, December 2012, p. 8.

26 According to the Ministry of Development website (anaptyxi.gov.gr), 14 January 2013. The funds for which payment applications were submitted until the end of the second half of 2012 are expected to be received within the first two months of 2013. According to the MoU, the targets for absorption of Community funds per year (on the basis of payment applications) are as follows: €2,750 million for 2010, €3,350 million for 2011, €3,730 million for 2012 and €3,890 million for 2013. These amounts do not include agricultural development. The funds for the period 2007-2013 will be received until 2015. As from 2011, the rule ν+2 applies, instead of ν+3, which applied in the period 2007-2010, i.e. funds must be absorbed within two years after being committed, so as to prevent the risk of loss.

27 European Commission, European Economy Occasional Papers 123, *The Second Economic Adjustment Programme for Greece, First Review – December 2012*, December 2012, pp. 110-111.

arrangements and some favourable developments expected in 2013.

Combined current and capital transfers balance

The combined current and capital transfers balance came to €3.8 billion in 2012, compared with €3.2 billion in 2011. Total net transfers from the EU (current and capital transfers less payments to the Community Budget) rose to €3.9 billion, from €3.6 billion in 2011.

Since the CAP revision will come into effect as from 2014, direct aid and subsidies under the CAP up to and including 2013 will remain broadly unchanged (around €2.2 billion per year). According to Bank of Greece provisional estimates, *EU net current transfers are expected to be €1.1 billion in 2013 and €800 million in 2014*,[28] from €770 million in 2011 and €1.4 billion in 2012, while *EU net capital transfers are projected to be €4.8 billion in 2013 and €3.7 billion in 2014*, from €2.8 billion in 2012 and €2.5 billion in 2011.

To sum up, **total net EU transfers** are estimated at €5.9 billion in 2013 and €4.5 billion in 2014, from €3.6 billion in 2011 and €3.9 billion in 2012.

The European Commission's initial proposals for the Community Budget 2014-2020 (June 2011)[29] provided for a substantial cut in total transfers of Community resources to Greece.[30] However, under the final decisions of the European Council of 8 February 2013, Greece achieved the biggest increase among all countries in the allocation of funds in comparison with the initial proposal of the European Commission, although the overall Community budget 2014-2020 was reduced relative to both the previous budget and the European Commission's initial proposal.[31] The near-achievement of the 2012 targets for the absorption of Community funds certainly provided Greece with leverage in its effort to reach the best possible result. Specifically, Greece will see inflows of €16.3 billion from the structural funds (€14.5 billion under the new NSRF and €1.8 billion for *agricultural development*), compared with €11.2 billion under the European Commission's initial proposals for the period 2014-2020 and €20.4 billion for the period 2007-2013.[32] Moreover, due to the prevailing adverse conditions arising from the sovereign debt crisis in several EU countries, the European Council decided to review the allocations in 2016 on the basis of up-to-date GDP data per country. Following the review, the government expects that Greece will receive an extra €2 billion in the period 2017-2020.[33] Income aid under the CAP is not included and will be calculated using a special formula. Finally, the ν+2 rule was replaced by the ν+3 rule, allowing more time for the full utilisation of funds (i.e. until 2023, instead of 2022). It is against this backdrop that Greece's strategic priorities for the new period are planned[34] (for more details, see Box VIII.1).

28 In the period 2012-2014, net current transfers also include amounts (€349.1 million for 2012, €330.3 million for 2013 and €242.6 million for 2014) of interest receipts pursuant to the Eurogroup's decision of 21 February 2012.

29 See European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A Budget for "Europe 2020" – PART I, and A Budget for "Europe 2020" – PART II: Policy fiches*, COM(2011) 500 final, 29 June 2011, and European Commission, Commission Staff Working Paper, SEC(2011) 868 final, 29 June 2011.

30 Transfers to Greece under the CAP remain substantial during the next programme period. Income aids are estimated to fall by 3% annually in nominal terms to around €2.0 billion per year, while 70% of these funds will be paid automatically and 30% will be subject to strict environmental conditions.

31 See statements by Prime Minister A. Samaras on 8 February 2013.

32 NSRF funds for Greece over the period 2014-2020 will be allocated as follows: €1.8 billion to Agricultural Development, €6.31 billion to less developed regions, €3.41 billion from the Cohesion Fund, €2.1 billion to transition regions, €2.5 billion to developed regions and €0.21 billion to Target 3. See Ministry of Development, Competitiveness, Infrastructures, Transport and Networks press release of 8 February 2013.

33 See statements by Prime Minister A. Samaras on 8 February 2013.

34 See also the Hellenic Foundation for European and Foreign Policy (ELIAMEP) unpublished study "Assessment of the past and future impact on the Greek economy from policies funded by the EU budget", Part II, "The proposals for the programme period 2014-2020", July 2012 (the conclusions of the study were presented during a public event held in the Bank of Greece on 29 October 2012).

Box VIII.1

THE CURRENT AND MEDIUM-TERM OUTLOOK OF THE ABSORPTION AND EFFECTIVE USE OF EU FUNDS

1 The importance of EU funds for growth

The effective use of funds available to Greece under the cohesion policy and the Common Agricultural Policy (CAP) of the European Union can decisively contribute to the country's economic recovery and boost employment, particularly in the current conditions of scarcity of national funds to finance Greece's growth policy, due to serious fiscal difficulties and liquidity constraints.

In such an adverse economic environment, EU funding can constitute a key driver of entrepreneurship, innovation and education, improving the competitiveness and productivity of the Greek economy and thereby boosting investment and exports.

In order to maximise growth gains from the absorption of EU funds, among other things, (a) EU funds should be tapped to address the social impact of the recession and the fiscal and structural adjustment measures; (b) programmes and projects should be implemented in combination, so as to deliver optimal results; and (c) the synergies between co-funded programmes and the structural actions envisaged in the Memorandum should be identified and fully taken advantage of.

2 Interventions for a faster absorption and more effective use of EU funds

As pointed out in several Bank of Greece reports, the **two major obstacles** to the fast and effective absorption of EU funds are liquidity shortage and persistent administrative obstacles in the management and control of programmes. The Greek authorities, assisted by the European Commission Task Force for Greece and in cooperation with EU institutions, continue with their efforts to lift the remaining obstacles.

With regard to *liquidity*, as is known, the Greek authorities have ratified the EU decision to increase co-financing rates to a maximum of 95% for NSRF projects and programmes, with an earlier reimbursement of already committed EU funds.[1] At the same time, the imminent completion of banks' recapitalisation is expected to enhance liquidity in the economy, in conjunction with other actions such as financing agreements with the EIB (see below), the unblocking of funds of the Hellenic Fund for Entrepreneurship and Development (ETEAN)[2] and the establishment of a Greek Investment Fund (still under way).

In parallel with the above interventions for the enhancement of liquidity, improving the management of EU funds is on the top of the agenda of the Greek authorities. In this context, **in 2012**

1 The European Commission had initially (October 2011) approved an increase in co-financing rates to 85% retrospectively to 1 January 2007. The further increase to —a maximum of— 95% as of 2011 constitutes an exceptional temporary measure and concerns the countries receiving support under financial assistance programmes (Portugal, Ireland, Greece, Romania, Latvia and Hungary) to facilitate them in finding national match-funding for the execution of projects. As a result, additional funds amounting to €1.5 billion will be injected into the Greek economy. See European Commission, Press Release IP/11/942, and European Commission, Memo "Building blocks towards economic growth", 26 June 2012.

2 In January 2013, the various funds under the umbrella of the Entrepreneurship Fund (TEPIX) were revamped. Specifically, (a) new terms and conditions were introduced for the operation of the five Loan Funds of TEPIX (€315 million), (b) a "Business Growth Loan Fund" was created with a view to granting working capital loans to small and medium-sized enterprises at low interest rates (€450 million) and (c) the Guarantee Fund (€350 million) was activated. See ETEAN, press release "ETEAN: Effective actions and entrepreneurship", 22.1.2013 (in Greek). Furthermore, the procedures of the Fund for Energy Efficiency in Households are being simplified (€450 million), while new initiatives are expected regarding the activation of the "Enalio" Fisheries Fund.

the review of the NSRF programmes was completed, with an emphasis on boosting entrepreneurship and curbing unemployment, while a number of provisions were introduced, which will help to simplify and speed up NSRF procedures, such as the abolition of more than 60% of required signatures for the management of loans under the Public Investment Programme.[3]

In 2013, a second package of measures aimed at simplifying procedures is to be adopted, expropriation procedures will be further accelerated, the sorting out of inactive projects is underway and a new regional operational programme has been announced, with a view to providing €456 million support to small and medium-sized enterprises in the sectors of manufacturing, tourism, trade and services. At the same time, project managers have been appointed to support and press ahead with top-priority projects, particularly those required under the Memorandum, such as "Elenxis", a national civil registry, infrastructures for solid waste management, "e-procurement" and "e-prescription".[4]

3 Actions in cooperation with the EIB

The role of the EIB in the provision of liquidity to the economy is important and has been further enhanced following a recent EU decision to **increase the Bank's capital** by €10 billion. The capital increase will allow the EIB to provide up to €60 billion in additional lending for economically viable projects across the EU[5] over the next three years.

It should be noted that *small and medium-sized enterprises (SMEs) as well as mid-caps* play a key role in the Greek economy. SME support in Greece has therefore been a major EIB objective over the past five years, with facilities amounting to some €1.5 billion, in partnership with all major Greek banks. In *education infrastructure*, total EIB financing amounts to date to €800 million. In recent years in Greece, EIB financing in the energy sector has been directed towards securing sustainable energy supplies, reducing the burden on the environment and promoting the development of renewable energy sources.[6]

EIB is also expected to actively contribute to the *financing of major motorways*. For the time being, negotiations with banks lending to concessionaires (with whom an agreement has been reached) are still underway, with an aim to re-launch projects in April, thus increasing the absorption of NSRF funds.

Total EIB disbursements to Greece, guaranteed by the Greek State, amounted to €908.2 million[7]

3 Press Conference "The 2013 Programme of the Ministry of Development and Infrastructures", 9 January 2013 (in Greek). Other measures include: (a) speeding up public procurement procedures; (b) imposing a submission fee in favour of the Greek State, amounting to 1% of the tender budget and up to a maximum of €50,000, which is expected to act as a deterrent to applications for injunctions that delay the completion of tenders; (c) allowing for the appointment of legal entities in private law of the public and the broader public sector as accounting officers/managers of co-financed projects, with the aim of facilitating payments; (d) abolishing the requirement of prior acceptance by the beneficiary of the decision regarding the inclusion of a project in the NSRF Operational Programmes; and (e) establishing the mandatory use of the State Aid Information System. See the press release of the Ministry of Development and Competitiveness "Provisions regarding the simplification of NSRF procedures and the supply of liquidity support to businesses, through ETEAN, under an act of legislative content", 7 December 2012.

4 See Press Conference "The 2013 Programme of the Ministry of Development and Infrastructures 2013", 9 January 2013.

5 See European Investment Bank, Press Release "EIB capital increase approved by all 27 EU member states", 8 January 2013.

6 See European Investment Bank, Press Release "EIB steps up its support for climate action, knowledge economy and SMEs in Greece", 7 December 2012.

7 Specifically, disbursements concerned the NSRF facility (€200 million), the granting of five loans to the Public Power Corporation (DEH) (€148 million), as well as lending to a motorway concessionaire in the Peloponnese (€17.7 million), the Attiko Metro S.A. for the Thessaloniki metro system (€250 million), the School Buildings Organisation (€50 million), the Hellenic Gas Transmission Operator S.A. (DESFA) (€30 million), the National Bank of Greece (€60 million), Pancretan Cooperative Bank Ltd (€12.5 million) and Alpha Bank (€140 million), for loans to SMEs. See announcement of the Ministry of Finance "Programme for the disbursement of €750.5 million by the EIB to our country, from Tuesday 11 December to Friday 21 December 2012", 10 December 2012.

in 2012. According to the Ministry of Finance,[8] in 2013 both signatures and disbursements are projected at another €1,542 billion.[9]

4 Developments regarding EIB's available financing instruments:

• In January 2013 the implementation of the agreement with the EIB started with the provision of guarantees to SMEs under the Guarantee Fund for SMEs. Contracts of a total amount of €600 million have already been signed and another €400 million are expected to follow by the end of 2013, i.e. a total of €1 billion out of the 2013-2015 target of €1.44 billion. The financing amount in 2013 will come from NSRF funds totalling €500 million and EIB funds with a leverage ratio of 1:2.

• The *trade finance facility for the provision of guarantees to the import/export sector* is expected to be implemented in April 2013. Guarantees will amount to €500 million, which will support a volume of transactions of about €1.5 billion per year.

• On 7 November 2012 a Cooperation Agreement was signed between the European Commission and the EIB on the launch of the pilot phase of the EU-EIB Project Bond Initiative. Its aim is to unlock private investment in infrastructure projects. This pilot phase is funded by EU budgetary resources, in partnership with the EIB.[10]

• At the same time, the *Risk-Sharing Instrument for infrastructure and productive investment projects* is still available, guaranteed by NSRF funds and with leverage from the EIB.[11] The Greek authorities, by virtue of the new provisions, are currently assessing the projects that are eligible for funding, particularly in the sectors of energy, waste management and transport.

8 Announcement of the Ministry of Finance "Programme for the disbursement of €750.5 million by the EIB to our country, from Tuesday 11 December to Friday 21 December 2012", 10 December 2012.

9 Specifically, the following are expected: (a) a disbursement of €250 million to Attiko Metro S.A. for the extension of the Athens metro system in February-March; (b) the signing of a contract of €300 million with Attiko Metro S.A. in the first quarter of 2013; (c) a disbursement of at least €200 million to the Public Power Corporation (DEH), upon the signing of agreements in January-February; (d) the signing of a contract of €100 million for the School Buildings Organisation; (e) gradual disbursements to the National Bank of Greece, Pancretan Cooperative Bank Ltd, Piraeus Bank and Eurobank for loans to SMEs; (f) a disbursement of €650 million for motorways, conditional upon the signing of all agreements between the Greek State and the concessionaires; and (g) a disbursement of another €42.2 million to a concessionaire for the Corinth-Tsakona-Kalamata motorway.

10 See European Investment Bank, Press Release "EU-EIB Project Bond Initiative launched with start of pilot phase", 7 November 2012; for general information, see EU Regulation 670/2012 of 11 July 2012, *Journal of European Communities*, L. 204/1, 31 July 2012.

11 Risk-sharing instruments for Member States that have been hit the hardest by the financial crisis were approved by the European Parliament in April 2012. The EU, using cohesion policy allocations, covers part of the risk associated with private lending or guarantees to final beneficiaries, thus acting as a catalyst in terms of additional private funding of infrastructure projects. For instance, in Greece, EU investment amounting to €1.5 billion can generate at least €2.25 billion for lending or guarantees. See European Commission, Press Release IP/12/283, 19 April 2012, and (EU) Regulation 423/2012 of 22 May 2012, *Official Journal of the European Union*, L 133/1, 23 May 2012.

4 FINANCIAL ACCOUNT BALANCE

In 2012, the financial account balance showed a net inflow of €3.6 billion, compared with €17.8 billion in 2011. Specifically, a net inflow was recorded mainly under "other" investment (€101.7 billion) and —to a much lesser extent— direct investment (€2.3 billion), while portfolio investment showed a net outflow (of €100.5 billion). Non-residents' direct investment in Greece recorded a net inflow of €2.3 billion (compared with an inflow of €0.8 billion in 2011): the gross inflow was partly offset by outflows due to negative reinvested earnings (i.e. losses) on the balance sheets of corporate recipients of FDI in Greece.[35] The main inflow

35 It should be noted that the figure of reinvested earnings for 2012 is drawn from Bank of Greece estimates on the basis of balance sheet data of corporate recipients of FDI for 2011.

under this category concerned the participation of Crédit Agricole (France) in the capital increase of Emporiki Bank.[36] FDI in Greece remains very low due to both structural and conjunctural factors (see Section 4.A below). In 2012, residents' direct investment abroad[37] showed a small inflow (disinvestment) of €30.4 million, compared with an outflow of €1.3 billion in 2011.

Under portfolio investment, 2012 saw a net outflow of €100.5 billion (compared with €19.8 billion in 2011). In more detail, outflows were recorded due to (a) a €57.7 billion hike in residents' holdings of bonds and Treasury bills issued by non-residents (including EFSF bonds); (b) a €41.8 billion decline in non-residents' holdings of bonds and Treasury bills issued by residents; (c) a €831 million increase in residents' investment in foreign derivatives; (d) a €129 million rise in residents' holdings of foreign shares; and (e) a €52 million drop in non-residents' holdings of Greek shares.

Under "other" investment, a net inflow of €101.7 billion was recorded (compared with €38.1 billion in 2011), chiefly attributable to net general government borrowing of €109.1 billion, corresponding to gross borrowing of €109.9 billion from the EFSF and the IMF. There was also an inflow due to a €15.3 billion decrease in resident credit institutions' and institutional investors' foreign deposit and repo holdings. These developments were partly offset by a €23.4 billion fall (outflow) in non-residents' deposit and repo holdings in Greece.

At end-December 2012, Greece's reserve assets stood at €5.5 billion.

4.A FOREIGN DIRECT INVESTMENT IN GREECE

The role of FDI in the financing of the current account deficit

The key conclusions of the analysis of the financial account balance from 2001 to 2008 regarding net investment inflows are as follows: (a) FDI contribution to the financing of the current account deficit was almost zero; (b) portfolio investment had a large share (about 2/3 on average); and (c) the contribution of "other" investment (mainly cross-border loans) has increased since 2005.

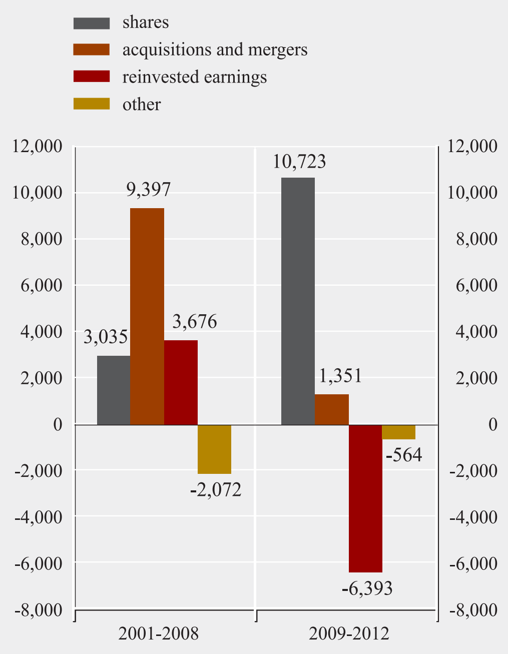
The financial crisis of 2008/2009 and the ensuing sovereign debt crisis led to the collapse of portfolio investment and further discouraged FDI in Greece, mainly by non-residents, due to lack of investor confidence and heightened economic uncertainty. The resulting funding gap in the balance of payments and the real economy in general was almost exclusively covered by increased general government external borrowing under

36 Developments in FDI in Greece were mainly determined by the following inflows: (a) €2.3 billion for the participation of Crédit Agricole (France) in the capital increase of Emporiki Bank; (b) €213 million as a capital endowment of RBS NB by the parent company RBS NB (Netherlands); (c) €164 million for the participation in the capital increase of Pfizer Hellas S.A. by the parent company in Luxembourg; (d) €150 million for the participation in the capital increase of AB Vassilopoulos S.A. by the parent company Delhaize le Lion S.A. (Belgium); (e) €114 million for the participation of the German majority shareholder in the capital increase of Siemens S.A. Electrotechnical Projects and Products; (f) €47 million for the participation of the Cypriot company TBG Cyprus Holdings Limited in the capital increase of Pepsico-IVI S.A.; (g) €43 million for the participation of the Dutch majority shareholder in the capital increase of Siemens Healthcare Diagnostics S.A.; (h) €30 million for the capital increase of Abbott Laboratories Hellas S.A. by the parent company Abbott Investments SARL (Luxembourg); (i) €25 million for the capital increase of AbbVie Pharmaceuticals S.A. by the parent company AbbVie Investments SARL (Luxembourg); (j) €134 million for the capital increase of Allianz Hellas by the parent company Allianz SE (Germany); (k) €286 million for the capital increase of Geniki Bank by the parent company Société Générale (France); (l) €175 million for the capital increase of Johnson & Johnson Hellas S.A. by the parent company J.C. General Services CVBA (Belgium); (m) €139 million for the capital increase of Millennium Bank by the parent company Banco Comercial Portuguès (Portugal); (n) €105 million for the capital increase of American Life Insurance Co by the parent company Metlife Alico (USA); (o) €70 million for the capital increase of Crédit Agricole Life by the parent company Crédit Agricole (France); (p) €60 million for the capital increase of Emporiki Leasing S.A. by the parent company Crédit Agricole Leasing & Factoring (France); and (q) €41 million for the capital increase of Janssen-Cilag Pharmaceuticals by the parent company J.C. General Services CVBA (Belgium). These inflows were partly offset by outflows due to negative reinvested earnings (see main text).

37 The most important transactions concerned inflows of (a) €460 million from the sale (disinvestment) of Eurobank's subsidiary in Poland EFG Eurobank Ergasias S.A. Spolka Akcyjna Oddzial w Polsce to Austrian Raiffeisen Bank International AG; and (b) €100 million from the sale of Piraeus Bank's stake in Marathon Banking Corporation (USA) to Investors Bancorp Inc. There were also outflows of (a) €70 million for the participation of the parent company Jumbo S.A. in the capital increase of its subsidiary Jumbo ECB (Bulgaria); (b) €80 million for the participation of Emporiki Bank in the capital increase of its subsidiary Emporiki Bank Cyprus LTD (Cyprus); and (c) €72 million for the participation of Eurobank in the capital increase of its subsidiary EFG New Property Holdings (Cyprus).

Chart VIII.2 Inward foreign direct investment (2001-2012)

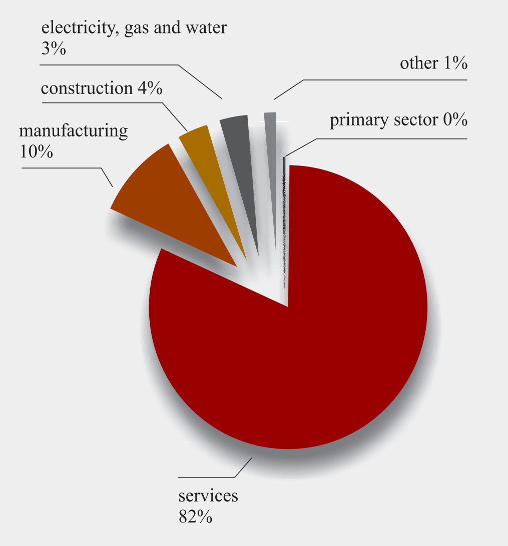
(million euro)



Source: Bank of Greece.

Chart VIII.3 Inward foreign direct investment by sector of economic activity (2001-2012)

(million euro)



Source: Bank of Greece.

the two support programmes for the Greek economy (in 2010 and 2012).

Geographic and sectoral breakdown of FDI

Between Greece's euro area entry and the onset of the financial crisis in 2008, FDI inflows came to a cumulative €14 billion, while FDI outflows amounted to €12.5 billion (see Table VIII.2). Therefore, during the period 2001-2008 net FDI inflows were just €1.6 billion. On an annual basis, non-residents' FDI inflows accounted for 0.9% of GDP on average.

During the crisis, from 2009 to 2012, the already low FDI contracted further, almost by a factor of three. FDI inflows came to a cumulative €5.1 billion, while FDI outflows amounted to €3.9 billion. Therefore, during the period 2009-2012, net FDI inflows fell to just €1.2 billion. On an annual basis, non-residents' FDI inflows shrank to 0.6% of GDP on average.

In most cases, FDI inflows in the period 2001-2008 concerned acquisitions of Greek firms, several of which were state-owned enterprises that were privatised. A small percentage concerned more productive investment, such as creation of greenfield plants or expansion of existing firms. **By contrast, during the period 2009-2012, there was an increase in FDI for business start-ups or capital increases, as well as a relative slowdown in M&As.** However, it should be noted that this development was partly offset by **negative reinvested earnings**, as corporate recipients of FDI in Greece posted losses on their balance sheets (see Chart VIII.2).

Regarding the **breakdown of FDI by sector of economic activity**, for the whole of the 2001-2012 period, 82% of total inflows were channelled to investment in the services sector, in particular in the financial industry, which absorbed 45% of total FDI (see Chart VIII.3). Turning to the **geographic origin of FDI**, almost the whole of inflows came from

Table VIII.2 Direct investment

(million euro)

A. Geographic breakdown of inward foreign direct investment			
	2010	2011*	2012*
European Union - 27	197	376	2,237
Euro area	530	224	2,065
Other OECD countries[1]	45	509	155
Balkan countries[2]	3	-2	-3
Middle East, Mediterranean and former USSR[3]	9	15	21
Other	-4	-77	-118
Total direct investment by non-residents	**249**	**822**	**2,292**
B. Geographic breakdown of outward foreign direct investment			
	2010	2011*	2012*
European Union - 27	607	837	-418
Euro area	489	120	402
Other OECD countries[1]	542	324	218
Balkan countries[2]	90	18	53
Middle East, Mediterranean and former USSR[3]	17	12	12
Other	-80	84	105
Total direct investment by residents	**1,176**	**1,275**	**-30**

Source: Bank of Greece.
* Provisional data.
1 Australia, Canada, Iceland, Japan, S. Korea, Mexico, New Zealand, Norway, Switzerland, Turkey and United States.
2 Albania and former Yugoslavia (Bosnia-Herzegovina, Croatia, FYROM, Serbia and Montenegro).
3 Greece's main trading partners in the Middle East, the Mediterranean and former USSR countries.

the EU-27 and about four fifths (75%) from the euro area. In more detail, the major FDI originators were France and Germany, which account for more than half of FDI in Greece.

Therefore, there is a concentration of FDI inflows in specific sectors of the economy, while international investment interest in Greece seems to be shown, for the time being, predominantly by the EU Member States.

Actually, the most important transactions (of over €1 billion) in 2010-2012 concerned inflows by Crédit Agricole (France), Deutsche Telekom (Germany) and Société Générale (France) for the acquisition and, later, participation in the capital increase of Emporiki Bank, the Hellenic Telecommunications Organisation (OTE) and Geniki Bank, respectively. It should be noted that, due to the small size of FDI in Greece, the effect of individual transactions on total FDI is particularly strong.

In comparison with other countries, the EU-27 and the euro area, Greece lags behind considerably in terms of FDI inflows as a percentage of GDP (see Table VIII.3).

The importance of FDI for growth

Of the three forms of financing, FDI is considered the most stable and sound, with important benefits for the host country. FDI is usually accompanied by technology imports, development of new and innovative products, enhancement of competition and generation of human capital, and at the same

Table VIII.3 Foreign direct investment in Greece and competitor countries

(% of GDP)

	2004	2005	2006	2007	2008	2009	2010	2011	2004-2011 (average)
EU-27	0.6	1.1	2.1	3.6	1.6	2.4	1.7	1.9	1.9
Euro area	1.1	1.9	3.0	4.7	1.2	3.2	2.9	2.7	2.6
Bulgaria	10.3	14.9	23.5	29.4	19.0	7.0	3.2	4.5	14.0
Greece	0.9	0.3	2.0	0.7	1.3	0.8	0.1	0.4	0.8
Ireland	-5.7	-15.6	-2.5	9.6	-6.3	11.5	20.7	5.2	2.1
Portugal	1.0	2.0	5.4	1.3	1.9	1.2	1.2	4.4	2.3
Romania	8.5	6.6	9.3	5.8	6.8	3.0	1.8	1.4	5.4
Turkey	0.7	2.1	3.8	3.4	2.7	1.4	1.2	2.1	2.2

Sources: Calculations based on Eurostat and Bank of Greece data.

time may lead to the development of new branches of activity and changes in the productive structure of the economy (Lipsey, 2004). Regarding Greece, FDI can help Greek businesses integrate into European industrial networks, leading to the adoption of best practices and changes in business and work cultures. Benefits will be visible in both the domestic market and the external balance.

Specifically, FDI helps boost exports both directly, through the export activity of foreign affiliates that tend to be more extrovert than domestic firms (Camarero and Tamarit, 2004; Baldwin and Ottaviano, 2001), and indirectly, through the transfer of know-how and information on foreign markets. This transfer is achieved either through partnerships and integration of domestic firms into international production and distribution networks or by replicating products or production processes of foreign rivals. In this way, domestic firms become more productive and, by extension, more extrovert.

The magnitude of the positive effect of FDI on domestic firms and the economy in general depends on various factors, such as the kind of synergies between foreign and domestic firms, the degree of competition, labour mobility, as well as the quality of domestic human capital, infrastructures and distribution networks.

At the same time, **FDI acts as a shield protecting the host country at times of financial turmoil and investment deleveraging**, as they are characterised by relative inelasticity of outflows due to the long-term horizon of investment.

In this light, taking into account the challenges facing the Greek economy in terms of both its funding gap/liquidity constraints and the long-term restructuring of its growth and production model, attracting FDI —by taking proper action— should be a key priority of Greek economic policy. FDI could also dampen the impact of the recession on Greece's potential output from the current brain drain, erosion of skills due to long-term unemployment and obsolescence of inactive equipment.

Creating a new landscape for FDI

In recent years, the Greek government and corporate Greece have made efforts to restore foreign investors' confidence in the prospects and potential of the Greek economy. Structural changes are underway, with the assistance of Greece's European partners and the IMF, and Greek entrepreneurs actively seek international strategic partnerships, laying the foundations for a gradual reversal of the chronic trend of very low FDI in Greece.

Although structural changes aimed at creating a stable and investment-friendly environment have not gathered momentum yet, the first signs of foreign investors' interest are encouraging (e.g. decisions or declarations of intent by Cosco, Hewlett Packard, Unilever, Henkel, Procter & Gamble, Johnson & Johnson and Mondelez – formerly Kraft Foods). Foreign investors are also interested in the Hellenic Football Prognostics Organisation (OPAP), retail trade in pharmaceuticals and production of generics, the Greek railway operator (TRAINOSE), the Greek Sugar Industry (EBZ) and the Public Gas Corporation (DEPA) group.

Conditions and policies for attracting FDI

FDI-attracting factors are closely connected with domestic competitiveness, in particular **structural competitiveness** (see the Annex to this chapter).

The Greek economy's inability to attract and tap FDI in the current economic conjuncture is attributable to (a) **structural** factors relating to the Greek institutional and regulatory framework, such as an unpredictable tax system, an unsteady regulatory framework, delays in the administration of justice, red tape, lack of transparency and corruption, or inadequate modern infrastructures, labour market malfunctions and rigidities, and market fragmentation;[38] and (b) **conjunctural** factors associated with the adverse macroeconomic environment, liquidity shortages and the sovereign debt crisis.

Accordingly, it is obvious that the government's efforts should focus on **developing investment opportunities and incentives, simplifying procedures** and, generally, **creating investment facilitators**, such as infrastructures, logistical interconnectivity and telecommunications.

In more detail, policies to attract productive FDI, which would maximise benefits to exports and economic activity, include:

(a) Restoring **investors' confidence** and improving the economic climate.

(b) Formulating and implementing consistently a long-term **national growth strategy**[39] backed by all economic and political stakeholders in the private and the public sector. Needless to say, this strategy should identify overlaps or problems, highlight investment opportunities and connect the sectors where Greece has a (real or potential) comparative and competitive advantage, e.g. energy, shipping, transit trade, tourism, banking, agriculture-fishing, foods, pharmaceuticals and informatics-telecommunications.[40]

(c) Speeding up the **privatisation** programme and creating synergies with domestic firms through M&As.[41]

(d) Improving the **business environment** by reforming the institutional framework for private initiative. Although there has been some progress in this area (see *Doing Business 2013*), there is ample room for improvement, most notably in terms of establishing a rational and stable tax regime, cutting red tape and making the government apparatus work more fairly. On the positive side, tax rates on large corporations were recently cut

38 These problems have been repeatedly highlighted by the Bank of Greece in its reports, as well as by international organisations.

39 According to the *Doing business 2013* report, the countries that managed to improve considerably their position were those that have developed a comprehensive strategy for the business environment and competitiveness based on an at least three-year medium-term plan, which they implemented consistently and methodically. See the presentation of the *Doing business 2013* report by World Bank Director Augusto Lopez-Claros, Athens, 30 October 2012.

40 See also Bank of Greece, *Monetary Policy – Interim Report 2011*, November 2011, Chapter VI.

41 See the example of the central and eastern European countries, where, since 1994, privatisations have acted as an incentive for attracting FDI, upgrading domestic technology and improving labour skills (Mody et al., 2007).

from 40% to 33% (new tax law 4110/2013)[42] and action has been taken so that courts will resolve disputes equitably and speedily, providing incentives and reducing risks for FDI. The investment law, public-private partnerships, simplification of licensing procedures (regarding also business parks), the plans to set up a central licensing authority for strategic and private investment (see the strategic and private investment bill to be tabled to Parliament) and the fast track procedure for the approval of large investment projects are also important initiatives for attracting FDI.

(e) Developing the **physical and human capital** by creating infrastructures and promoting labour market and education reforms.[43]

The above factors may replace *market-seeking incentives* for foreign firms with **export-driven incentives**. Another action that could help in this direction would be to promote abroad the recent strategic investment decisions of big foreign companies, which aim at tapping the advantages offered by Greece's geographic location.

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5 INTERNATIONAL INVESTMENT POSITION AND GROSS EXTERNAL DEBT

The **International Investment Position** (IIP) presents the country's net foreign liabilities, taking into account direct investment, portfolio investment, "other" investment and reserve assets.[44] On the basis of provisional data (see Table VIII.4) for 2012, at the end of the year Greece's net foreign liabilities rose by €40.3 billion over the end of 2011, while the IIP recorded a *negative* balance, reaching €219.8 billion, compared with a *negative* balance of €179.6 billion at end-2011. This deterioration (by €40.3 billion) is accounted for by a €109 billion increase in general government liabilities arising from loans (2011: €83.6 bil-

42 It should be noted that in other countries of the European South, corporate taxation is much lower, providing stronger incentives for FDI.

43 Improving labour skills and infrastructures and promoting labour market reform helped other economies of the EU periphery – in particular Ireland – to attract FDI, which was instrumental to achieving trade growth (Barry and Bradley, 1997, Roper et al., 2006).

44 It should be noted that, according to international regulations, direct investment, bonds and equities should be marked to market as at the last day of the reference period.

Table VIII.4 Greece's international investment position

(million euro)

	2010	2011[1]	2012*
1. Direct investment	5,686	11,228	5,986
Abroad by residents	31,899	33,772	33,627
In Greece by non-residents	26,213	22,544	27,641
2. Portfolio investment	-88,162	-17,716	51,332
Assets	71,839	63,920	111,955
Liabilities	160,001	81,636	60,623
3. Financial derivatives	1,395	2,104	2,850
4. Other investment	-142,328	-180,504	-285,552
Assets	112,576	106,275	91,073
Liabilities	254,904	286,779	376,625
5. Reserve assets	4,777	5,332	5,500
Net international investment position (i.i.p.) (1+2+3+4+5)	-218,632	-179,556	-219,884
GDP	222,151	208,532	195,018
Net i.i.p. as % of GDP	-98.4	-86.1	-112.8

Source: Bank of Greece.
* For 2012, Bank of Greece estimates based on provisional b.o.p. and i.i.p. data.
1 Revised data.

Table VIII.5 Gross external debt position

(million euro)

	2007	2008	2009	2010	2011[1]	2012*
A. General government	**177,106**	**191,985**	**224,946**	**181,902**	**156,995**	**244,057**
B. Bank of Greece	**10,797**	**35,348**	**49,036**	**87,088**	**104,750**	**98,355**
C. Other credit institutions	**97,424**	**111,194**	**112,861**	**116,422**	**91,191**	**75,500**
D. Other sectors	**19,501**	**21,252**	**24,216**	**16,691**	**9,698**	**12,131**
E. Direct investment (intercompany lending)	**3,690**	**4,614**	**5,716**	**5,072**	**7,316**	**7,363**
Debt liabilities to affiliated enterprises	827	1,082	2,824	1,635	1,750	1,722
Debt liabilities to direct investors	2,863	3,532	2,892	3,437	5,566	5,641
Gross external debt (A+B+C+D+E)	**308,517**	**364,393**	**416,775**	**407,175**	**369,950**	**437,406**
% of GDP	**138.25**	**156.26**	**180.36**	**183.29**	**177.41**	**224.29**

Source: Bank of Greece.
* For 2012, Bank of Greece estimates based on provisional b.o.p. and i.i.p. data.
1 Revised data.

lion, 2012: €192.7 billion), mostly under the support mechanism, which amounted to €182 billion in 2012, from €73.0 billion in 2011.

This worsening was offset, on the one hand, by a €48.0 billion rise in portfolio investment assets (from €63.9 billion to €111.9 billion in 2012), mainly stemming from EFSF bonds transferred to banks in the context of their recapitalisation, as well as EFSF bonds delivered to Greek holders of Greek government bonds (social security funds – private entities)[45] following the PSI+, and, on the other hand, a €21 billion decrease in portfolio investment liabilities (from €81.6 billion in 2011 to €60.6 billion in 2012). This reduction is mainly attributable to the PSI and PSI+, as well as the bond buyback completed in December 2012. It should be noted that, in this calculation, Greek government bonds held by the ECB and the national central banks are marked at face value, while private sector holdings of Greek government bonds are marked to market.

As a result of these developments, at end-2012 the IIP corresponded to 112.8% of GDP, against 86.1% of GDP in 2011.

IIP liabilities, excluding equities and financial derivatives liabilities, constitute Greece's **Gross External Debt**, which came to €437.4 billion in 2012, up by €67.4 billion over 2011 (see Table VIII.5). This rise primarily stems from an €87 billion increase in liabilities out of general government borrowing, chiefly under the Financial Support Programme, which was partly offset by a decrease in the liabilities of the TARGET account of the Bank of Greece, as well as a €15.7 billion drop in credit institutions' foreign liabilities.

45 The PSI and PSI+ took place during the reviewed period (first and second quarters of 2012). The bond buyback took place in the last quarter (it was completed in December 2012).

ANNEX TO CHAPTER VIII
OUTWARDNESS AND COMPETITIVENESS OF THE GREEK ECONOMY

1 INTRODUCTION

Increasing Greece's openness and improving its overall international competitiveness remain key to the sustainable recovery of its economy.

The Greek exports of goods and services as a percentage of GDP, having risen strongly in the 1970s, began to decline after 1981 from a level of 26%. Most importantly, since 1993 (when it stood at 17.2%) this percentage has been the lowest among the 17 euro area member countries. Despite a gradual increase thereafter on the back of growing market globalisation and the country's entry into the euro area, the share of exports in Greek GDP not only remains the lowest among the euro area and EU-27 countries, but also falls increasingly short of the respective averages. For instance, it was 25.7% in 2000 and 22.2% in 2010, against an average of 36.8% and 41.1% respectively for the euro area as a whole.

After 2009, when Greece's export share had reached a post-1996 record low of 19.3% of GDP on account of the international crisis and a sharp fall in world demand, it saw a small but steady improvement. According to estimates from the European Commission, Greek exports of goods and services were 25.1% of GDP in 2011 and 27.8% (an all-time high) in 2012, whereas a further increase to 30.2% is projected for 2013. Despite these recent positive developments, in 2012 Greece was still the least export-oriented country in EU-27 based on the ratio of its total exports (goods and services), in value terms, to GDP.[46]

2 EXPORTS OF GOODS AND SERVICES: DEVELOPMENTS AND PROSPECTS[47]

According to balance of payments data, Greece's exports of goods and services followed an upward trend throughout the 2000-2008 period, despite their small share in GDP relative to the EU-27 average and a loss in competitiveness. In particular, receipts from exports of goods and services grew by about 7% on average per annum, without significant differences between the growth rates of the individual components (7.8% for goods and 6.5% for services). Receipts from services exports, chiefly travel services and sea transport, were almost double those from exports of goods and accounted for over 65% of the total.

The deterioration in the balance of goods and services, especially after 2005, which occurred despite the rise in export receipts, was mainly due to an increase in the non-oil import bill (as well as in the net oil import bill). Import payments were triple the size of export receipts, in response to the needs of production —given the import content of exports (estimated at 35% for manufacturing according to OECD data)— and increased consumption.

After their marked fall in 2009, receipts from exports of goods and services began to rebound in 2010. According to the latest data, the deficit of goods and services in 2012 (based on Bank of Greece balance of payments statistics) narrowed to 18% of the 2008 figure; this improvement was primarily due to developments in the trade balance – chiefly a strong decline in goods imports and a pickup in the export activity of domestic firms. Specifically, receipts from goods exports have shown strong growth since the second half of 2010, with the total for 2011 rising above its 2008 level, whereas receipts from goods exports excluding oil and ships remained virtually unchanged between 2008 and 2012.

Over the same period, receipts from services have come under strain. Sea transport receipts have declined, due to falling freight rates, as the world fleet transport capacity continues to grow faster than the world trade volume. Besides, tourism has been hit by the adverse sentiment towards Greece, fuelled by

46 European Commission, *Statistical Annex of European Economy*, November 2012.
47 The analysis in this section is based on Bank of Greece balance of payments data and on product and country breakdown. A broadly similar picture is suggested by ELSTAT data on trade in goods.

domestic social tensions and their wide coverage by international media, which diverted tourists to other destinations (especially in 2010); more recently, another factor that weighed on tourism was the climate of uncertainty that prevailed during the protracted election period.

Eventually, receipts from exports of goods as a percentage of total receipts from exports of goods and services rose significantly, from 36.8% in 2008 to 44.8% in 2012.

The rapid growth of exports and the improvement in the non-oil trade balance have resulted from the recession and weak domestic demand, in turn reflecting declines in consumption, investment and production activity. This situation urged domestic firms, led by the sectors of metallurgy, food, chemicals/plastics, machinery and electrical equipment, to turn to foreign markets, where they fared considerably well.

This outward-orientation was not accompanied by significant changes in the product structure of exports. Between 2008 and 2012, exports of agricultural products and raw materials saw their shares in total exports (excluding oil and ships) increase by 4 and 1 percentage points, respectively, at the expense of manufacturing goods, the bulk of which are low- and medium-tech products. Also, the rise in exports was not accompanied by new investment, while the industrial output index declined across most industries.

The deterioration of the global economic environment, in particular in EU countries which represent Greece's leading export market, a surge in uncertainty sparked by domestic developments and the severe liquidity constraints facing firms, all resulted in a deceleration in export growth in 2012. Due to a lack of liquidity, domestic firms are finding it increasingly difficult to import raw materials and intermediate products, while subdued investment activity implies the obsolescence of capacity. Against this background, the growth rate of receipts from exports of goods (excluding oil and ships) decelerated in 2012.

The sustained positive growth in exports has been supported by a shift of Greek exports to non-EU markets that show robust growth. Exports (excluding oil and ships) to the European Union as a percentage of total Greek exports moderated to 60.8% in 2012 (according to ELSTAT data for January-November 2012) from 67% in 2008. Conversely, there has been an increase in the proportion exported to markets that are already significant export partners for Greece, such as Turkey, Russia, the United States and North Africa and Middle East countries, but also to new markets, still receiving a small percentage of Greek exports, such as Japan, China and India. This geographical re-orientation of Greek exports was also supported by the depreciation of the euro and the decline in freight rates.

In the current juncture, Greek firms have once again managed to take advantage of shifts in international demand patterns and penetrate new export markets, just as they had expanded to South East European countries in the mid-90s, but have failed to change significantly the composition (in particular the sectoral composition) of exports. Meanwhile, Greece's export market shares remain low.

3 FACTORS THAT HAVE CONTRIBUTED TO AN INCREASE IN EXTROVERSION

The increased extroversion of Greek firms over the past three years is certainly associated with (a) a slump in domestic demand in the context of the recession, urging firms to find new markets in order to survive, and (b) to a lesser extent, a gradual improvement in Greece's international competitiveness indicators.

Improvements in price and labour cost competitiveness

According to the available real effective exchange rate (EER) indices compiled by international organisations, in 2010, after more than two decades of almost continuous declines in international price and labour cost competitiveness, the Greek economy began to recover a significant part of its losses. Based on EER indices deflated by relative labour costs, the Bank of Greece expects that the competitiveness lost between 2001 and 2009 will have fully been regained by 2013, and an even more optimistic outlook is suggested by the ECB and the European Commission (see Chapter VII.3). It should be noted that a recent study by Eurobank on the prospects for altering the economy's structure towards a new export-led growth model estimates that regaining cost competitiveness losses would translate into a significant increase in the country's world market shares in the long run.[48]

Evolution of structural competitiveness

Despite the improvements in Greece's international price and labour cost competitiveness observed in 2010-2012, Greek firms still face several other obstacles and costs that prevent them from becoming more competitive internationally. Composite competitiveness indicators for Greece continue to point to a very low level of competitiveness (by international standards) and - until recently - a deterioration after 2007-2008. In the World Economic Forum's *Global Competitiveness Report 2012-2013*[49] (September 2012), Greece now ranks 96th out of 144 countries and, as in the previous two years, remains the EU's lowest-ranking country.[50] This is attributable to: (a) its weak macroeconomic environment; (b) the adverse financial market sentiment and a lack of investor interest; (c) inefficiency of its public administration and corruption; and (d) the rigidity of its labour market. According to the same study, the most problematic factors for doing business in Greece are: (a) inefficient government – bureaucracy; (b) access to financing; (c) policy instability; (d) tax regulations; and (e) corruption.

By contrast, the country's assessment in the World Bank's *Doing Business Report 2013* was more positive – Greece ranked among the world's 10 most improved economies in 2013. The Doing Business Report, launched ten years ago, reviews business regulation in about 185 economies and ranks them on the basis of two sets of criteria, referring to: (a) the role of the regulatory framework and the various institutional bodies; and (b) the complexity and cost of starting, operating and potentially resolving a business.

The regulatory reforms implemented in 2012 in such areas as the issuance of building permits, investor protection and insolvency procedures markedly improved Greece's ranking, from 100th in the 2012 survey to 78th in the 2013 survey. In particular, Greece moved up from the 155th to the 117th place in terms of the strength of investor protection index. This was largely due to a circular issued by the Hellenic Capital Market Commission, which clarified the notion of "material" transactions between listed companies and affiliated parties and specified the obligations of issuers regarding public disclosure of inside information.

Also, in the *2012 Euro Plus Monitor* published by the Lisbon Council think tank on 29 November 2012, Greece ranked first among 20 countries (i.e. the euro area countries, Poland, Sweden and the United Kingdom) on the Adjustment Progress Indicator, up from second in 2011. It also earned the best score in the "reform drive" and "fiscal adjustment" sub-indicators, while it was no. 3 in "labour cost adjustment" and no. 5 in "external adjustment".

48 See Malliaropulos and Anastasatos (2013). The study estimated that the total decline in Greece's relative labour costs would translate into a 24% increase in the market share of Greek exports by 2020 and a 14 percentage point rise in the exports-to-GDP ratio.

49 The World Economic Forum (WEF) defines competitiveness as the set of institutions, policies, and factors that determine the level of a country's productivity.

50 Compared with 2011, Greece dropped by six places in the global competitiveness index ranking. This was in line with the steady deterioration in the country's competitiveness after 2006, when it had ranked 47th out of 125 countries. Moreover, Greece ranked at the bottom place in Deloitte's survey *Global Manufacturing Competitiveness Index 2013*.

4 THE OUTWARDNESS OF THE GREEK ECONOMY AND ITS EVOLUTION SINCE 2010

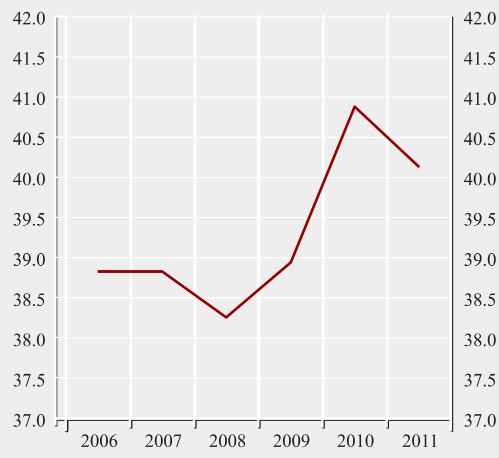
A small, open economy like Greece faces ever-stronger international competition. Coping with competitive pressures, especially within a single currency area such as the eurozone, requires the constant use of mechanisms other than the exchange rate tool. This implies a need for a shift to an economic model of high productivity and greater export specialisation.[51]

The trade openness of the Greek economy

In the Greek economy, the key tradables come from the primary sector, manufacturing, professional and financial services and tourism-related services, such as accommodation, food services, air and sea transport, etc.[52,53]

Chart A The share of tradables in total value added in the Greek economy

(percentages)



Source: ELSTAT, National Accounts.

As a percentage of total value added in Greece, tradable goods and services accounted for 38.8% in 2006 and 40.1% in 2011 (see Chart A).[54]

In terms of the export orientation of its production structure, Greece lags behind the euro area average. The share of tradables in total value added in the euro area was 44.3% in 2006 and 43% in 2010 (latest available year). However, it should be noted that there are differences across countries: France and Portugal each had a tradables share of 40% (i.e. very close to that of Greece) in 2006-2010, compared with 48% in Germany[55] (see Chart B).

Between 2008 and 2011, Greece's share of tradables improved marginally from 38% to 40%. As a result, the gap relative to the euro area average narrowed gradually from 5.5 percentage points in 2006 to 2.1 percentage points in 2010.

The increase in the share of tradables in Greece over the 2008-2010 period reflected positive contributions from several *subsectors* of manufacturing, such as food, beverages, tobacco and petroleum products, as well as from tourism services and certain financial services[56] (see Chart C). By contrast, the primary sector made a negative contribution, as did most tradables sectors, which saw their

51 A similar emphasis on the need to strengthen the productivity and openness of the Greek economy can be found in a recent study by Malliaropulos and Anastasatos (January 2013). As highlighted in the study, reinforcing competition in the euro area cannot be solely based on the (equiproportionate) horizontal reduction of unit labour costs in all sectors of the economy. This is so because the poor performance of Greek exports until 2009, usually attributed to a drop in price competitiveness owing to the rise in wage costs, largely reflects increasing wages and prices of non-internationally-tradable goods and services relative to tradables.

52 Mining and quarrying" and "real estate activities" are excluded from the calculation of total value added (see Gibson, 2010). Alternative tradable sector definitions (see Gibson, 2010) instead exclude one of the following service combinations: (a) professional and financial services; (b) air and sea transport services; and (c) financial and transport services. Although tradables account for a smaller share of total value added in 2006 under each of these alternative definitions (for instance their share would be 28.6% in 2006 under the alternative definition (c), compared with 38.8% under the baseline definition used here), the qualitative conclusions about how this share changed after the onset of the crisis remain the same. However, under the alternative definitions, the increase in the share of tradables is larger, given the strong decrease in value added of financial services that outpaced the decline in total value added.

53 According to data from the input-output table for 2010, tradables accounted for 83% of total exports. This figure does not take into account the contribution of the accommodation and food services sector, as available data do not allow a distinction between resident and non-resident recipients of these services.

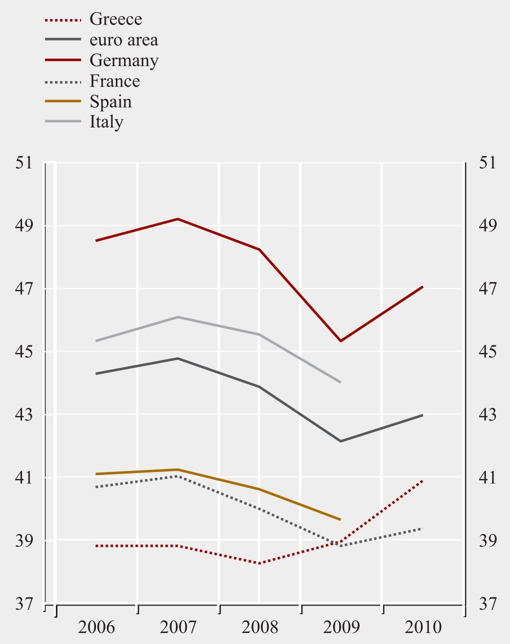
54 Due to a break in the series available from ELSTAT in 2005, the breakdown of total value added provided here only covers the period after 2006. Data for the period after 2008 are provisional.

55 Data for France, Italy and Spain are period averages for 2006-2009.

56 Financial services that posted an increase in their value added include: "administration of financial markets", "security and commodity contracts brokerage", "other activities auxiliary to financial services, except insurance and pension funding", "activities auxiliary to insurance and pension funding" and "fund management activities".

Chart B The share of tradables in total value added in Greece, the euro area and selected euro area countries

(percentages)



Source: ELSTAT, National Accounts.

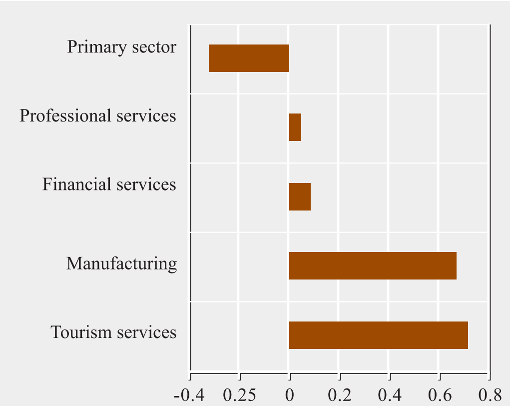
value added drop in the 2008-2011 period. The marginal reduction in the share of the tradables sector between 2010 and 2011 (Chart D) is largely attributable to the very negative developments in value added in legal and consultancy services, manufactured food products and sea transport.

After a steep fall in 2009, Greek exports of goods started to rebound as from mid-2010 (see Section 2 of this Annex). In 2012, exports were led by agricultural products (e.g. fish, fruit and vegetables) and raw materials (e.g. aluminium products and electricity).[57] However, one characteristic feature of Greek exports is that they are concentrated on relatively low-skill intensive (hence low added value) sectors (see also European Commission, 2010). Moreover, only a small proportion of Greek firms (1.57%[58] of the total in 2011) are engaged in some sort of export activity and there is fragmentation of export activity, with 40% of Greek manufacturing SMEs exporting on average only 25% of their production (see National Bank of Greece, 2012[59]).

57 Data from the Exports Research Centre of the Panhellenic Exporters Association, Press Release, 18 December 2012 (available in Greek at: http://www.pse.gr/node/12637).
58 A total number of 12,000 firms. These figures, which are based on ELSTAT data, were published in January 2013 by the Exports Research Centre of the Panhellenic Exporters Association. Available (in Greek) at: http://www.pse.gr/node/12647.
59 *Survey of Greek SMEs*, July 2012. Similar conclusions are derived from the Panhellenic Exporters Association's sample survey of its members, according to which only 23% of Greek exporters are "large" or "very large" enterprises.

Chart C Sectoral contributions to changes in value added of total tradables

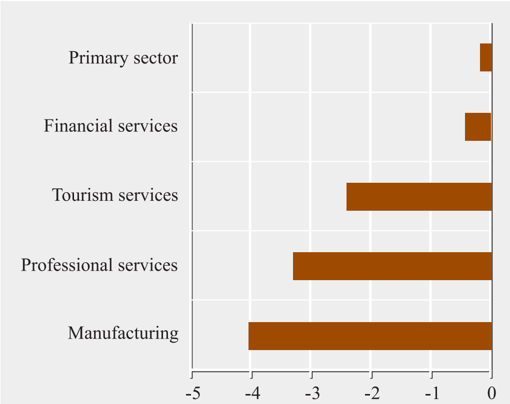
(2008-2010 average; percentage points)



Source: Eurostat, National Accounts.

Chart D Sectoral contributions to changes in value added of total tradables in 2011

(percentage points)



Source: Eurostat, National Accounts.

Export orientation and productivity

As regards the ability of domestic tradable sectors to compete internationally, Chart E shows average and median productivity for each tradable sector in Greece and for selected sub-sectors in 2010 compared with the respective euro area averages. Overall, and with the notable exception of tourism services, Greek tradable sectors lag behind in terms of productivity and competitiveness.

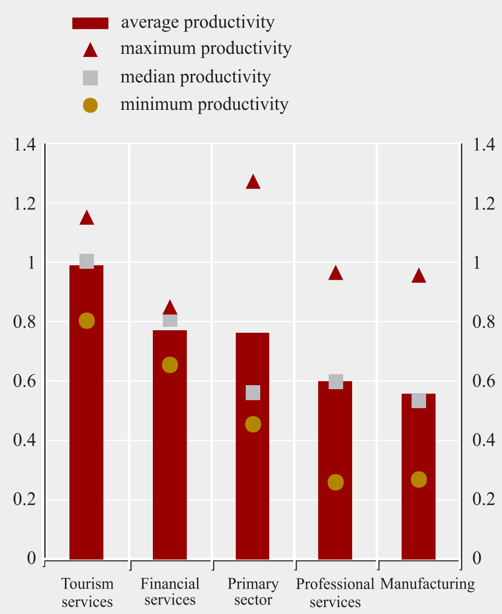
There are at least two important exceptions to this overall negative picture. For one, sectors with higher initial productivity tend to be associated with higher export activity relative to the euro area (see Chart F).[60] Second, as shown in Chart E, there are sectors in which productivity exceeds the euro area average. This is the case with "fisheries and aquaculture" within the primary sector, or "accommodation and food service activities" and "water transport" in tourism services, suggesting their huge export potential. Indeed, in 2010, a substantial share of the total production of these sectors (as much as 95% of total water transport, see also Chart F) was exported. Taken together, these sectors make a major contribution to the competitiveness of the Greek economy, with an aggregate share of 49% in total exports for that year[61] (along with a share of 8% in total imports.

In fact, given the capabilities of the Greek economy (e.g. in terms of primary resources, know-how, infrastructure, etc.) and the dynamics of supply and demand internationally (in terms of market size and growth rates), McKinsey (2012) identifies tourism, food production and the primary sector (especially aquaculture) as high potential areas that can drive Greece's economic growth over the next ten years.

In order to promptly boost the country's international competitiveness and improve its trade balance, it is essential to create the conditions that will foster the productivity of firms active in already strongly export-oriented sectors.

Chart E Productivity by sector or industry of the Greek economy compared with the euro area, 2010*

(productivity ratio: Greece to euro area)

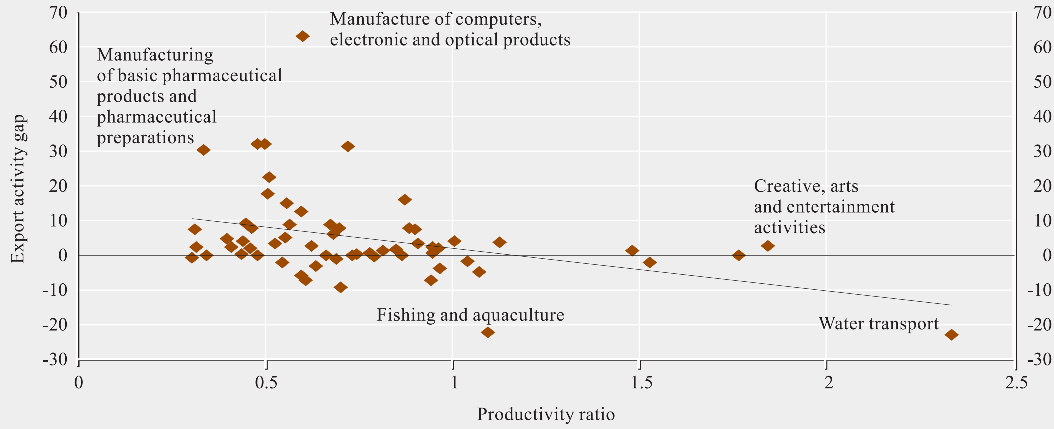


Source: Eurostat, National Accounts.
* Productivity is defined as gross value added per employee (in euro; at constant prices of 2005). Euro area data refer to 2009 (latest available year). Averages are not weighted.

Based on a sample of European firms, Altomonte et al. (2012) identify the following four factors as important for a firm's productivity to rise above (or stay at) a minimum performance threshold (or 'productivity cut-off') enabling it to engage in exports: human capital and R&D intensity; availability of finance (especially in the capital market); sound corporate governance (e.g. the use of performance-based salaries and a reduced presence of managers belonging to the family owning the firm); and the affiliation to a foreign group. The study also found that a small firm size does not affect the firm's medium-term productivity or export orientation, but merely its short-term growth dynamics.

60 This points to a convergence between domestic sectors and their euro area counterparts in terms of export intensity (exports as a share of output).
61 These sectors accounted for 14% of total value added (and 35% of tradables).

Chart F Productivity and export activity per sector: gap vis-à-vis the euro area (selected sectors)



Source: Eurostat, National Accounts.
Productivity ratio: productivity per sector of the Greek economy to productivity of the respective euro area sector in 2006. Productivity is measured as gross value added per employee (in euro; at constant prices of 2005). For the euro area: non-weighted average of countries.
Export activity gap: gap, in percentage points, of export activity (as a percentage of exports in total output) per sector of activity in Greece, relative to the respective euro area sectors, in 2010. Export activity is defined as the percentage of output exported per sector. The export activity gap is defined as the difference of export activity per sector in the Greek economy vis-à-vis the euro area.

With respect to these four factors, Greece spends little on R&D; has a fairly high quality of human capital[62] (although there is scope for improvement) and an enterprise structure dominated by traditional, family-owned businesses and SMEs in which international groups only play a limited role through their FDI and affiliate partners.[63] While these structural characteristics of the Greek economy have been affected by the crisis, there is no evidence that changes have been so drastic as to have an impact on the export orientation of local firms.

Export orientation and liquidity of firms

A factor that is emerging as critical for local firms to remain export-oriented during the crisis is liquidity. According to the Panhellenic Exporters Association's survey[64] (see Table A), in 2011 the percentage of Greek exporters facing severe liquidity constraints rose to 25.2%, from 10.65% in 2009. The lack of liquidity was exacerbated in 2012, when this percentage rose further to 38.7%. It is worth noting that, in the latest (July 2012) survey of Greek SMEs conducted by the National Bank of Greece, exporting SMEs had better **liquidity ratios** than non-exporting ones.

Other challenges facing exporting firms, SMEs in particular, include VAT refund arrears and rising operating costs. The uncertain political and economic environment for businesses also plays a negative role.[65, 66]

Policy interventions towards greater export orientation

To address the pressing liquidity problems facing exporting firms, a number of policy interventions have been implemented, such as the Extroversion Programme of ECIO (Export Credit Insurance Organisation). Also, as part of the "national exports strategy", the Ministry

62 According to the World Economic Forum (2012), the "reasonably well-educated workforce" is one of the strengths of the Greek economy.
63 See OECD (2012) at: http://www.oecd.org/greece/44785912.pdf
64 See http://www.pse.gr/sites/default/files/DT_EXPORTS_REUSTOTHTA.doc (in Greek).
65 See http://www.pse.gr/sites/default/files/DT-9mino-2012.doc (in Greek).
66 Similar problems have been identified by the Greek International Business Association (SEVE), see http://www.seve.gr/default.aspx?lang=el-GR&loc=1&&page= 589&newsid=1140 (in Greek).

Table A Export activity data based on a sample of Panhellenic Exporters' Association members

Businesses reporting:	2009	2010	2011	2012
Liquidity problems	10.65%	7.3	25.2%	38.7%
Interruption of export activity	7.7%	3.65%	2.9%	2.9%
Start of export activity	1.2%	11%	32.8%	9.5%

Source: Panhellenic Exporters' Association (PSE).

of Development, Competitiveness, Infrastructure, Transport and Networks has announced actions aimed to simplify export procedures and reduce the associated operating costs for businesses.[67, 68]

Along with actions focused on existing export-oriented sectors, there is a need, over the medium term, for appropriate measures to promote potential new exporters among businesses and sectors with an international competitive advantage. *It is worth noting that McKinsey (2012) sees significant growth prospects in industries conventionally classified as "non-tradable". Prominent examples are medical tourism, elderly care and education (with an emphasis on classical studies).*

Moreover, in addition to policy measures tailored to the needs of specific branches and businesses, there is a need for across-the-board policy interventions aiming to establish (or strengthen) the pillars of competitiveness of the national economy. These could include measures to enhance infrastructures (e.g. under the National Strategic Reference Framework (NSRF)), education reforms, the creation of industrial zones and a stable tax system that provides incentives to invest.

5 COMPETITIVENESS AND EXTERNAL IMBALANCES IN EURO AREA ECONOMIES: A RECENT STUDY

Euro area economies are characterised by significant trade imbalances. Before the introduction of the euro, a number of countries showed trade surpluses, while others ran deficits for long periods. The adoption of the euro had an impact that varied across individual Member States, but trade performance divergences still remain today, thirteen years on. Given that euro area economies are linked together by a common monetary and exchange rate policy, and in view of the goal to improve their trade performance, an investigation of the factors underlying the evolution of their balance of payments is particularly relevant. In this respect, the ECB together with a team of experts from twelve national central banks carried out joint research on the role of competitiveness in the trade balances of individual euro area countries. (The team included staff from the Economic Research Department of the Bank of Greece). The study was published in December 2012 under the Occasional Papers series (ECB, 2012). Its findings lead to policy proposals of particular relevance to the Greek economy.

The paper is divided into two parts:

In the first part, the analysis focuses on examining the behaviour of the trade balance and the factors underlying such behaviour, for the period after the introduction of the euro. Empirical observations from the recent past help to draw conclusions about the factors that determine a country's trade performance and

67 See http://www.mindev.gov.gr/wp-content/uploads/2012/06/Greece_Trade_Facilitation_Strategy_Roadmap_Oct-2012.pdf
68 The "national exports strategy" being developed envisages, among other things, an enlargement of the country's export base.

to derive policy recommendations. In the second part, econometric model simulations of the euro area are applied to investigate a number of alternative policy options as highlighted by the analysis in the first part. The results are reported and commented.

The first part begins by analysing how competitiveness affects a country's trade position. The analysis allows for a distinction between the effects from changes in price competitiveness and changes in non-price competitiveness.

I) Price competitiveness. A drop in competitiveness, measured by differences in unit labour costs, was found to lead to the deterioration in the trade balance. The analysis showed that, in several countries (including Greece), the compensation of employees rose more than proportionately to productivity in 1999-2007, thus adversely affecting price competitiveness. This might have been due to either an increase in wages or a fall in productivity. As regards the first possibility, an explanation supported by evidence from deficit countries could be that a surge in domestic demand for non-tradables (such as the construction sector) pushed up wages in the relevant industries with possible spillovers to wages in the tradable sector and a loss of competitiveness for tradable goods and services. Turning to the second possibility of a reduction in productivity, the boom seen in non-tradable industries of external deficit countries may have caused the most productive and skilled workforce to move into these industries (construction, financial services, government, etc.) and away from non-tradable ones, thus reducing the productivity and price competitiveness of the latter. Based on these observations, the policy proposals arising from the paper advocate: (a) a reduction in unit labour costs by linking wages to productivity, possibly through labour market reforms; and (b) an improvement in competitiveness.

Moreover, an examination of the data revealed that changes in wages and unit labour costs do not always pass through to general price indices or to export prices. This observation supports a case for the implementation of reforms in product markets aimed to increase competition, thereby making prices more responsive to labour cost reductions.

Empirical evidence also showed that countries with large current account deficits (as is the case with Greece) tend to have high employers' social security contributions that weigh on total product costs, thereby negatively affecting price competitiveness. To address this, one policy option would be a "fiscal devaluation", in which it is presumed that a cut in employers' social security contributions has a positive effect on competitiveness as it reduces costs. Such a cut could be offset by higher indirect taxation (e.g. VAT) that can lead to a rise in the consumer prices of domestic and imported products, thus a decline in imports and an improvement in the trade balance.

The trade balance could also benefit from a strengthening of productivity, which can bring about a decline in unit costs and improves the quality of products and exports in particular. According to economic theory, productivity gains are associated with:

(a) Technological improvements. Technological progress underpinned by R&D investment increases exports, reduces import penetration and therefore contributes to improving the trade position. Indeed, those euro area economies that invested in R&D in 1999-2007 saw their trade balances improve. According to the data, *of all euro area countries, Greece saw the most pronounced reduction in R&D spending in 2007-2009.*

(b) A skilled workforce. Yet, data for individual euro area member countries do not indicate a significant correlation between trade balance improvement and labour force skills and education.

(c) The institutional framework for production. The business environment, the lack of red tape and the ease of starting a business can all affect productivity and production costs (the ease of entry into and exit from a sector facilitates the survival of the most productive firms in an economy). Empirical evidence from the euro area supports this view: the countries with the most business-friendly environment are also those with the best trade performance. *In terms of business-friendliness and flexibility of its business environment, Greece was among the worst-ranking countries in 1999-2007.* Also, as mentioned earlier, economies with large external deficits (such as Greece), productivity gains are smaller in the tradables sector as compared with the non-tradables sectors. This could be attributed to the fact that higher domestic demand for non-tradable services may have triggered a reallocation of skilled resources from the former to the latter. Indeed, large deficit countries tend to have a higher share of non-tradables in total output.

II) Non-price aspects of competitiveness refer to factors such as product quality, reliability and reputation, availability and reliability of after-sales services and preferences. Improving non-price competitiveness depends also on technological innovation and the development of new products and technologies, and can be further driven by R&D and institutional reforms that foster entrepreneurship. The empirical evidence presented in the paper suggests that non-price competitiveness was equally important as price competitiveness in euro area countries' trade performance in the review period. Particularly in countries like Ireland or Finland that specialise in high-tech products, non-price competitiveness was found to have been more important than price competitiveness in driving export dynamics. This suggests that institutional (structural) reforms in product markets (such as a sound patent protection regime, protected designation of origin, and a shift of production towards high-tech products) are likely to be as effective as cost-cutting policies in boosting exports and improving the trade balance.

Apart from competitiveness, other factors that drive trade balance dynamics in euro area countries are the following:

(a) the sectoral composition of exports, i.e. the types of products exported (agricultural, industrial, high-tech, etc.)

(b) the geographic breakdown of exports (to other euro area countries, developing countries, or fast-growing emerging market economies, etc.); and

(c) the import content of exports, referring to the extent to which exports depend on imports of goods and services. A high import content of exports means that, as exports grow, so do imports, therefore any improvements in the trade balance are less than proportional to the increase in exports.

The analysis goes on to examine the impact of the above factors on the trade of euro area countries. As shown by the data, all euro area countries except Austria lost export market shares between 1999 and 2007, partly on account of the sectoral and geographic composition of their exports. This loss was limited in the case of Greece over the 1999-2007 period, although this was not so much due to a sectoral diversification as to the geographic orientation of its exports towards emerging countries in the Balkans and Turkey. However, during 2008-2010, Greece faced a further loss of market share, as a result of changes in the structure and strength of demand from these countries. According to estimates, the exports of the more open economies of the euro area have higher import content. Greece is one of the least open economies of the euro area, which is consistent with the relatively low import content of its exports (35%).

The second part of the paper uses four macroeconometric models of the euro area to simulate alternative policy scenarios, assuming: (a) a price competitiveness shock; (b) a non-price competitiveness shock; (c) a fiscal devaluation; and (d) a productivity shock. The results of the model simulations reveal that, although all scenarios have a positive impact on GDP, the impact on the current account position is model-dependent. Gains in both price and non-price competitiveness are found to have a positive effect on the current account position, but the effect of the latter is more lasting. Fiscal devaluation has also a significant positive impact on the current account position. The effects of productivity gains are less straightforward and depend on the model used and on whether productivity gains are temporary or permanent in nature. Under all scenarios, however, productivity gains in the tradables sector were shown to play a significant part in improving the current account position.

The main conclusions of the paper can be summarised as follows:

(1) Gains in non-price competitiveness are equally, if not more, important as gains in price competitiveness for improving an economy's trade performance, they last longer, and they are also closely linked to R&D expansion and the quality of the institutional framework governing product markets.

(2) Price competitiveness itself depends not only on wage developments, but also on increases in productivity that can be achieved through technological innovation and the improvement of the institutional framework governing product markets.

(3) Price competitiveness can be improved by cuts in employers' social security contributions. Replacing these contributions with indirect taxes on import prices can have an additional positive effect on the trade balance through a drop in imports.

(4) Product market reforms contribute to enhancing competitive conditions, so that decreases in unit labour costs can more directly pass through to export prices.

(5) The sectoral and geographic composition of exports and their import content are significant determinants of trade balance dynamics.

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IX FISCAL DEVELOPMENTS AND PROSPECTS[1]

1 REVIEW OF DEVELOPMENTS AND PROSPECTS

The fiscal consolidation efforts of the past few years have led to significant improvements in fiscal aggregates. According to the European Commission's December 2012 report,[2] Greece has done a tremendous fiscal consolidation effort, one of the biggest fiscal consolidations that any EU country has done over the past 30 years. Specifically, the general government deficit on a national accounts basis fell from 15.6% of GDP in 2009 to 9.4% of GDP in 2011, and is expected to further decline substantially to 6.6% of GDP in 2012 according to the Introductory Report to the 2013 Budget and the European Commission[3] (see Table IX.1). The primary deficit also recorded a significant decline, from 10.5% of GDP (or €24.1 billion) in 2009 to 2.3% of GDP (or €4.8 billion) in 2011, and is estimated to have dropped further to 1.5% of GDP in 2012.

Progress is more apparent in terms of the general government *cyclically adjusted primary balance*, since fiscal efforts take place in a period of deep and protracted economic downturn. In particular, the *cyclically adjusted primary deficit* is estimated to have improved by around 13 percentage points of GDP from 2009 to 2012, while according to the European Commission, the first Economic Adjustment Programme adopted in May 2010 called for a minimum improvement of 10 percentage points of GDP.[4] In addition, the European Commission expects that the budget will be in primary balance in 2013, and a cyclically adjusted primary surplus will be achieved.

According to available data on a cash basis for 2012, the general government deficit is estimated at 6.5% of GDP (€12,531 million), against a deficit of 9.9% of GDP (€20,646 million) in 2011. Moreover, a primary surplus of 0.2% of GDP was achieved, against a primary deficit of 1.7% of GDP in 2011. (It should be noted that these cash data are compiled by the State General Accounting Office and published in the "General Government Data" monthly bulletin.) The cash balance on an unconsolidated basis differs from the balance on a national accounts basis in that the calculation of the latter also entails necessary data adjustments on a national accounts basis according to ESA 95. Compared with 2011, the state budget balance and the balances of social security funds appear to have improved, while the balances of local governments deteriorated slightly. However, government arrears have increased by a total of €1,001 million since the beginning of 2012, with the largest rise recorded by social security funds and hospitals.

In January-December 2012 the state budget deficit stood at 8.1% of GDP (€15,688 million), compared with a deficit of 10.9% of GDP (€22,773 million) in 2011 (see Table IX.9), which is €624 million less than the revised annual fiscal targets for 2013. During the same period, the state budget primary deficit was 1.8% of GDP, overachieving by around €1,112 million the revised targets set in the budget (according to the Introductory Report to the 2013 Budget), and was substantially better than the primary deficit of 2011 (3.1%).

The continued efforts towards achieving general government primary surpluses are also reflected in the targets set in the 2013 Budget and the Medium-Term Fiscal Strategy framework (MTFS) 2013-2016 (Law 4093/2012). Fiscal adjustment in 2013-2016 can be described as frontloaded and is based on measures that will deliver a net €14,244 million, of which €9,374 million in 2013, €4,186 million in 2014, €529 million in 2015, and €155 million in 2016. According to the MTFS, in order to achieve the targeted general government primary surplus of 3.0% of GDP in 2015 and 4.5% of GDP in 2016, additional measures are necessary, in the amount of €1,877 million in 2015 and €2,765 million in 2016, which have yet to be defined.

1 This chapter takes into account data available up to 7.2.2013.
2 European Commission, *The Second Economic Adjustment Programme for Greece – First Review* December 2012.
3 See European Commission, *op. cit.*, Table C.1, p. 137.
4 See European Commission, *op. cit.*, Box 5, p. 20.

Table IX.1 General government and state budget deficits

(percentages of GDP)

	2008	2009	2010	2011	2012*
General government deficit[1] *(national accounts data – convergence criterion)*	**-9.8**	**-15.6**	**-10.7**	**-9.4**	**-6.6**
– Central government	**-9.9**	**-15.4**	**-11.8**	**-9.0**	**-**
– Social security organisations, local government, legal entities in public law	0.1	-0.3	1.1	-0.4	-
State budget deficit[2] *(administrative data)*	**-6.2**	**-14.6**	**-10.0**	**-10.9**	**-8.1**
State budget deficit[3] *(cash data)*	**-7.4**	**-14.1**	**-10.5**	**-11.1**	**-5.5**[4]

Sources: Bank of Greece, Ministry of Finance and ELSTAT.
* Provisional data.
1 ELSTAT data, as notified to the European Commission (Excessive Deficit Procedure). Data on the general government deficit for 2011 are estimates from the State General Accounting Office's general government cash data of February 2012. Figures may not add up due to rounding.
2 State General Accounting Office data, as shown in the state budget.
3 Bank of Greece data referring to the state budget deficit on a cash basis excluding movements in the OPEKEPE account.
4 Excluding accrued interest of €4,751 million, paid in the form of EFSF notes, on PSI bonds, as well as interest payments of €519 million due to the debt buy-back through EFSF notes.

Measures defined and already underway so far include actions for restructuring central and local government, reducing wage and pension spending, rationalising social, healthcare and education expenditure, cutting down on defence spending, and reforming the tax system (see Section 5.2).

Despite progress, efforts to reform tax administration and the tax collection mechanism must be redoubled. To this end, the Ministry of Finance has taken action to further reform the tax system, with a view to simplifying the income taxation code, streamlining real estate taxation, introducing a tax procedure code and passing additional measures against tax evasion.

Furthermore, measures are taken to cut down on government wasteful spending (by merging or closing general government entities), to improve control of expenditure, and to monitor more effectively the execution of the general government budget.[5]

These actions include the adoption of fiscal rules introducing quarterly targets, a domestic stability pact with local governments, and sanctions in case of deviation from, or non-compliance with, fiscal targets.

Despite remarkable fiscal efforts, the debt-to-GDP ratio has not fallen fast enough, due to the high cost of government short-term borrowing (through Treasury bill issues) and, mainly, as a result of the significant decline in GDP (snowball effect).[6]

However, the recent Eurogroup decisions on 26-27 November and 13 December 2012 paved the way for a further decline in the debt-to-GDP ratio, by reducing interest rates on the loans extended under the first Economic Adjustment Programme and, mostly, by approving the bond buyback operation. The latter is estimated to have lowered the outstanding debt by around €21.1 billion. As a result of the above, coupled with the PSI, the consolidated general government debt as a percentage of GDP is expected to stand at

5 See the omnibus law (Law 4111/2013) "Pension-related provisions, amendments to Law 4093/2012, ratification of the legislative act 'Amendment agreement relating to the Master Financial Assistance Facility Agreement between the European Financial Stability Facility (EFSF), the Hellenic Republic, the Hellenic Financial Stability Fund (HFSF) and the Bank of Greece (BoG) entitled 'Master Financial Assistance Facility Agreement', the Financial Assistance Facility Agreement between the EFSF, the Hellenic Republic and the Bank of Greece entitled 'PSI LM Facility Agreement' and the Financial Assistance Facility Agreement between the EFSF, the Hellenic Republic and the BoG entitled 'Bond interest facility', authorisation to sign agreements, and other emergency provisions".
6 See *Monetary Policy – Interim Report*, November 2012. For further details, see also Section 2.6 below.

161.0% of GDP in 2012, i.e. around 9.7 percentage points lower than in 2011. In addition, the public debt-to-GDP ratio is projected to be 124.0% of GDP in 2020, and is expected to stand below 110.0% of GDP in 2022.

The adoption of the MTFS 2013-2016 and the successful implementation of the bond buyback exercise opened the way for the disbursement of a €49.1 billion tranche by the EFSF. December 2012 saw disbursements of €34.3 billion, of which €16 billion for the recapitalisation of the banking system, €11.3 billion for financing the bond buyback operation, and €7.0 billion to cover the state budget financing needs (including the payment of government arrears).[7]

Furthermore, on 16 January 2013 the IMF approved the disbursement of €3.24 billion, intended to cover state budget financing needs. In addition, on 21 January 2013, the Eurogroup approved the disbursement of €9.2 billion, of which €7.2 billion for banks' recapitalisation, and €2.0 billion to cover the state budget financing needs. The January disbursement by the EU was conditional on certain prior actions (adoption of a new tax law and increase in electricity rates).[8]

The remaining €5.6 billion will be disbursed in sub-tranches over the February-March 2013 period. A disbursement of €2.8 billion scheduled for February 2013 is conditional on updating the MTFS and establishing a binding expenditure ceiling for each and every sector of general government.[9] The March 2013 disbursement (€2.8 billion) is conditional on the completion of ministries' new organisation charts, determination of redundancies and definition of quarterly targets for exits up to end-2014, as well as the downward adjustment of the prices of pharmaceuticals based on the three EU countries with the lowest prices.

The increase in the liquidity of the Greek economy, which will come from the disbursement of the €52.4 billion tranche by the EU and the IMF in the first quarter of 2013, combined with the return of deposits to banks, the stepping up of the implementation of structural reforms and privatisations, prompt action for the recovery of the economy and continued fiscal adjustment, despite its short-term negative effects (see Section 1.A below), should help stabilise and drive down the public debt-to-GDP ratio, reduce uncertainty and restore confidence in the prospects of the Greek economy.[10]

1.A A DISCUSSION OF FISCAL MULTIPLIERS

According to a recent IMF staff report, fiscal adjustment had a substantially larger impact on GDP than initially projected. In particular, during the early years of the crisis, the average fiscal multiplier was 2-3 times higher than the original estimates (0.5; see IMF Report, March 2012, *Greece: Request for Extended Arrangement Under the Extended Fund Facility – Staff report*, p.15). See Blanchard, O. and D. Leigh (2012), "Growth Forecast Errors and Fiscal Multipliers", IMF Working Paper 13/1; and IMF, *World Economic Outlook*, Autumn 2012.

However, the ECB and the European Commission voiced their disagreement to both the results of the IMF study and the methodology used to estimate fiscal multipliers. See European Commission (2012), *Autumn Economic Forecasts*, and ECB (2012), *Monthly Bulletin*, December.

In this light, the IMF January 2013 report suggests that the average fiscal multiplier for Greece is estimated at around 1 (see *Greece:*

7 However, according to announcements of the Ministry of Finance, by the end of 2012 government arrears of €700 million were paid (against a budgeted €3.5 billion until end-2012 under the 2013 Draft Budget).
8 The new tax law (Law 4110/2012) was passed by Parliament on 11 January 2013, and the new increases in electricity rates were announced on 14.1.2013.
9 The relevant draft law was tabled to Parliament on 7 February 2013.
10 According to the aforementioned report of the European Commission (Box 3, p. 12), uncertainty shocks have been more frequent since mid-2011 due to the PSI, political developments etc., which resulted in precautionary savings by domestic consumers and investors and risk aversion by foreign investors, in an effort to be insulated against the risks surrounding the sustainability of reform efforts and the future of the country in the euro area. However, since these risks have receded, a faster return to recovery and growth is possible.

First and Second Reviews, IMF Country Report No. 13/20, p. 13).

2 FISCAL DEVELOPMENTS IN 2012 BASED ON FISCAL DATA

In January-December 2012, the state budget deficit stood at 8.1% of GDP (€15,688 million), compared with a deficit of 10.9% of GDP (€22,773 million) in 2011 (see Table IX.9), overachieving the revised annual targets of the 2013 Budget by €624 million.

In the same vein, the state budget primary deficit was 1.8% of GDP, i.e. it also overachieved, by around €1,112 million, the annual revised fiscal targets set in the budget (according to the Introductory Report of the 2013 Budget), and was substantially better than the primary deficit of 2011 (3.1%).

Improved results over the revised targets are attributable to larger cuts in ordinary budget *primary expenditure* (by around €449 million) and public investment programme expenditure (by some €736 million), as well as to better than expected net ordinary budget revenue (by €619 million). Higher than anticipated receipts during the January-December 2012 period are attributable to increased receipts from income tax, real estate taxes, other direct taxes due to the social solidarity levy on natural persons, annual road taxes, non-tax revenue and, mainly, income tax refunds that were by €517 million lower than the updated target.

However, the net result was negatively affected by an overrun of €488 million in interest payments due to the buy-back of debt with a nominal value of €31.9 billion, and a €1,086 million shortfall in public investment programme revenue (attributable to lower inflows from Community Funds).

2.1 ORDINARY BUDGET REVENUE

One of the main features of the execution of the 2012 Budget was a large decline in revenue. In particular, ordinary budget revenue (before tax refunds) declined by 7.1% compared with 2011 to €51,497 million, against revenue of €55,442 million in 2011 (see Table IX.2). This outcome is better by €102 million than the revised target (a decline of 7.3%) under the Introductory Report to the 2013 Budget. It should be noted that the original target under the 2012 Budget was a 3.4% increase in revenue. Lower tax revenue compared with 2011 is attributable to a further decline in economic activity, increased tax evasion due to tax hikes and liquidity constraints, two consecutive elections, and delays in the dispatch of Property Tax (FAP) notifications. Moreover, successive extensions of the deadline to file both personal and corporate income tax returns resulted in lower income tax inflows until July, while as a result of an increase in the number of tax payment instalments, income tax revenue will continue to be collected into the first two months of 2013.

- **Revenue from direct taxation** increased by 3.8%. This positive performance is primarily due to receipts from the property tax collected through electricity bills (EETHDE) in 2011 and partly in 2012, as well as the positive performance personal income tax receipts. In particular:

– Personal income tax receipts increased substantially by 20.3%, which is indicative of the high tax burden due to the onerous measures taken in early 2012.[11] Receipts from the social solidarity levy on personal income for 2012 also rose significantly, as this levy is withheld on a monthly basis and was spread across 2012.

– Receipts from corporate income tax fell substantially compared with 2011 (-37.9%), as the majority of businesses, including banks, suffered substantial losses in 2011. It should be noted that the original target was a decline of 15.9%, later revised to 40.4%.

11 Tax law 4024/2012 provided for a retrospective reduction in the tax-free threshold to €5,000, changes in income tax brackets and tax rates, withholding of the social solidarity levy at source and substantial cuts in tax allowances.

Table IX.2 Ordinary budget revenue

(million euro)

	2009	2010	2011	2012*	Percentage changes 2010/2009	2011/2010	2012*/2011
I. Direct taxes	**21,432**	**20,224**	**20,318**	**21,096**	**-5.6**	**0.5**	**3.8**
1. Income tax	16,590	14,287	12,933	13,311	-13.9	-9.5	2.9
– Personal	10,841	9,398	8,285	9,968	-13.3	-11.8	20.3
– Corporate	3,790	3,149	2,760	1,715	-16.9	-12.4	-37.9
– Special categories of income tax	1,880	1,670	1,888	1,628	-11.2	13.1	-13.8
(tax on shipping)	13	14	14	18	7.7	0.0	28.6
(tax on interest income from bonds, deposits, etc.)	504	567	1,008	994	12.5	77.8	-1.4
2. Property taxes	526	487	1,172	2,857	-7.4	140.7	143.8
3. Direct taxes collected on behalf of third parties	2	1	1	0	-70.0	0.0	
4. Tax arrears	2,446	2,874	1,911	1,812	17.5	-33.5	-5.2
5. Extraordinary and other direct taxes	1,868	2,575	4,301	3,116	37.8	67.0	-27.6
II. Indirect taxes	**28,291**	**31,042**	**28,632**	**26,082**	**9.7**	**-7.8**	**-8.9**
1. Customs duties and special contributions on imports-exports	254	217	198	162	-14.6	-8.8	-18.2
2. Consumption taxes on imports	2,229	2,046	1,910	1,433	-8.2	-6.6	-25.0
– VAT	1,756	1,796	1,810	1,380	2.3	0.8	-23.8
– Cars	441	226	89	44	-48.8	-60.6	-50.6
– Special consumption tax	32	24	11	9	-25.0	-54.2	-18.2
3. Consumption taxes on domestic products	23,758	27,150	25,106	23,147	14.3	-7.5	-7.8
– Turnover tax	1	1	0	0	0.0		
– VAT	14,826	15,578	15,077	13,575	5.1	-3.2	-10.0
– Fuel	4,374	5,698	4,653	4,464	30.3	-18.3	-4.1
– Tobacco	2,566	2,913	3,045	2,707	13.5	4.5	-11.1
– Road duties	1,046	1,591	1,117	1,305	52.1	-29.8	16.8
– Special levies and contributions on cars	63	52	42	36	-17.5	-19.2	-14.3
– Other[1]	882	1,317	1,172	1,060	49.3	-11.0	-9.6
4. Transaction taxes	1,453	1,120	905	733	-22.9	-19.2	-19.0
– Capital transfers	831	702	509	387	-15.5	-27.5	-24.0
– Stamp duties	459	414	393	342	-9.8	-5.1	-13.0
– Licence fees for gambling	163	4	3	3	-97.5	-25.0	0.0
5. Other indirect taxes	597	509	513	607	-14.7	0.8	18.3
III. Total tax revenue	**49,723**	**51,266**	**48,951**	**47,179**	**3.1**	**-4.5**	**-3.6**
IV. Non-tax revenue[2]	**3,720**	**4,912**	**6,490**	**4,318**	**32.0**	**32.1**	**-33.5**
V. Total ordinary budget revenue	**53,443**	**56,179**	**55,442**	**51,497**	**5.1**	**-1.3**	**-7.1**

Source: State General Accounting Office.
* Provisional data.
1 Including the special consumption tax on domestic products.
2 Including revenue from licensing public rights.

– Receipts from inheritance, gift, parental donation and real estate taxes increased significantly (by 143.8%) due to the collection of (EETHDE) for 2011 and part of 2012. The 2012 EETHDE will be paid in five bi-monthly instalments until June 2013.

– Revenue from tax arrears fell by 5.2%, against a revised targeted increase of 9.9%, mostly due to the subdued performance of the 2010 and 2011 "settlement of tax arrears" and as a result of the large number of company closures. This revenue item has also been boosted by Property Tax (FAP) receipts for 2010, while the 2011 FAP is expected to be collected in 2013.

– The reduced (by 27.6%) performance of other direct tax receipts is due to non-recurrence in 2012 of the one-off levy on the profits of large enterprises. This revenue item also includes receipts from the social solidarity levy on personal income for 2011 (€1.5 billion) and the levy on the self-employed (€188 million) for income earned in 2011.

• **Receipts from indirect taxation** fell significantly for the second consecutive year, by 8.9%, since –with the exception of road tax receipts– receipts from all other indirect tax categories declined. In more detail:

– VAT receipts fell substantially by 11.4% due to higher tax evasion, but mainly as a result of the sharp decline in economic activity.[12]

– Receipts from taxation on liquid fuel were 18.3% lower, despite the substantial increase in the excise tax on heating fuel.[13] This is associated with lower liquid fuel consumption,[14] as a result of increased heating fuel prices and the protracted economic downturn.

– Furthermore, for the third consecutive year, declines were also recorded in receipts from property transfer tax (-23.4%) owing to a sharp fall in real estate demand, the stock exchange transactions tax (-31.0%) due to falling stock prices and transactions, and car registration fees (-50.6%) owing to a steep drop in car demand.

– Part of the above shortfalls was covered by the collection of road taxes for 2013, which increased significantly by 16.9%. This increase is partly attributable to the fact that collection of the 2012 road taxes was not completed by end-December 2011, and a new deadline was set, which affected receipts for 2012. Furthermore, 2012 saw the adoption for the first time of a simple payment process, through electronic payment services.

• **Non-tax revenue** fell substantially (by 33.5%), mostly due to lower receipts from incorporated off-budget accounts (€785 million, against €1,033 million in 2011) and the bank liquidity support programme (€703 million, against €909 million in 2011). Moreover, in 2011 receipts of over €1 billion were registered from licensing public rights,[15] while the corresponding amount collected in 2012 from the sale of two aircrafts reached a mere €15 million. Part of the above shortfall was covered by transfers of earnings of around €303 million on Greek government bond holdings by the central banks of France, Finland, Spain, Luxembourg and the Netherlands.

• In 2012, **tax refunds** were significantly lower (-40.0%) compared with the revised target for a decline of 30.2%; as a result, ordinary budget net revenue (after tax refunds) showed some improvement.

2.2 ORDINARY BUDGET EXPENDITURE

The main feature of the 2012 Budget execution was large cutdowns on primary expenditure. Specifically, compared with 2011, ordinary budget expenditure fell by 12.3% in 2012, against a revised estimate for a decline of 11.8% under the Introductory Report to the 2013 Budget. Better than expected results are attributable to great efforts to contain ordinary budget primary expenditure,[16] so as to

12 According to ELSTAT, the turnover index in January-October 2012 fell by 10.8%.
13 Law 4092/2012; see Annex to this chapter.
14 According to 10-month consumption data, the decline in consumption is 13.1%.
15 Gambling and radio frequency licences.
16 According to the Ministry of Finance, ordinary budget expenditure includes grants to hospitals for payment of arrears, military procurement, guarantees called to bodies classified inside and outside general government, as well as loan disbursement fees to the European Financial Stability Facility (EFSF). These items are excluded from ordinary budget primary expenditure, but included in state budget primary expenditure.

Table IX.3 Outlays under the ordinary budget and the public investment budget

(million euro)

	Annual data					Percentage changes			
	2010	2011	2012		2013	2011/10	2012/11		2013/12
			Revised targets	Execution*	Budget		Revised targets	Execution*	
	(1)	(2)	(3)	(4)	(5)	(6=2:1)	(7=3:2)	(8=4:2)	(9=5:4)
I, Outlays under the ordinary budget	**67,758**	**70,146**	**61,855**	**61,499**	**55,802**	**3.5**	**-11.8**	**-12.3**	**-9.3**
1. Personnel outlays	22,543	21,823	20,629	20,511	18,499	-3.2	-5.5	-6.0	-9.8
of which: wages	16,290	15,251	14,108	13,947	12,736	-6.4	-7.5	-8.6	-8.7
pensions	6,253	6,572	6,521	6,564	5,763	5.1	-0.8	-0.1	-12.2
2. Social security and healthcare	15,764	17,715	16,202	16,742	14,969	12.4	-8.5	-5.5	-10.6
of which: grants to social security funds	13,524	15,154	13,784	14,466	12,600	12.1	-9.0	-4.5	-12.9
3. Operating and other expenditure	8,097	7,020	7,146	6,410	6,305	-13.3	1.8	-8.7	-1.6
of which: consumer expenditure and off-budget items	2,722	2,157	2,435	2,066	1,892	-20.8	12.9	-4.2	-8.4
4. Earmarked spending	5,775	5,003	3,306	3,474	3,777	-13.4	-33.9	-30.6	-8.7
5. Reserve			303		1,100				
6. Interest payments	13,223	16,348	11,735	12,223	8,900	23.6	-28.2	-25.2	-27.2
7. Grants to hospitals for payment of arrears	367	435	400	392	400	18.5	-8.0	-9.9	2.0
8. Ministry of National Defence programmes for procurement of military equipment	1,017	360	700	410	750	-64.6	94.4	13.9	82.9
9. Guarantees called to bodies classified inside general government	827	1,249	691	679	558	51.0	-44.7	-45.6	-17.8
10. Guarantees called to bodies classified outside general government	145	193	178	117	469	33.1	-7.8	-39.4	300.9
11. Loan disbursement fee to the European Financial Stability Facility (EFSF)	0	0	565	541	75				
II. Outlays under the public investment budget	**8,454**	**6,559**	**6,850**	**6,114**	**6,850**	**-22.4**	**4.4**	**-6.8**	**12.0**
1. Project execution	3,198	1,500	...	...	...				
2. Grants	5,236	5,016	...	...	...				
3. Administrative costs	20	43	...	...	...				
III. Outlays under the state budget (I+II)	**76,212**	**76,705**	**68,705**	**67,614**	**62,652**	**0.6**	**-10.4**	**-11.9**	**-7.3**
Primary expenditure under the state budget (III-I6)	62,989	60,357	56,970	55,391	53,752	-4.2	-5.6	-8.2	-3.0
Primary expenditure under the ordinary budget (I1+I2+I3+I4+I5)	52,179	51,562	47,586	47,137	44,650	-1.2	-7.7	-8.6	-5.3
Amortisation payments	19,549	28,843	12,860	23,905	12,845	47.5	-55.4	-17.1	-46.3

Source: State General Accounting Office.
* Provisional data.

compensate for shortfalls in revenue. As a result, ordinary budget primary expenditure in 2012 fell by 8.6%, against a revised target for a decrease of 7.7%. However, it should be noted that this performance is moderated by an observed accumulation of arrears, which increased by €1 billion (0.5% of GDP) between January and December. Interest payments also fell, by 25.2%, against a rise of 23.6% in 2011, thanks to the PSI (see Table IX.3).

Based on available disaggregated data, developments in the main items of ordinary budget expenditure are as follows:

Wage and pension spending declined further by 6.0% in 2012, compared with a decrease of 3.2% in 2011 (see Table IX.3). Specifically, wage spending fell by 8.6% in 2012, against a decline of 6.4% in 2011. This decline was due to measures taken so far to reduce wage costs, and is larger than the revised target (-7.5%), owing to higher than expected exits. Central government pension expenditure remained virtually unchanged, down by 0.1% against 2011, despite the measures taken to reduce main and supplementary pensions, which are required under the second Memorandum of Understanding, retrospectively to the beginning of 2012. The deviation from the 0.8% targeted decline is mainly attributable to the greater than expected number of retirements.

Social security and healthcare spending dropped by 5.5% in 2012, against an increase of 12.4% in 2011, and fell short of the revised target for a decrease of 8.5%. This deviation is attributable to a 4.5% decline in grants to social security funds, against a revised targeted decline of 9.0%. Despite cuts in main and supplementary pensions, social security funds were faced with increasing cash needs due to the economic downturn, lower employment and wages, rising tax evasion, and the increased number of pensioners.

Operational and other expenditure fell by 8.7% in 2012, against a revised targeted increase of 1.8%, helping contain ordinary budget expenditure.

Earmarked spending also fell sharply by 30.6% in 2012, against 13.4% in 2011, due to savings in the context of administrative reforms in local governments (Kallikratis Plan), as well as lower transfers from the state budget to local governments.

Interest payments, which had increased by 23.6% in 2011, fell by 25.2% in 2012, i.e. with a pace somewhat slower than the revised budgetary projections of a 28.2% decline. Lower interest payments compared with 2011 are a result of savings thanks to the PSI,[17] while the smaller decline compared with the revised target is attributable to additional interest payments of €519 million in the context of the buyback of government debt with a nominal value of €31.9 billion on 18 December 2012, through six-month EFSF notes.

2.3 PUBLIC INVESTMENT BUDGET

Despite available National Strategic Reference Network (NSRF) resources and the revised target for an increase of 4.4% in investment spending in 2012, cuts in expenditure under the public investment budget continued for the third consecutive year. In the course of the year, investment expenditure was cut three times in order to compensate for the shortfalls in ordinary budget revenue, further declining by 6.8%, after dropping by 22.4% in 2011 and 11.8% in 2010, to reach €6,114 million or 3.2% of GDP (see Table IX.9). Likewise, public investment programme revenue fell by 4.6% in 2012, against a revised targeted increase of 24.2%, owing to delayed submission of payment requests to the Community Funds. As a result, the public investment budget deficit stood at €2,513 million, or 1.3% of GDP, i.e. almost the same as in 2011.

17 The programme is analysed in Bank of Greece, *Annual Report 2011*, April 2012, p. 107.

Table IX.4 Results of public enterprises and their financing

(million euro)

	2009	2010[1]	2011	2012*	Budget 2013	Percentage changes 2010/2009	2011/2010	2012*/2011	2013/2012*
A. Operating account									
1. Revenue	1,853	2,318	1,807	1,731	2,157	25.1	-22.0	-4.2	24.6
2. Expenditure	3,820	4,521	3,483	2,978	2,991	18.4	-23.0	-14.5	0.4
3. Balance (1 - 2)	-1,967	-2,203	-1,676	-1,247	-834				
B. Capital account									
4. Revenue	0	0	0	0	0				
5. Expenditure	755	1,385	2,781	1,648	2,436	83.6	100.8	-40.7	47.8
Investment	1,244	1,291	1,754	483	987	3.8	35.9	-72.5	104.3
Working capital	-645	-545	-536	1,051	1,404	-	-	-	-
Other expenditure	155	639	1,563	114	45	311.2	144.6	-92.7	-60.5
6. Balance (4 - 5)	-755	-1,385	-2,781	-1,648	-2,436				
7. Special funds and provisions[2]	1,249	2,759	5,586	3,304	2,059	120.8	102.5	-40.9	-37.7
Total balance (3+6+7)	***-1,472***	***-829***	***1,128***	***409***	***-1,211***				
Percentage of GDP	***0.6***	***0.4***	***0.5***	***0.2***	***0.7***				
Financing									
8. Ordinary budget subsidies[3]	232	210	359	398	378	-9.4	70.6	10.9	-5.0
9. Depreciation	276	524	403	400	417	89.8	-23.1	-0.6	4.3
10. Net borrowing requirements	964	95	-1,890	-1,207	415	-90.2	-	-	-
Total financing	***1,472***	***829***	***-1,128***	***-409***	***1,211***	***-43.7***	***-236.1***	***-136.2***	***196.3***
11. Amortisation[4]	403	699	2,076	1,660	155	73.5	197.2	-20.1	-90.7
12. Credit repayments[4]	12	299	890	711	66	2,304.4	197.2	-20.1	-90.7
13. New commercial credit	3	428	1,001	1,098	586	12,261.0	134.0	9.7	-46.6
14. Gross borrowing requirements (10+11+12-13)	1,376	665	75	66	50	-51.7	-88.7	-11.9	-24.2

Source: Ministry of Finance.
* Estimates.
1 According to Law 3899/2010, the Directorate of Public Enterprises and Organisations supervises all —without exceptions— sociétés anonymes (S.A.) on which the Greek State has a direct or indirect material influence, as well as legal entities in private law in which the Greek State holds a majority stake and conducts their administration and management. This definition increases the number of entities supervised to 75 public enterprises and organisations (DEKOs) and 57 legal entities in private law (NPIDs) in 2010 (from 52 DEKOs in 2009), 73 DEKOs and 57 NPIDs in 2011 [since as from 4 March 2011 (a) Athens-Piraeus Trolley Buses (ILPAP) was absorbed by THERMAL BUSES S.A., and OSY S.A. was established; and (b) the Athens-Piraeus Electric Railways (ISAP) and TRAM S.A. were absorbed by AMEL S.A. (the Athens Subway Operation Company), and STASY S.A. was established], and 51 DEKOs and 85 NPIDs in 2012. The table presents financial results of DEKOs only as from 2010, to ensure comparability with previous years.
2 Advance payments and participations by DEH consumers, one-off contribution by OTE subscribers, private participations in EYDAP projects and own reserves (from surpluses) of certain public enterprises. Since 1997, subsidies through the public investment budget and the EU have gradually taken the form of share capital increases, thus have gradually stopped appearing under "subsidies" and are now recorded as "special funds".
3 Ordinary budget subsidies to public enterprises with deficits, minus revenue payments by enterprises with surpluses.
4 Estimated breakdown of amortisation and repayments, due to the lack of relevant data.

2.4 SOCIAL SECURITY AND WELFARE FUNDS

Data on the unified social security system, under the Introductory Report to the State Budget for 2013, present estimates on the balance of social security funds in 2012 and projections for 2013; no ex-post data for 2011 are included.

According to forecasts in the Introductory Report to the State Budget for 2013, social security funds should record a deficit of €2.2 billion on a national accounts basis in 2012, against a projected €1.2 billion in the 2012 Supplementary Budget, with the deviation mainly due to a substantial increase of €1.3 billion in social security funds' arrears to the private sector. The accumulation of arrears more than offset the €670 million shortfall in revenue; as a result, the cash deficit of social security funds stood at €953 million, i.e. €580 million lower than the Supplementary Budget forecast.

2.5 PUBLIC ENTERPRISES

In 2012, positive effects from restructuring, elimination and merger of public entities (Law 3895/2010, Law 4002/2011, and Law 4038/2012) were reflected in the €409 million (or 0.2% of GDP) consolidated surplus of public enterprises' (DEKO) operating and capital accounts. However, compared with 2011 (a surplus of €1.1 billion, or 0.5% of GDP), a deterioration in the balance of public enterprises is observed, mostly attributable to higher working capital needs, lower "special purpose resources and provisions" and lower current revenue (see Table IX.4).

Specifically, due to the protracted negative economic conjuncture, revenue under the operating account fell by 4.2% compared with 2011, to stand at €1,731 million. By contrast, expenditure under the operating account was contained at €2,978 million, falling by 14.5% against the respective item in 2011. This development mostly reflects a €318 million decline in the wage bill in 2012, following the implementation of Law 3899/2011, which provided for further cuts in the wages of DEKO employees as from 1 January 2011.[18] At the same time, the number of DEKO employees declined, as Law 3986/2011 introduces the 1:5 hiring rule (according to which one employee can only be hired against five retirees).

It should also be noted that, within 2012, OSY S.A. (the Athens public buses company) paid up an amount of €2.1 billion, which concerned amortisation and credit repayment, and was financed from special resources (including budget appropriations). Thus, public enterprises as a whole reduced their liabilities by €1,207 million. This amount would have been larger but for the substantial borrowing requirements of the Hellenic Railways Organisation – OSE (€732 million) and the Athens Subway – ATTIKO METRO S.A. (€194 million), which mostly reflect new trade credits.

2.6 PUBLIC DEBT

The consolidated debt of the general government as a percentage of GDP is estimated at around 161.0% of GDP in 2012, down by around 9.5 percentage points of GDP compared with 2011 (see Table IX.5). The halt in the upward course of public debt in 2012 is a result of both the PSI and the debt buyback agreement (on 13 December 2012) and other Eurogroup decisions on 26 November 2012. The quantitative effect of the above developments on general government debt is reflected in the "stock-flow adjustment", which is estimated at around 29.0% of GDP for 2012.

The crisis of the Greek economy since 2008 brought to the fore public debt management issues, as the evolution of Greece's debt has been volatile over time. A key factor in the course of debt as a percentage of GDP is the

18 In particular, a 10% decline in all categories of remuneration exceeding €1,800 per month, a reduction of maximum monthly earnings to €4,000, and a ceiling (10% of the total wage bill) on allowances for overtime, detached duty, travel expenses, etc.

Table IX.5 Consolidated debt of general government[1]

(million euro)

	2005	2006	2007	2008	2009	2010	2011
Short-term	1,337	2,479	2,180	5,790	12,334	11,745	14,449
– securities	1,156	943	1,625	5,496	10,820	9,121	11,844
– loans	181	1,536	555	294	1,514	2,624	2,605
Medium- and long-term	209,846	221,409	236,617	256,767	285,871	316,763	340,524
– securities	168,336	178,600	192,712	211,516	242,802	244,312	240,004
– loans	41,510	42,809	43,905	45,251	43,069	72,451	100,520
Coin and deposits	1,235	988	693	728	1,477	1005	820
Total	**212,418**	**224,876**	**239,490**	**263,285**	**299,682**	**329,513**	**355,793**
% of GDP	*110.0*	*107.7*	*107.5*	*112.9*	*129.7*	*148.3*	*170.6*
– euro-denominated debt	209,671	222,820	237,574	261,653	298,422	323,500	347,642
of which:							
to the Bank of Greece	*(7,988)*	*(7,991)*	*(7,521)*	*(7,051)*	*(6,581)*	*(6,154)*	*(5,684)*
to the IMF/EU/ECB						*(27,121)*	*(65,379)*
– non-euro denominated debt[2]	2,747	2,056	1,916	1,632	1,260	6,013	8,151
of which: to the IMF/EU/ECB						*(4,704)*	*(7,831)*

Source: State General Accounting Office.
1 According to the definition in the Maastricht Treaty.
2 Valuation using exchange rates as at 31 December of each year.

Table IX.6 Decomposition of changes in the general government debt-to-GDP ratio[1]

(percentages of GDP)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
General government debt-to-GDP ratio	101.7	97.4	98.9	110.0	107.8	107.3	112.9	129.7	148.3	170.6	161.0
Changes in the general government debt-to-GDP ratio	-2.1	-4.2	1.4	11.2	-2.2	-0.5	5.6	16.8	18.6	22.2	-9.6
– Primary balance	-0.8	0.7	2.7	0.8	1.1	1.7	4.7	10.5	4.7	2.2	1.2
– Change in GDP and change in interest rates	-1.2	-4.3	-1.9	0.7	-3.5	-2.2	0.5	6.2	11.2	16.9	18.2
– Deficit-debt adjustment[2]	-0.1	-0.5	0.7	9.7	0.2	0.1	0.4	0.1	2.7	3.1	-29.0

Sources: Ministry of Finance, General Directorate of Economic Policy, "Hellas: Macroeconomic Aggregates", European Commission, "The Second Economic Adjustment Programme for Greece–First Review December 2012".
* Provisional data. GDP for 2012 is €194,003 million.
1 Changes in the debt ratio have been decomposed using the following formula:

$$\left(\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}}\right) = \frac{PB_t}{Y_t} + \left(\frac{D_{t-1}}{Y_{t-1}} * \frac{i_t - g_t}{1+g}\right) + \frac{SF_t}{Y_t}$$

where D_t = general government debt
PB_t = primary balance (deficit or surplus)
Y_t = GDP at current prices
g_t = nominal GDP growth rate
i_t = average nominal rates on government debt
SF_t = deficit-debt adjustment

2 The deficit-debt adjustment includes expenditure or liabilities assumed by the general government that do not affect the deficit but increase debt, as well as proceeds (e.g. from privatisation) that do not affect the deficit but reduce debt.

dramatic economic downturn, which has been increasingly pushing up the debt-to-GDP ratio since 2009.[19]

Debt dynamics is further enhanced by (downward) revisions of forecasts on privatisation revenue and the prolongation of the fiscal adjustment programme.

It should also be noted that the large and rigorous adjustment, as well as steps taken towards addressing structural problems of the public sector, have started to bear fruit, as the contribution of primary fiscal balances to the increase in public debt has been declining since 2010 (see Table IX.6).

By contrast, the key factor behind developments in the public debt-to-GDP ratio is the relationship of the nominal interest rate with economic growth. However, due to Greece's recourse to the support mechanism, the cost of government borrowing (excluding borrowing through Treasury bill issues) is not affected by market forces. Therefore, the key determinant of developments in public debt-to-GDP dynamics is developments in economic activity.

Characteristically, since the first stages of the recession of the Greek economy, developments in interest rates and economic growth (snowball effect) have had a decisive impact on the public debt growth rate over time.

As is evident in Table IX.6 for 2010, 2011 and 2012, the above-mentioned effect was 11.2%, 16.9% and 18.2%, respectively. That is, for the period as a whole the public debt-to-GDP ratio worsened by 46.3% of GDP on a cumulative basis.

It is therefore critical to halt the recessionary cycle by accelerating structural reforms and privatisation, and promptly tackling the constraints on the real economy from problems in the financial sector (see *Monetary Policy – Interim Report*, November 2012). Moreover, further measures should be taken to moderate —to the extent possible— the negative impact from fiscal policy on economic activity.

2.6.A EURO AREA FINANCE MINISTERS' DECISIONS

Eurogroup statements/decisions on 26-27 November and 13 December helped stem the upward course of public debt. Specifically, the following were decided:

1) Postponing the Treasury cash buffer build-up (as per the March 2012 programme) of €5 billion, and replacing it with an amount of €1.5 billion for the 2012-2014 period;

2) Debt buy-back, which helped save around €21.1 billion;[20]

3) Reduction of the Greek Loan Facility (GLF) interest margin[21] by 100 basis points, with a view to saving around €900 million in 2012-2014 and approximately €1 billion in 2015-2016.

4) Cancellation of the EFSF guarantee commitment fee,[22] which is expected to save a total of €200 million in 2012-2014 and €300 million in 2015-2016.

5) Member States committed to pass on to Greece an amount equivalent to the income on the SMP portfolio accruing to their national central bank as from budget year 2013.

6) Deferral of EFSF interest rate payments over a 10-year period, which will reduce Greece's public debt burden by €3.4 billion in 2012-2014, and by €9.5 billion in 2015-2016.

19 In addition, the fact that the negative impact from fiscal adjustment on economic activity was underestimated has aggravated debt dynamics (see also comments on fiscal multipliers, Section 1.A).

20 Total participation in the debt buy-back programme reached €31.9 billion, and debt of an equal amount was purchased by the Greek government at an average price of 33.8% of the nominal value.

21 The interest margin referred to in this decision was equal to the 3-month Euribor plus 150 basis points.

22 The EFSF borrowing costs for services rendered is determined on the basis of the lending fee equivalent to the EFSF borrowing costs, a guarantee commitment fee and a service fee in order to cover its operational costs.

7) Maturity extension of GLF and EFSF loans by 15 years, which even though has no impact on the reduction of debt, reduces repayment obligations which would have hampered Greece's return to the markets.

Moreover, it is estimated that public debt should be further reduced in 2013-2016 due to the rollover of ANFA holdings of NCBs. Thus, the Greek government financing needs should be reduced by €3.7 billion until 2014, and by €1.9 billion in 2015-2016.[23]

2.6.B PUBLIC DEBT DYNAMICS

Assessment of the public debt sustainability of Greece[24] is a basic parameter for the evaluation of the adjustment programme. This is so for two reasons:

– First, it is a determinant of the time needed to return to the markets.

– Second, any negative prospects signal the need for additional interventions so as to help restore debt sustainability.

According to the updated sustainability analysis on the basis of European Commission (December 2012) and IMF (January 2013) reports, and compared with the previously published relevant fiscal sustainability reports (see European Commission and IMF reports, March 2012), a substantial deterioration of the baseline scenario is observed. Specifically, while the original estimate on general government debt was 116.5% of GDP in 2020, the updated estimate stands at 144.0% of GDP, and 133.0% of GDP in 2022. The main reasons behind this deterioration are the following:[25]

(a) Worse than expected growth prospects (domestic demand and external sector) of the Greek economy.

(b) Objective difficulties in collecting substantial revenue through privatisations.

(c) The extension of the Greek fiscal adjustment programme by 2 years.

The deteriorating outlook of public debt sustainability was the main reason behind the significant Eurogroup decisions of 26-27 November and 13 December, which aimed to restore the Greek debt to a sustainable course.[26] As a result of these decisions, Greece's debt is estimated to reach 124.0% of GDP in 2020 and fall below 110.0% of GDP[27] in 2022. Moreover, it is expected to peak at a little below 176.0% of GDP in 2013-2014,[28] and then to embark on a downward course.

The medium-term outlook of debt sustainability, even after recent favourable decisions, depends on a number of exogenous or other factors, most notably economic recovery and privatisations, as the other two determinants (interest rates and deficits) are under control. Debt sustainability studies and revisions so far point to the need for strict implementation of the fiscal adjustment programme, promotion of structural reforms and acceleration of privatisations, which should improve prospects and support growth, in order to keep debt on a downward trend. Such a medium-term debt strategy should allow for debt sustainability to be restored, so that Greece may return to international capital markets and borrow at a reasonable cost.

23 NCBs are not committed to this option, however it is expected that they will participate.
24 In relevant literature, public debt sustainability tests of a country are based on developments in the "debt-to-GDP" parameter. However, others suggest alternative indicators that could be used for a more comprehensive and realistic assessment of debt sustainability. Such an indicator is the debt-to-tax revenue ratio, which is considered to give a more comprehensive picture of the ability of a country to service its public debt by own resources.
25 European Commission assessment report, "The Second Economic Adjustment programme for Greece – First Review" December 2012, *Occasional Paper* no 123, European Commission.
26 Originally, the debt sustainability threshold for 2020 had been set to 120% of GDP.
27 According to the relevant Eurogroup statement (26 November 2012), when Greece reaches a primary surplus, euro area Member States will consider further measures and assistance, including inter alia lower co-financing in structural funds and/or further interest rate reduction of the Greek Loan Facility.
28 This is a conservative forecast based on assumptions from Troika reports on debt sustainability (growth in 2013: -5.4%, 2014: +0.2% and primary surplus in 2013: 0.0% of GDP, 2014: +1.5% of GDP).

3 FISCAL DEVELOPMENTS IN 2012 BASED ON CASH DATA

In 2012 the cash deficit (borrowing requirement) of the state budget[29] improved substantially to €10,697 million, against a deficit of €23,144 million in 2011, falling to 5.5% as a percentage of GDP, from 11.1% in 2011 (see Table IX.7 and Chart IX.1). The large improvement in the deficit is partly associated with the cash/settlement approach used to record payment of accrued interest in March and December, due to the decline in public debt.[30]

However, even if such accrued interest was included, the 2012 deficit would be lower than in 2011 (8.2% of GDP, against 11.1% in 2011).

The state budget primary cash deficit fell to €3,479 million (or 1.8% of GDP), from €6,887 million (or 3.3% of GDP) in 2011.

The largest improvement mainly stems from the ordinary budget, as the ordinary budget deficit fell to €8,503 million in 2012, from €20,462 million in 2011, mostly as a result of a sharp decline in interest payments.

Cash revenue fell by 6.3% compared with 2011, due to widespread tax evasion and the negative

29 Not including movements in the Payment and Control Agency for Guidance and Guarantee Community Aid (OPEKEPE) account.
30 Cash data do not include accrued interest of €4,751 million (2.4% of GDP) on the bonds that participated in the PSI, which was paid in the form of EFSF notes, as well as interest of €519 million on the bonds that participated in the debt buy-back operation, which was likewise paid in the form of EFSF notes.

Table IX.7 State budget deficit on a cash basis[1,2]

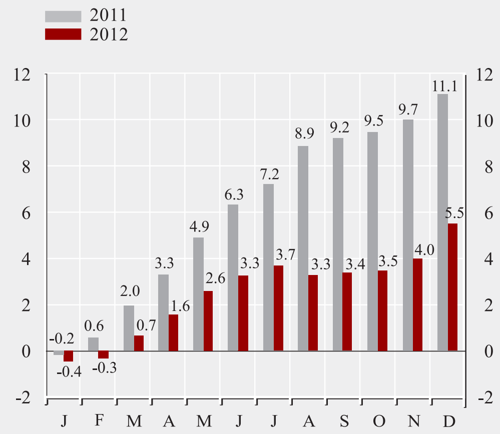
(million euro)

	Annual data			
	2009	2010	2011	2012*
State budget	**32,622**	**23,396**	**23,144**	**10,697**
% of GDP	14.1	10.5	11.1	5.5
– Ordinary budget[3]	25,318[4]	18,333[5]	20,462[6]	8,503[7]
– Public investment budget	7,304	5,063	2,682	2,194

Source: Bank of Greece.
* Provisional data.
1 As shown by the respective accounts with the Bank of Greece and other credit institutions.
2 Excluding movements in the OPEKEPE (Payment and Control Agency for Guidance and Guarantee Community Aid) account.
3 Including movements in public debt management accounts.
4 Not taking into account expenditure of €3,769 million for the acquisition of preference shares of Greek banks pursuant to Law 3723/2008 and of €1,500 million for the issuance of bonds to cover the capital increase of the Guarantee Fund for Small and Very Small Enterprises (TEMPME), but including revenue of €673.6 million from the sale of OTE shares, of €72.3 million from the privatisation of Olympic Airlines, as well as the issuance of a bond amounting to €531 million, the proceeds of which were given as a grant to OGA to cover obligations of the Greek government.
5 Including expenditure of: a) €297.9 million (bond issue reopening) for the payment of past government debt to the Social Insurance Institute (IKA); and b) €714.7 million (bond issuance) for the payment of Greek government debt to the Hellenic Petroleum SA (ELPE), EGNATIA MOTORWAY SA, and the Agricultural Bank of Greece, but excluding expenditure of: a) €849.2 million (bond issue reopening) for the repayment of public hospitals' arrears pursuant to Article 27 of Law 3867/2010, which burdens the 2010 debt; and b) €424.3 million (bond issuance) for the settlement of financial obligations to the Hellenic Agricultural Insurance Organisation (ELGA), a replacement of previous loan with the same terms. Also excluding expenditure of €1,500 million for the paying-up of the capital of the Hellenic Financial Stability Fund.
6 Not including revenue of: a) €675 million from the sale of preference shares of the Agricultural Bank of Greece by the Greek State; and b) €250 million from the Deposits & Loans Fund due to the reduction of its reserves. By contrast, including privatisation proceeds of €1,536 million, but excluding expenditure of: a) €4,011 million (bond issue reopening) for the repayment of public hospitals' arrears pursuant to Article 27 of Law 3867/2010, which burdens the 2011 debt; b) €350 million (bond issuance) for the settlement of financial obligations of the Hellenic Agricultural Insurance Organisation (ELGA), a replacement of previous loan with the same terms; and c) €140.2 million (bond issuance) for covering the State's debt to the former employees of Olympic Airlines that were laid off. Also, not including expenditure of €1,551.8 million for the participation of the Greek State to capital increases, of which €1,434.5 million relate to the capital increase of the Agricultural Bank of Greece as well as to the proceeds from a bond issue reopening (€1,380 million) paid for the purchase by the Greek State of preference shares of the National Bank of Greece and Piraeus Bank.
7 Including revenue of: a) €303 million relating to ANFA returns; and b) €10.6 million from privatisation proceeds, but excluding expenditure of: a) €4,751 million for accrued interest paid in the form of EFSF short-term securities on PSI bonds, as well as interest payments to the amount of €519 million due to debt buy-back through securities issued by the EFSF; b) €9.9 million (bond issuance) for covering the State's debt to the Jewish Community of Thessaloniki; and c) €73 million for the participation of the Greek State to capital increases (Horse Racing Organisation of Greece (ODIE), Hellenic Vehicle Industry (ELVO), Hellenic Defence Systems SA, etc.). Including expenditure of €901.3 million relating to Greece's participation in the European Stability Mechanism (ESM).

Chart IX.1 Net borrowing requirement of central government on a cash basis (January 2011 - December 2012)

(percentages of GDP)



Source: Bank of Greece.
Notes: "Monthly" data refer to the percentage for the period from the beginning of the year up to the reference month. The balance in the OPEKEPE (Payment and Control Agency for Guidance and Guarantee Community Aid) account is excluded.

economic conjuncture. Cash expenditure declined by 21.4%. As mentioned above, interest payments fell substantially, though primary expenditure also decreased by 11.3%, mainly due to the lower wage bill and reduced operating costs.

The public investment budget deficit fell to €2,194 million in 2012, against a deficit of €2,682 million in 2011. This is attributable to a decline of 10.6% in investment expenditure, given the slower than projected absorption of funds from the EU structural funds (down by 5.2%).

The state budget borrowing requirement and amortisation payments were solely financed by loans from the support mechanism (€23 billion), almost half of which was used to repay government debt (Treasury bills, external debt, etc., see Table IX.8).

Table IX.8 Financing of the state budget deficit

(million euro)

	2009		2010		2011		2012*	
	Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total
Greek Treasury bills and government bonds[1]	39,953[4]	122.5	1,155[5]	4.9	-19,763[6]	-85.4	-8,365[7]	-79.5
Change in the balances of central government accounts with the banking system[2]	-4,612[4]	-14.1	-8,148	-34.8	3,086	13.3	-2,895	-27.5
External borrowing[3]	-2,719	-8.3	-1,314	-5.6	-1,650	-7.1	-1,071	-10.2
Borrowing from the IMF/EU/ECB			31,703	135.5	41,471	179.2	23,028	215.3
– from the EU			*21,000*		*31,900*		*21,397*	
– from the IMF			*10,703*		*9,571*		*1,631*	
Total	**32,622**	**100.0**	**23,396**	**100.0**	**23,144**	**100.0**	**10,697**	**100.0**

Source: Bank of Greece.
* Provisional data.
1 Comprising Treasury bills, short-term securities and government bonds issued in Greece, as well as bonds convertible into shares.
2 Comprising changes in the central government accounts held with the Bank of Greece and other credit institutions. Excluding changes in the OPEKEPE account.
3 Comprising borrowing abroad and securities issuance abroad (all currencies). Excluding non-residents' holdings of bonds issued in Greece.
4 Including the issuance of bonds of €3,769 million for the acquisition of preference shares of Greek banks to help strengthen their liquidity position, as well as the issuance of bonds of €1,500 million for covering the capital increase of the Credit Guarantee Fund for Small and Very Small Enterprises (TEMPME SA).
5 Excluding bonds issued by the Greek government for the payment of arrears of public hospitals and of the Hellenic Agricultural Insurance Organisation (ELGA). See also footnote 5 in Table IX.7.
6 Excluding bonds issued by the Greek government for the payment of arrears of public hospitals, ELGA and Olympic Airlines. See also footnote 6 in Table IX.7.
7 Excluding expenditure of €9.9 million (bond issuance) for covering the State's debt to the Jewish Community of Thessaloniki.

4 THE BUDGET FOR 2013

4.1 THE STATE BUDGET FOR 2013

According to the Introductory Report to the 2013 Budget, the general government deficit (on the basis of ESA 95) should stand at €9,442 million, or 5.2% of GDP, in 2013 (see Table IX.9), while the European Commission projects a deficit of €8.5 billion, or 4.6% of GDP.[31] Furthermore, 2013 is expected to see a primary surplus of €748 million, or 0.4% of GDP (against a balanced budget projected by the European Commission) – i.e. the general government primary balance is projected to improve by around 1.6% of GDP in 2013.

To achieve the above targets for 2013, further measures were taken, in the amount of €10,983 million, with a net effect of €9,374.1 million, or 5.1% of GDP, which —according to the MTFS— are expected to reduce nominal GDP by around 3.5% in 2013. Approximately 82% of measures are on the expenditure side. 47.8% of measures concern the state budget, 47.2% social security funds (lower pensions) and hospitals, while measures affecting local governments (2.0%), public enterprises (1.9%) and legal entities (0.9%) are much less onerous.

Owing to the above measures, total ordinary budget expenditure is projected to fall to €55,802 million, i.e. €6,053 million or 9.8% lower than the respective estimates for 2012. Ordinary budget primary expenditure is projected to moderate to €44,650 million, i.e. €2,936 million or 6.2% lower than the respective estimates for 2012. Despite efforts to rationalise the tax system, tax revenue is expected to decline by 4.3% in 2013, owing to the protracted recession and the projected decrease in real GDP by 4.5%.

Successful execution of the 2013 Budget is key to consolidating public finances, as it lays the foundations for generating primary surpluses, which should be welcomed by the markets. This should help restore the country's credibility, bolster confidence and facilitate the exit from the crisis.

4.2 FINANCING FLOWS WITH THE EUROPEAN UNION

As regards Greece's financial flows with the EU, net receipts increased further by 4.1% in 2012, after rising by 27.8% in 2011, to reach €4,142 million (see Table IX.10). Total receipts from the EU fell slightly (-2.7%) despite an increase in receipts from the European Social Fund (48.2%) and the Cohesion Fund (14.5%). Payments to the EU also fell (by 15.1%) to €1,831 million, mainly due to reduced contributions proportional to GDP and extraordinary contributions.

As regards 2013, a further large increase in net receipts is projected (37.4%), which are estimated to reach €5,689 million. This development is expected to come mostly from a 28.3% increase in receipts, while payments to the EU should rise by a mere 7.9% (see Table IX.10).

4.3 BUDGETS OF SOCIAL SECURITY FUNDS AND PUBLIC ENTERPRISES

4.3.1 SOCIAL SECURITY FUNDS

According to the Introductory Report to the Budget, the social budget is expected to show a surplus of €3.2 billion on a cash basis in 2013, against a deficit of €953 million in 2012. On a national accounts basis, social security funds are projected to record a surplus of €2.7 billion in 2013, against a deficit of €2.2 billion in 2012. The difference from the cash balance is almost solely due to social security funds' arrears of €548 million, which are projected to be €767 million lower than in 2012.

Improved cash balances in 2013 are mainly attributable to measures on the expenditure side and, specifically, cuts in pensions. Thus, out of a total €5 billion decline in expenditure compared with 2012, €4.7 billion concern pensions and other transfers, while €331 million should be saved from wage and other operating costs.

31 European Commission, *op. cit.*, Table C.1, p. 137.

Table IX.9 State budget balance

(million euro)

	Annual data					Percentage changes			
	2010	2011	2012		2013	2011/10	2012/11		2013/12
			Revised targets	Execution*	Budget		Revised targets	Execution*	Budget/ Execution*
	(1)	(2)	(3)	(4)	(5)	(6=2:1)	(7=3:2)	(8=4:2)	(9=5:4)
I. Revenue	**53,929**	**53,932**	**52,393**	**51,925**	**51,458**	**0.0**	**-2.9**	**-3.7**	**-0.9**
1. Ordinary budget (net)	50,857	50,159	47,706	48,325	46,322	-1.4	-4.9	-3.7	-4.1
Revenue before tax refunds	*56,179*	*54,285*	*51,363*	*51,482*	*49,137*	*-3.4*	*-5.4*	*-5.2*	*-4.6*
Special revenue from licensing and consession fees	*0*	*1,157*	*32*	*15*	*86*				
Tax refunds	*5,322*	*5,283*	*3,689*	*3,172*	*2,901*	*-0.7*	*-30.2*	*-40.0*	*-8.5*
2. Public investment budget	3,072	3,773	4,687	3,601	5,136	22.8	24.2	-4.6	42.6
– Own revenue	271	147	200	166	200	-45.8	36.1	12.9	20.5
– Receipts from the EU	2,801	3,626	4,487	3,434	4,936	29.5	23.7	-5.3	43.7
II. Expenditure	**76,212**	**76,705**	**68,705**	**67,614**	**62,652**	**0.6**	**-10.4**	**-11.9**	**-7.3**
(State budget primary expenditure)	62,989	60,357	56,970	55,391	53,752	-4.2	-5.6	-8.2	-3.0
1. Ordinary budget	67,758	70,146	61,855	61,499	55,802	3.5	-11.8	-12.3	-9.3
– Interest payments	13,223	16,348	11,735	12,223	8,900	23.6	-28.2	-25.2	-27.2
– Ordinary budget primary expenditure	52,179	51,561	47,586	47,137	44,650	-1.2	-7.7	-8.6	-5.3
– Grants to hospitals for past debt settlement	367	435	400	392	400				
– Procurement of defense equipment	1,017	360	700	410	750				
– Call-in of guarantees from entities *of which*	*972*	*1,442*	*869*	*796*	*1,027*				
from within the general government	827	1,249	691	679	558				
from outside the general government	145	193	178	117	469				
– Fee for disbursement of EFSF loans	0	0	565	541	75				
2. Public investment budget	8,454	6,559	6,850	6,114	6,850	-22.4	4.4	-6.8	12.0
III. State budget balance	**-22,283**	**-22,773**	**-16,312**	**-15,688**	**-11,194**	**2.2**	**-28.4**	**-31.1**	**-28.6**
% of GDP	**-10.0**	**-10.9**	**-8.4**	**-8.1**	**-6.1**				
1. Ordinary budget	-16,901	-19,987	-14,149	-13,174	-9,480				
2. Public investment budget	-5,382	-2,786	-2,163	-2,513	-1,714				
IV. State budget primary balance	**-9,060**	**-6,425**	**-4,577**	**-3,465**	**-2,294**	**-29.1**	**-28.8**	**-46.1**	**-33.8**
% of GDP	**-4.1**	**-3.1**	**-2.4**	**-1.8**	**-1.3**				
V. General government balance									
% of GDP (on a national accounts basis)	**-10.7**	**-9.4**	**-6.6**	**-**	**-5.2**				
Amortisation payments	19,549	28,843	12,860	23,905	12,845	47.5	-55.4	-17.1	-46.3
GDP (at current prices)	222,151	208,532	194,003	194,003	183,049	-6.1	-7.0	-7.0	-5.6

Source: Ministry of Finance.
* Provisional data.

Table IX.10 Greece's financial account with the European Union

(million euro)

	2009	2010	2011	2012*	Budget 2013	Percentage changes 2010/2009	2011/2010	2012*/2011	Budget 2013/2012*
A. Receipts from the EU budget	**4,498**	**5,476**	**6,136**	**5,973**	**7,665**	**21.7**	**12.1**	**-2.7**	**28.3**
1. 10% refund on own resources collection costs	64	64	47	41	45	0.0	-26.6	-12.7	9.6
2. European Social Fund	118	295	513	760	1,100	150.0	73.9	48.2	44.7
3. EAFRD – Agricultural Fund	261	408	448	366	412	56.3	9.8	-18.3	12.6
4. ERDF – Regional Fund	1,338	1,735	2,219	1,743	2,530	29.7	27.9	-21.5	45.2
5. EAGF – Agricultural Guarantee Fund	2,398	2,351	2,234	2,297	2,502	-2.0	-5.0	2.8	8.9
6. Framework programme on solidarity and management of migration flows	6	37	25	49	60	516.7	-32.4	96.9	21.9
7. Other receipts	13	16	19	13	19	23.1	18.8	-32.6	48.4
8. Cohesion Fund	274	570	591	677	852	108.0	3.7	14.5	25.9
9. EFF – Fisheries Fund	26	0	40	27	145	-100.0	-	-32.8	439.5
B. Payments to the EU budget	**2,484**	**2,363**	**2,157**	**1,831**	**1,976**	**-4.9**	**-8.7**	**-15.1**	**7.9**
1. Agricultural levies and duties – Sugar levies	6	2	2	2	2	-66.7	0.0	-4.8	5.0
2. Customs duties under the Common External Tariffs and anti-dumping duties	248	277	186	162	180	11.7	-32.9	-12.8	10.9
3. Contribution according to the VAT base	512	462	372	304	320	-9.8	-19.5	-18.4	5.4
4. Contribution on the basis of GDP	1,522	1,561	1,408	1,304	1,395	2.6	-9.8	-7.4	7.0
5. Additional extraordinary contributions	150	12	137	9	9	-92.0	1,041.7	-93.6	2.4
6. Contribution to the European Development Fund	43	47	48	42	65	9.3	2.1	-13.1	55.8
7. Payments owing to unrealised projects	3	2	4	9	5	-33.3	100.0	128.8	-45.4
Net receipts from the EU budget (A-B)	**2,014**	**3,113**	**3,979**	**4,142**	**5,689**	**54.6**	**27.8**	**4.1**	**37.4**

Source: State General Accounting Office.
* Provisional data.

Projected **expenditure reductions** mainly reflect:

(i) the introduction as from 1 January 2013 of stricter retirement conditions under Law 3863/2010, and an increase in retirement age by two years;

(ii) large cuts (up to 20.0%) in main and supplementary pensions, and lump-sum payments on retirement;

(iii) abolition of the Christmas, Easter and summer bonuses in main and supplementary pensions under Law 4093/2012;

(iv) means-testing of certain benefits.

As regards the **revenue of social security funds**, the Introductory Report projects a decline of €863 million in 2013 compared with 2012, which is mainly accounted for by reduced transfers from the state budget (down by €757 million) and, secondarily, lower interest and other revenue. By contrast, social security contributions are projected to rise marginally by €129 million.

Revenue forecasts in the Introductory Report also reflect:

(i) the adjustment of maximum insurable earnings of both the old (i.e. first insured before 1993) and the new employees insured with the wage earners' fund (IKA – Social Insurance Institute); and

(ii) the stepping up of efforts to combat contribution evasion and to collect social security arrears.

4.3.2 PUBLIC ENTERPRISES

The consolidated balance of the operating and capital accounts of public enterprises is expected to show a deficit of €1.2 billion in 2013 (0.7% of GDP), deteriorating by €1.6 billion against 2012, when it is estimated to be in surplus (see Table IX.4).

This deterioration stems from a €1.2 billion decline in special purpose resources against 2012, as well as a €788 million increase in expenditure on the capital account (mostly investment and working capital). By contrast, current revenue is projected to increase by €406 million against 2012, mostly reflecting enhanced revenue of transport enterprises as a result of the new price-setting policy and intensified efforts of audit mechanisms. Accordingly, ordinary budget grants are projected to decline by 5% against 2012.

Operating account expenditure is projected to increase marginally (by 0.4% compared with 2012). It should be noted that, according to the MTFS 2013-2016, the year 2013 is expected to see cost savings of €208 million due to restructuring, cuts in operating costs of public enterprises and inclusion of public utilities' employees into the unified wage grid. Furthermore, efforts to reduce the number of employees are expected to continue.

Lastly, in 2013, as in 2012, the Hellenic Railways Organisation and ATTIKO METRO S.A. are expected to present substantial borrowing requirements (€393 and €194 million, respectively), which should be covered by new trade credits.

5 KEY FISCAL ADJUSTMENT MEASURES AND INSTITUTIONAL FISCAL REFORMS

5.1 FISCAL ADJUSTMENT MEASURES

The two consecutive general elections in May and June 2012, despite causing delays in the implementation of the Second Economic Adjustment Programme, delivered a majority needed to form a coalition government in favour of continuing fiscal adjustment and structural reforms. In the context of the negotiations carried out with the country's partners from July to October 2012, it was decided to revise the targets set in the Second Economic Adjustment Programme agreed in February 2012. Specifically, the primary surplus of 4.5%

of GDP was deferred to 2016 in the MTFS 2013-2016, instead of 2014.

On 7 November 2012, Parliament passed the omnibus law (Law 4093/2012) *"Approval of the Medium-Term Fiscal Strategy Framework 2013-2016 – Emergency measures for the implementation of Law 4046/2012 and the Medium-Term Fiscal Strategy Framework 2013-2016"*. The omnibus law includes the MTFS 2013-2016, as well as significant measures to support fiscal adjustment, among which further substantial cuts in pensions and social expenditures; a reduction in the wage bill by abolishing holiday and summer bonuses and reducing wages of employees under "special wage regimes" in the public sector; cutbacks in pharmaceutical expenditure; amendments to several tax provisions; and establishment of the position of a Secretary-General for Public Revenues in the Ministry of Finance.[32] In addition, it includes important provisions further enhancing labour market flexibility and opening up closed professions.

According to MTFS estimates, the general government deficit should stand at €13,537 million or 7.0% of GDP in 2012,[33] €10,047 million or 5.5% of GDP in 2013, and €6,322 million or 2.0% of GDP in 2015. The general government budget is expected to shift from a primary deficit of 1.5% of GDP in 2012 to a primary balance of 0.0% of GDP in 2013, and then to a surplus of 1.5% of GDP in 2014, 3.0% of GDP in 2015, and 4.5% of GDP in 2016. Fiscal adjustment in 2013-2016 is characterised as frontloaded and is based on measures with a net result of €14,244 million, of which €9,374 million in 2013, €4,186 million in 2014, €529 million in 2015, and €155 million in 2016.

The package of measures for 2013-16 includes the following (estimated net performance in parenthesis):

- public sector restructuring (€719 million);
- local government restructuring (€210 million);
- lower wage bill (€1,497 million);
- lower pension expenditure (€5,475 million);
- rationalisation of social transfers spending (€307 million);
- rationalisation of healthcare expenditure (€1,113 million);
- reduction in defence expenditure (€406 million);
- rationalisation of education expenditure (€133 million);
- rationalising the operation of public enterprises (€495 million); and
- tax system changes (€3,890 million).[34]

38.4% of the measures in 2013-16 concern pension expenditure cuts and 27.3% additional revenue from tax system restructuring. Furthermore, out of total measures, 34.2% concern the 2014-2016 period, of which 19.4% represent expenditure cuts and 14.8% increased revenue.[35]

However, according to the MTFS, in order to achieve the targeted general government primary balance of 3.0% of GDP in 2015 and 4.5% of GDP in 2016, *additional interventions are necessary, amounting to €1,877 million in 2015 and €2,765 million in 2016, which have yet to be defined.*

According to the MTFS, the implementation of a fiscal policy that could achieve general government primary surpluses, and the adop-

32 See Annex about changes in the tax system already under way.
33 As mentioned in the MTFS, ANFA revenue, i.e. national central banks' earnings on Greek government bonds that were excluded from the PSI, which are transferred to Greece, are not included among the MTFS targets. They are however included in the Introductory Report to the 2013 Budget; *as a result, there are small divergences between the 2013 Budget and the MTFS fiscal forecasts.*
34 See Annex.
35 In addition, during the 2013-2016 period and under the 1:5 rule, the MTFS provides for the exit of 96,139 civil servants and the recruitment of 15,234, implying a net decline of 80,905.

tion of measures to kick-start the economy, such as accelerated absorption of National Strategic Reference Framework (NSRF) resources, combined with faster implementation of structural reforms and the privatisation programme, should help correct fiscal and macroeconomic imbalances and deliver sustainable growth.

5.2 INSTITUTIONAL FISCAL REFORMS

A very positive effect is expected from legal measures taken recently by the coalition government, which aim to improve control of expenditure and to support monitoring of budget execution, a development also noted in the European Commission December 2012 report.[36]

Specifically, in order to improve policies to control public expenditure, the government adopted on 29 October 2012 a Legislative Content Act which changes the tasks and responsibilities framework of general government entities that manage public resources. The relevant act was ratified (Law 4111) on 14 January 2013.[37] The Legislative Content Act provides for: (a) timely approval of the budgets of all general government entities by 31 January every year; (b) preparation of budget execution programmes on a monthly basis; (c) establishment of quarterly targets for ministries and ministry-supervised entities; (d) timely adoption of corrective measures when deviations from targets jeopardise budget execution; (e) conclusion of programme agreements between the Ministry of Finance and other ministries, and between ministries and ministry-supervised entities; (f) borrowing by entities only for investment purposes; and (g) sanctions in case of non-compliance. Sanctions include (1) cuts in budgets when deviations exceed 10% of agreed targets and no corrective measures are taken; and (2) appointment of an economic services supervisor in entities that show large deviations or non-compliance.

Furthermore, an internal stability pact is introduced specifically for local governments, which requires balanced budgets. The control is carried out by the "Observatory for the Economic Autonomy of Local Governments" of the Ministry of Interior, which should monitor, on a monthly basis, execution of the budgets of municipalities and municipal legal entities included in the Register of General Government Entities. Deviations from targets bring about immediate adjustments to expenditure, as applied also to other general government entities.

Moreover, efforts continue to staff the General Departments of Fiscal Audit in all ministries, to appoint heads of accounting offices to all general government entities and to establish a commitments register. As noted in the recent European Commission report, over 70% of general government entities supplied data through this register in June 2012, achieving the respective structural reform milestone. However, the amount of arrears in budget execution bulletins overshot by 42% the amounts in commitments registers, while the target set for June was to keep deviations below 25%. Structural reform milestones for end-December 2012 were, among others, to have over 90% of general government entities supply data through commitments registers and to contain discrepancies between bulletins and registers to 1%. At end-December 2012, the respective percentages were 85% and 4%, which suggests a satisfactory approximation of structural reform milestones for 2012.[38]

In any case, the increase in arrears by €977 million in January-December, mostly attributable to social security funds and hospitals, suggests that expenditure control issues remain to be resolved. However, the government adopted towards the end of 2012 a new project to identify, verify and clear arrears (in a total amount of €8,773.6 million at end-December 2012, including tax arrears of

36 One of these measures is the staffing and reactivation of the Budget Office of Parliament.
37 See Annex.
38 It should be noted that the 2013 percentages have been revised to 80% and 10%, respectively, for end-July and to 97% and 1% for end-December.

€723.6 million) by end-2013. The prerequisites for clearing arrears are sound financial management and the supply of timely and accurate data through the commitments register by all general government entities involved.

A key factor for centralised expenditure control is effective and comprehensive operation of the **Single Payment Authority**.[39] The Single Payment Authority has a two-phase *modus operandi*; the first phase includes centralised payment of all general government employees; the second, more important phase (which is about to begin) includes centralised payroll settlement, on the basis of data from the census of public sector employees using contemporary analysis and risk management methods.

So far, in the context of the first phase, all the employees of entities under ministries and municipalities have come under the Single Payment Authority, as well as employees of around 550 legal persons in public law, whereas another 2,000-3,000 legal persons in public law are expected to follow suit. As regards the number of employees, 530,000 persons employed in central administration, and 113,000 persons employed in local authorities and legal persons in public law have been registered. In the next months it is expected that the Single Payment Authority should also register clergymen (around 10,500 people), as well as another 20,000 wage-earners employed by other legal persons in public law.

With the contribution of the EU Task Force for Greece, administrative reform is promoted at central and regional levels, in order to make public administration more effective and efficient. As a first step, an assessment of the structures and a reorganisation of ministries is promoted, in order to support efficient functioning, while also taking into account the budgetary constraints and staffing plans. According to the EU Task Force for Greece December 2012 report, the reorganisation of ministries is scheduled for the first quarter of 2013, while work has started on the definition of evaluation criteria for assessing the competences of civil servants and the procedure is expected to move in 2013.

In order to further strengthen coordination of government work, Law 4109 was passed on 9 January 2013, which provides for the establishment of a General Secretariat of Coordination as an independent public body reporting directly to the Prime Minister's Office.[40,41]

In an effort to cut down on government wasteful spending, Law 4081/2012 "Cutting public expenditure, and regulatory issues of fiscal audits" was passed, aiming to reduce operating costs (rents paid by public entities), to curtail public spending connected with the operation of the political system and the administration of the country, and to improve the efficiency of fiscal audits. Furthermore, the above-mentioned Law 4109/2013 provides for abolishing and merging entities in central government and the broader public sector, as abolitions and mergers of public entities have not delivered satisfactory results so far and, therefore, efforts in this area must be redoubled.

In the context of measures to downsize the public sector beyond the 1:5 hiring rule, the government has committed to transfer 27,000

39 It should be noted that payment of any remuneration to civil servants used to he conducted at decentralised level by the payment agents of the entities concerned (ministries, legal persons in public law and local governments). The Single Payment Authority was established by Law 3845/2010 to control expenditure at central level and to undertake the payment of remuneration to general government employees, i.e. ministries, hospitals, legal persons in public law and local governments (municipalities, decentralised administrations and regions). The Single Payment Authority system is supported by DIAS Interbanking Systems S.A. and the General Secretariat of Information Systems. The purpose of this system is to reduce wasteful spending observed in the past, as well as to systematically monitor and control expenditure at payee level.

40 Law 4109/2013 "Abolishing and merging of public entities – Introduction of a General Secretariat for the Coordination of government work, and other provisions".

41 The General Secretariat of Coordination will be entrusted with coordinating actions to implement government policies and, specifically, planning, organisation, monitoring and coordination among ministries, resolving any disputed between ministries, particularly those associated with issues of joint competence, ensuring coherence of government policies and control of their implementation according to the decisions of government bodies. Furthermore, the General Secretariat of Coordination is also entrusted with the tasks of supervising and promoting actions to simplify procedures, as well as documentation and record-keeping.

people to the mobility scheme on reduced pay for one year up to end-2013. If they fail to find a new position in the public sector, they will be laid off at the end of this period. In 2012, 2,000 staff were moved to the mobility scheme, against a target of 15,000. It should be noted that detailed planning of ministry hirings as well as quarterly setting of mobility targets are prior actions for the March 2013 disbursement.[42]

Major public sector cost savings will result from the activation of a central Electronic Public Procurement Register for project execution, procurement of goods and services, as well as from the codification and simplification of the relevant legislation. The launch of the Single Public Procurement Independent Authority is a positive development, although, as noted by the European Commission, it is necessary to enhance staffing and fully define its regulatory framework.[43]

Further progress was made in the reform of the pension system in 2012. March 2012 saw the establishment (under Law 4052/2012) of the Unified Fund of Supplementary Insurance (ETEA)[44] to incorporate all major supplementary pension funds of employees, and a system of "notional" defined contribution capitalisation scheme for those first insured after 1 January 2001. The MTFS 2013-2016 also introduced an increase in the statutory retirement age to 67, from 65. It should be noted that the 2010 reform provided for a gradual increase in the statutory retirement age to 65 as of 2015.

The upgrade of the education system through improved allocation of resources (e.g. the implementation of the "Athena" scheme in tertiary education), and the reform in the healthcare system should contribute to a more effective and efficient utilisation of scarce public resources.

Significant progress has been made towards reforming the healthcare system. Electronic prescribing is ever more widely used —over 90%, as noted in the European Commission report— contributing to the control of, and decline in, pharmaceutical expenditure. Furthermore, a new application for electronic prescription is being used, which records medical consultations and referrals for testing. A significant decline was achieved in hospitals' operating costs. However, the active ingredient-based prescription scheme is not fully implemented, and clawbacks cannot be collected yet from pharmaceutical companies due to legal obstacles. Moreover, the merger of health insurance funds (other than the four major funds incorporated in April 2012) into the National Organisation for the Provision of Health Services (EOPYY) is not complete, though recently the government took legal initiatives to this end. Additionally, discrepancies in healthcare contributions still remain, giving rise to disparities in return on contributions and healthcare access problems. Further progress and continuous efforts must focus on promoting electronic prescription, imposing active ingredient-based prescription and expanding the use of generic medicines, regular revision and publication of the price list and positive list of medicines, regular review of the EOPYY healthcare services in order to achieve further cost savings in connection with services provided by private clinics and diagnostic centres, conduct of centralised tender procedures for medical equipment by the Health Procurement Committee, restructuring and merger of hospitals, and better utilisation of available staff.

42 A Ministry of Administrative Reform and e-Governance circular issued on 10 January 2013 defines criteria for transferring employees to the mobility scheme due to abolition of their positions and reassigning them to other positions.

43 See Central Electronic Public Procurement Registry's website at www.eprocurement.gov.gr.

44 The funds merged into ETEA so far are: Wage Earners' Supplementary Insurance Fund (IKA/ETEAM), Insurance Fund for Bank and Public Utility Service Employees (TAYTEKO – formerly for DEKO employees), Supplementary Insurance Fund for Public Sector Employees (TEADY), Municipal Employees' Insurance Fund (TADKY), Supplementary Insurance Fund for Social Security Employees (TEAPOKA), and Supplementary Insurance Fund for Retail Store Employees (TEAYEK). Any other funds unable to provide evidence of their sustainability on the basis of actuarial reports will also merge into ETEA. Ultimately, supplementary funds not merged into ETEA will be converted into occupational funds, thus losing access to government financing.

Delays were observed in the reform of tax administration, as noted in recent European Commission (December 2012) and IMF (January 2013) reports, and the report of the EU Task Force for Greece (December 2012), and as admitted in announcements of the General Secretariat of Information Systems. According to General Secretariat for Information Systems data, in January-December 2012 the structural reform milestones set in the Second Economic Adjustment Programme as regards the collection of arrears and the conduct of audits were not fully implemented. However, the target for collection of assessed penalties and taxes was overachieved. In whole, around €2.8 billion was collected, of which around €275 million is attributable to tax audits, and the rest to arrears.

The coalition government is committed to support the operation, independence and accountability of tax authorities. To this end, the government appointed a permanent Secretary-General for Public Revenues.

However, emphasis should be placed on enhancing internal control and combating corruption in the tax audit mechanism, strengthening the staffing of the tax collection mechanism, as well as auditing high-wealth taxpayers, accelerating the collection of arrears, reducing the number backlog of tax cases through a more efficient judicial procedure,[45] and reaching extrajudicial settlements. Progress was made towards abolishing the Code of Books and Records and replacing it with a more simplified Code of Tax Recording of Transactions (see Annex).

Furthermore, tax law 4110, which was passed on 11 January 2013 (a prior action for the January 2013 disbursement), introduces a simplified tax scale for wage or pension income, with only three tax brackets, and reduces substantially tax allowances, although certain allowances are maintained in the form of means-tested benefits. Moreover, the new law changes the income taxation of the self-employed, introducing two tax brackets and abolishing the tax-free threshold, but maintaining income imputation criteria for the self-employed. Furthermore, the special tax regime for sailors and farmers on the basis of imputed income was abolished. Corporate income taxation was reformed, including an increase in the tax rate on corporate profit and a reduction in the tax on dividends, as a result of which the gross tax rate on distributed profits fell to 33.4% from around 40%. Law 4111 of January 2013 introduces as from 2014 a luxury goods tax on swimming pools, aircrafts, helicopters and gliders, and passenger cars with 1,929 cc engines or bigger (see Annex).

According to EU estimates, the abolition of tax allowances and the reform of the tax scale should add €1 billion to revenue, or around 0.5% of GDP. By contrast, the government estimates that the total fiscal benefit should be around €2.3 billion, almost half of which should come from the new income tax scales, and the rest from taxes on interest on deposits, corporate profit, insurance compensation, ships, and the occupational tax on the self-employed. Moreover, as mentioned in a recent IMF report, improvements in tax administration and the more efficient operation of the tax collection mechanism should increase revenue by 0.34% of GDP in 2013-2014 and by 1.3% of GDP in 2015-2016. As noted, no progress has been achieved towards reducing the high tax burden on labour income, which generates a large tax wedge and hampers competitiveness and growth.[46]

Revenue from the privatisation and real estate development programme has been adjusted downwards due to legal and technical obstacles, as well as the negative economic sentiment. According to more recent estimates, rev-

45 Available data so far suggest that the targets set for June 2012 (50% reduction in the backlog of tax cases) have not been achieved (see European Commission Report, December 2012, and IMF report, January 2013).

46 See Barnes, S., Bouis, R., Briard, P., Dougherty, S., Eris, M. (2011), "The GDP impact of reform: A simple simulation framework", OECD Economics Department Working Papers, No. 834. OECD, Paris.

enue of €2.6 billion is projected by the end of 2013, against an original estimate of €8.5 billion – which is now the targeted revenue for 2016.[47] By end-2020 revenue is estimated to reach €22 billion.

Receipts in 2012 reached approximately €100 million, stemming from the sale of four Airbus aircrafts of the former Olympic Airways and the long-term lease of the International Broadcasting Centre (IBC) building for a 90-years period. Furthermore, on 12 December, the tender procedure for the privatisation of State Lotteries was completed. Efforts towards privatisation of the Hellenic Football Prognostics Organisation (OPAP), the Public Gas Corporation S.A. (DEPA)/Hellenic Gas Transmission System Operator S.A. (DESFA S.A.), the former Hellinikon international airport, and Astir Palace Vouliagmeni S.A. are in progress. Other assets are expected to follow, such as the Piraeus Port Authority (OLP), the Thessaloniki Port Authority, Hellenic Petroleum S.A. (ELPE), the Thessaloniki Water Supply and Sewerage Company (EYATH), the General Mining and Metallurgical Company (LARKO), the Athens International Airport "Eleftherios Venizelos", Egnatia Odos S.A. and Hellenic Post.[48]

As is evident in the EU and IMF reports, out of a total of 100,000 properties owned by the State, around 3,000 properties with a value of €10 billion have been earmarked for sale in the next 2-3 years. Of these, around 1,000 properties will be transferred for sale to the Hellenic Public Asset Development Fund (HRADF) within 2013 (almost 250 per quarter). Subsequently, the earmarking and development of a second group of 10,000 properties is under way, with a value of €8.5 billion.

In order to enhance privatisation efforts, the HRADF will publish revised semi-annual reports on the assets it holds for sale, as well as expected revenue for the years to come.

47 Not including revenue of €1.6 billion in 2011.
48 Law 4111 of January 2013 facilitates the privatisation of Hellenic Horse Racing Organisation S.A. (the utilisation of the government's right to organise and conduct mutual betting on horse races in Greece), the privatisation of the Hellenic Railways (OSE S.A.) and the train operating company (TRAINOSE S.A.)(including the establishment of a Maintenance of Rolling Stock & Railroad Equipment Company (ROSCO S.A.) and the spin-off of other operations by the railway infrastructure manager), and contains certain provisions on the transfer of the railroad real estate manager (GAIAOSE S.A.) shares to the Greek government.

ANNEX TO CHAPTER IX
TAX POLICY MEASURES

In 2012 and early 2013, a number of fiscal measures were adopted with a view to increasing tax revenue, promoting fiscal adjustment and restructuring the tax system. The main provisions are included in the two omnibus laws passed by Parliament in April and November 2012,[49] as well as in the new tax law and the omnibus law both enacted in January 2013. Thus, important interventions are made in areas such as fuel taxation, the market of oil products, real estate taxation, the tax recording of transactions and structural reforms for the effective collection of tax revenue. Furthermore, under the new tax law (4110/2013), the taxation framework for wage-earners and pensioners, self-employed, farmers and enterprises was overhauled. Moreover, presumptive taxation criteria for the determination of income remain in effect, while the occupational tax on the self-employed and the tax on deposit interest are increased. Lastly, the omnibus law (4111 of January 2013) reinstates on a permanent basis the luxury goods tax.

The April omnibus law **(4072/2012)**[50] comprises several provisions regarding the oil products market and real estate taxation, personal and corporate taxation, and proceeds from the sale of shares. More specifically, the law aims at combating fuel smuggling through compulsory liquid fuel tracing, implementation of an inflow-outflow system across the market network and GPS installation.

Under the same law, first home buyers' tax exemption can be granted not only to EU citizens, but also to citizens of European Economic Area (EEA) countries. Moreover, taxpayers are no longer required to file a real estate return in case of change in family status; henceforth, this reporting requirement only applies to cases of change in property status. Another provision stipulates that, as from 2012, the property tax bills will be issued separately for each liable individual.

In accordance with this law, the special property tax currently collected via electricity bills (EETHDE) will no longer qualify as corporate expense and thus cannot be deducted from corporate gross income.

Furthermore, employers are required to submit monthly returns of income tax withheld at source, including the amounts of social solidarity levy and social security contributions, which will all be paid together. A joint decision of the Ministers of Finance and Labour & Social Security may specify the form and contents of the common income tax and social security contribution return.

Another provision of this law stipulates that the tax-free threshold for personal incomes (either imputed on the basis of objectively determined living expenses or earned exclusively from wages and pensions) is lowered to €5,000 from €6,000. Furthermore, property lease agreements will henceforth be certified electronically by tax offices.

In the case of sociétés anonymes and limited liability companies being converted into partnerships, a 25% tax rate is imposed on taxable earnings, tax-exempt reserves (aimed at financing productive investments in accordance with the development law), as well as on reserves and tax-exempt earnings and earnings from separately taxable income as at the time of conversion.

Finally, the applicable transaction tax of 0.2‰ on the sale of shares listed on Greek or foreign stock exchanges is extended until 31 December 2012.[51] Under Law 4110 of January 2013 (see below), the above-mentioned tax remains in effect.

A number of circulars amend certain provisions of Law 4038/2012,[52] which enables tax-

49 Measures adopted until end-April 2012 are described in the *Bank of Greece Annual Report 2011*, pp. 120-125.

50 "Improving the business environment – New corporate form – Trademarks – Real estate agents – Regulation of matters relating to shipping, ports, fisheries, and other provisions".

51 It should be noted that Legislative Content Act No. 268/2011 suspended for three months the 45% capital gains tax on shares, scheduled to come into force on 1 January 2012. This provision was also included in tax law 3842/2010, but its implementation has been repeatedly postponed.

52 See *Bank of Greece Annual Report 2011*, April 2012, p. 125.

payers to pay tax arrears on favourable terms, modifying the number and amount of instalments. According to the latest decision **POL. 1170/10.8.2012**, this amnesty applies to all debts of previous years provided that they are in arrears by three months at least. The minimum monthly amount of each instalment is set at €100. Taxpayers can choose to pay their arrears either in 45 instalments, with a corresponding write-down/write-off of surcharges (100% in case of payment of the entire amount or 50% in case of payment in 45 instalments) or in 48 instalments but without any write-down of surcharges. It should also be noted that in both cases the former debt ceilings (€10,000 for individuals and €75,000 for legal entities) are no longer applicable. If a taxpayer takes advantage of this amnesty, any measures enforcing the payment of debts will freeze and his/her criminal prosecution will be suspended (applicable for debt amounts over €5,000).

A provision of **Law 4079/2012**[53] of September 2012 enables tax authorities to use indirect audit techniques for all taxpayer categories, as in the case of the self-employed. In other words, the presumptive determination of taxable income, which has already been applied to the self-employed since the beginning of 2013, is expanded.[54] More specifically, the amount of taxable income will be determined not only on the basis of earnings reported by taxpayers, but also on the basis of bank deposits, consumer expenses paid in cash or by credit card, and any other sources of income and saving. The corresponding tax rates will be applied to the resulting amounts. As regards bank deposits and cash expenses, the tax audit authorities may lift bank and tax confidentiality automatically and without red tape in order to scrutinise withdrawals and deposits by correlating the relevant amounts with the taxpayer's tax compliance and consumer behaviour.

Under **Law 4092/2012**[55] of November 2012, fuel taxation changes are introduced. In particular, as from 15 October 2012 the excise tax on heating oil was raised to equal 80% of the excise tax on diesel oil, implying a rise in the excise tax on heating oil from €60/1,000 lt to €330/1,000 lt. Likewise, the excise tax on diesel oil is reduced from €412/1,000 lt to €330/1,000 lt.[56] Refunds of heating oil tax in wintertime will be made on the basis of income, property and geographic location criteria.

With a view to pushing ahead with fiscal consolidation, **Legislative Content Act No. 228/2012**[57] of November 2012 regulates issues relating to the monitoring and proper implementation of the state budget and public sector entities' budgets within the boundaries and targets set and approved by Parliament. At the same time, the imposition of sanctions is envisaged in the event of non-compliance.

Omnibus law **4093/2012**[58] of November 2012 comprises several fiscal and structural interventions, including *inter alia* arrangements on public revenue, changes in the tax recording of transactions and other provisions on tax issues. Specifically, the Code of Books and Records is abolished and replaced with the Code of Tax Recording of Transactions. Under the new code, the classification of accounting books changes; e-invoicing is introduced; enterprises are no longer required to keep stock records but may provide at will information on the purchases, sales and move-

53 Law 4079/2012 endorsing the Legislative Content Act on capital support to credit institutions; the Legislative Content Act on measures for the implementation of Laws 3864/2010, 4021/2011, 4046/2012, 4051/2012 and 4071/2012; and the Legislative Content Act on financial reporting by credit institutions and their financial subsidiaries, and other provisions within the scope of responsibility of the Ministry of Finance.

54 Under Article 4 of Law 4038/2012.

55 Law 4079/2012 endorsing the Legislative Content Act of 6 September 2012 (which amended Law 3986/2011 on emergency measures for the implementation of the Medium-Term Fiscal Strategy Framework 2012-2015) and the Legislative Content Act of 7 September 2012 (which abolished the minimum limit on the share of the Greek State in certain public enterprises (ELPE, DEH, OPAP, ODIE, EIDAP, EIATH, ELTA, the Port Authorities of: Piraeus, Thessaloniki, Alexandroupoli, Volos, Elefsina, Igoumenitsa, Iraklion, Kavala, Corfu, Lavrio, Patra and Rafina), and repealed Article 11 of Law 3631/2008), and introducing other provisions.

56 Law 3986/2011 provided for a gradual increase in the level of the excise tax on heating oil to 80% of the excise tax on diesel oil by 30 September 2013. Law 4024/2011 postponed this to 15 October 2012.

57 "Fiscal rules and other provisions".

58 "Endorsement of the Medium-term Fiscal Strategy Framework 2013-2016 – Urgent arrangements for the implementation of Law 4046/2012 and the Medium-term Fiscal Strategy Framework 2013-2016".

ment of goods; the procedures concerning the recording of transactions of enterprises and the self-employed are simplified; the threshold above which transactions must be paid by bank transfer or cheque issued in the name of the payee is set at €3,000 (from €1,500 currently in effect), etc.

The said law also envisages further increases in fuel taxation, with the excise tax on LPG rising from €200 to €300 per 1,000 lt, i.e. at the same level as for diesel oil. Moreover, the excise tax on diesel oil used in farming is raised from €21 to €66 per 1,000 lt, with the aim of boosting public revenue.[59]

The same law increases the excise duty levied on manufactured tobacco. The flat excise duty is fixed at €80 per 1,000 cigarettes, while the *ad valorem* excise duty is determined at 20% of the retail selling price. The minimum aggregate amount of the excise duty cannot be lower than €115 per 1,000 cigarettes. Under another provision of the said law, the standard rate of VAT refunds for farmers is reduced from 11% to 6%. In addition, the requirement to obtain a special sticker evidencing payment of road taxes is abolished from 2013 onwards.

The law provides for the **appointment of a Secretary General for Public Revenue**, who will be responsible, among other things, for submitting to the Minister of Finance the proposed strategic planning of the General Secretariat for Public Revenue; establishing qualitative and quantitative targets for the Ministry of Finance operational units and their staff under his responsibility; taking measures to ensure transparency and combat corruption in the services under the responsibility of the General Secretariat, etc. At the same time, the Minister of Finance will sign a performance contract with the Secretary General for Public Revenue, which outlines his responsibilities and sets the qualitative and quantitative targets that must be met. His term of office will be five years and may be renewed only once.

Lastly, important changes are envisaged in the games of chance market, with a view to harmonising taxation. Specifically, from 1 January 2013 until 12 October 2020 the share of the Greek State in the earnings of OPAP S.A. (Hellenic Football Prognostics Organisation) is set at 30% of gross gaming revenue. The undistributed amounts of lottery winnings will be paid to the Greek State after the end of each fiscal year. The current share of the Greek State in gross winnings from VLTs (30%) that OPAP S.A. has been granted a licence to operate may increase up to 35% under certain conditions. Besides, as from 1 January 2013 the gambling tax rate on OPAP winnings will be 10%.[60] A more recent decision by the Ministry re-instates the tax-free amount of €100 as from 1 January 2014 and the gambling tax rate is set at 0% for winnings less than €100, 15% for winnings between €100 and €500, and 20% for winnings equal to or over €500.[61]

59 Effective as from 5 November 2012.
60 Under Law 3842/2010, a tax was imposed on gains amounting to €100 and over.
61 Referring to winnings from OPAP's traditional games, VLTs, online gambling and horserace betting.

Individual income tax scale for wage earners (for income earned as from 1 January 2013)

Income bracket (in euro)	Tax rate	Bracket tax (in euro)	Total income (in euro)	Total tax (in euro)
25,000	22%	5,500	25,000	5,500
25,000-42,000	32%	5,440	42,000	10,940
Over 42,001	42%			

In January 2013 the new tax law **(4110/2013)**[62] was enacted, comprising several provisions aimed mainly at abolishing most tax allowances, restructuring the tax scale for wage-earners and pensioners, introducing a special tax scale for the self-employed and incomes from property leases, and maintaining the criteria for the presumptive determination of income.

Namely, as regards income taxation for wage-earners and pensioners, a new tax scale is introduced with fewer income brackets,[63] while the tax-free threshold of €5,000 is abolished for all taxpayers. The new tax scale applies to incomes earned (and expenses incurred) from 1 January 2013 onwards. For incomes up to €21,000 a standard tax credit of €2,100 is introduced, which decreases as income increases. More specifically, for incomes over €21,000, the amount of the tax credit is set at €100 per €1,000 of income, whereas for incomes over €42,000 it cannot exceed €2,100. It should be noted that taxpayers are eligible for the tax credit if they can produce receipts for expenses incurred for the purchase of goods and services corresponding to 25% of their personal income, with a ceiling of €10,500. If the amount of expenditure receipts submitted by the taxpayer falls short of the above amount, a 22% tax will be imposed on the difference, up from 10% today.

Foreign language school fees and, for the first time, expenses incurred for the purchase of goods and services in EU countries are taken into account in the total value of expenditure receipts.

On the basis of the new scale, 10% of health-care expenses (medical consultations and tests, hospital care costs) is deducted from gross income. However, the level of deduction is calculated on the amount in excess of 5% of taxable income. At the same time, deductions of interest paid on housing loans, annual rent paid for the taxpayer's principal residence and for dependent children who are studying, private tuition fees and life insurance premiums are abolished. A 10% deduction continues to be applicable to expenses incurred for charitable donations, sponsorships and alimonies.

Furthermore, the tax-free amount for children is abolished[64] and replaced with means-tested family allowances. The new allowances will amount to €40 per month per child. The full amount will be paid to families with annual incomes of up to €10,000, 2/3 to families with incomes from €10,000 to €20,000, and 1/3 to families with incomes from €20,000 to €30,000. The allowance for families with three or more children is set at €500. Moreover, the new law stipulates that as from fiscal year 2013 (calendar year 2012), all individuals aged over 18, whether subject to taxation or not, are obliged to submit tax returns.

The criteria for the presumptive determination of income remain unchanged, including house ownership and vehicles, as well as vessels, swimming pools, etc. Nevertheless, in order to avoid applying the income imputation method to unemployed persons, a taxpayer's

62 "Arrangements regarding income taxation, regulation of matters within the scope of responsibility of the Ministry of Finance, and other provisions".
63 The current scale comprises 8 tax rates.
64 The tax-free amount was €2,000 for each of the first two children of an individual and €3,000 for each child after that.

Individual income tax scale for the self employed (for income earned as from 1 January 2013)

Income bracket (in euro)	Tax rate	Bracket tax (in euro)	Total income (in euro)	Total tax (in euro)
50,000	26%	13,000	50,000	13,000
Over 50,001	33%			

minimum annual objectively determined expenditure is set at €3,000 for unmarried individuals and €5,000 for spouses submitting a joint tax return, provided that an actual or imputed income is reported.

Turning to income taxation for the self-employed, a tax scale with only two income brackets[65] is introduced, while the standard tax-free threshold of €5,000 is abolished. It should be noted that self-employed individuals who will start their business in 2013 will enjoy a favourable taxation status for the first three years of operation of their business, i.e. they will be taxed at a rate of 13% for incomes up to €10,000, 26% for incomes from €10,001 to €50,000, and 33% for incomes over €50,000.

Furthermore, the occupational tax for enterprises and the self-employed is raised. Specifically, as from 2013 the occupational tax increases from €500 to €1,000 for business companies based in towns with over 20,000 residents and to €800 for those based in areas with less than 20,000 residents. The tax also increases to €650 for the self-employed and sole proprietorships and remains at €500 for those who work as freelancers that issue receipts for services rendered but are effectively wage-earners.

The said law also stipulates that, with respect to the taxation of agricultural incomes, the presumptive determination of income on the basis of farmed acres and crops will continue to apply to farmers for fiscal year 2013. From fiscal year 2014, farmers will be taxed on the basis of their actual profits (income less expenses), at a rate of 13%.

Under the same law, rental incomes will be taxed separately.[66] Gross income from properties will also be subject to a surtax of 1.5%. This rate is 3% higher for the rental of residential properties of over 300 square metres or for commercial property leases.

As regards real estate transfers, as from 1 January 2013 a 20% tax will be imposed on capital gains (differential between the selling price and the acquisition price of the property) from real estate sold. To factor in any price increases due to inflation, this differential is multiplied by a rate of 0.9%-0.6% depending on the age of the property.

The law also provides for an increase in the taxation of interest income from bank deposits, from 10% to 15%. This refers to interest income collected from 1 January 2013 onwards, irrespective of the period it was generated. Interest payments made by non-residents are subject to tax withholding of 20% if the beneficiary is an individual and of 33% if the beneficiary is a legal entity.

Furthermore, the income tax advance payment by general and limited partnerships which keep single-entry accounting books is raised from 55% to 80%.

The tax on profits of general and limited partnerships which keep single-entry accounting books is also raised. More specifically, the tax rate is raised from 20% to 26% for the first €50,000 of net profits and to 33% for the

65 The current tax scale comprises 8 tax rates.
66 An annual tax-free amount of €5,000 was applicable so far.

Individual income tax scale for real estate-related income (for income earned as from 1 January 2013)

Income bracket (in euro)	Tax rate	Bracket tax (in euro)	Total income (in euro)	Total tax (in euro)
12,000	10%	1,200	12,000	1,200
Over 12,001	33%			

amount of profits in excess of €50,000. With regard to enterprises keeping double-entry accounting books, total net income is subject to a 26% tax. Turning to the tax treatment of profits for sociétés anonymes and limited liability companies, undistributed profits will be taxed at 26% (up from the current 20% rate), while a surtax of 10% (down from 25%) will be imposed on distributed profits.

In accordance with another provision of the said law, as from 1 January 2013 a capital gains tax of 20% is imposed on shares listed on the Athens Exchange or a foreign stock exchange or other regulated bourse.[67] In calculating capital gains, the acquisition cost of transferred shares is deducted from their lowest market value at the time of the transfer.

Moreover, the law provides for the establishment of an independent Internal Affairs Service. Its mission is to investigate at national level any involvement of the Ministry of Finance staff or staff of entities under its supervision in criminal and disciplinary offences. It is also specified that the civil servants who will be appointed as Inspectors of Public Revenue Certification and Payment Enforcement will sign a performance contract for a period of twelve months. The tax amnesty scheme under Law 3888/2010 is abolished, with a view to doing away with permanent amnesty schemes.

Under the same law, individuals pursuing so-called technical professions (electricians, plumbers, etc.), whose gross income from the sale of goods and the provision of services did not exceed €5,000 in the previous fiscal year, are exempted from the obligation to keep accounting books and issue retail receipts. Furthermore, the law allows the self-employed and enterprises to deduct the sum of their compulsory social security contributions from their gross income as from 1 January 2013. As regards the depreciation of assets of enterprises and the self-employed, the depreciation of individuals' vehicles (e.g. cars) can be allocated over a period of 10 years. The same also applies for all other fixed assets. Moreover, the value of a fixed asset that could be depreciated fully within the year of its acquisition is set at €1,500.

Under the same law,[68] families with many children[69] and the disabled are exempt from car registration fees. In addition, the car scrappage scheme is extended until end-2013.[70] Lastly, a luxury tax is imposed on second-hand vehicles, using the tax scale of 10%-40% that applies for new cars.

In January 2013, in order to complete the requirements for the disbursement of a tranche of financial assistance to Greece, the Greek parliament passed omnibus **Law 4111/2013**[71] which endorses a number of legislative acts regarding fiscal management, taxation, wages and pensions. As regards tax provisions, the luxury goods tax is re-instated[72] on a permanent basis and is levied on cars, swimming pools and aircraft. In particular, vehicles with high-displacement engines of up to 10 years will be subject to a new standard luxury tax, amounting to 5% or 10% of the objectively determined annual expenditure. This tax will be certified in the income tax return, included in the tax payment notification and paid on an annual basis, just like income tax. It will apply as from 2014 to vehicles registered in 2013. Swimming pools will be taxed at 10% of the objectively determined annual expenditure.

67 This provision was first included in a 2008 law, but its implementation has been repeatedly postponed.
68 In combination with clarifying circular No. DEFK/D5003183EX/24.1.2013 of the Ministry of Finance, which was issued later.
69 It should also be noted that families with three children are, at the birth of a fourth child, entitled to a renewed exemption from car registration fees when purchasing a new car.
70 The car scrappage scheme applies to cars that have been customs-cleared and tax-cleared until 31.12.2013 at the latest.
71 "Pension provisions, amendments to Law 4093/2012, ratification of Legislative Content Act 'Approval of the draft agreements amending the Master Financial Assistance Facility Agreement between the European Financial Stability Facility (EFSF), the Hellenic Republic, the Hellenic Financial Stability Fund (HFSF) and the Bank of Greece, under the title 'Master Financial Facility Agreement', of the Financial Assistance Facility Agreement between the EFSF, the Hellenic Republic and the Bank of Greece, under the title 'PSI LM Facility Agreement' and of the Financial Assistance Facility Agreement between the EFSF, the Hellenic Republic and the Bank of Greece, under the title 'Bond Interest Facility', authorisation to sign agreements, and other emergency provisions".
72 Under Law 3986/2011, extraordinary levies were imposed on vehicles with high-displacement engines, vessels and swimming pools.

Under another provision, companies providing ancillary shipping services (such as chartering, insurance, brokerage, sale and purchase of vessels) are subject to an extraordinary progressive levy on total annual imports of foreign currency, which is envisaged for the next 4 years.

X MONEY, CREDIT AND CAPITAL MARKETS

1 MONETARY AGGREGATES

• During the January-August 2012 period, the annual rate of decline in M3 (excluding currency in circulation) gradually strengthened with some fluctuations (August 2012: -18.9%, December 2011: -16.5%). Between September and December 2012, the contraction in this monetary aggregate moderated year-on-year to -6.2% in December, as the return of deposits to the Greek banking system was satisfactory during these months (see Table X.1).

• Throughout 2012, the annual rates of decline in overnight deposits (December 2012: -12.3%, December 2011: -18.0%) were higher than those in term deposits with an agreed maturity of up to 2 years (December 2012: -2.2%, December 2011: -15.3%, see Table X.1 and Chart X.1).

• As regards the evolution of individual types of deposits,[1] deposits by non-financial corporations declined at a faster rate in 2012 (annual rate of decline in December 2012: -9.9%, December 2011: -22.4%) compared with household deposits (annual rate of decline in December 2012: -7.1%, December 2011: -16.4%).

• The deep economic recession, the prevailing uncertainty among depositors and the decrease in firms' and households' wealth explain to a large extent the gradual strengthening in M3 decline (excluding currency in circulation) up until August. Similarly, the moderation in the annual rate of M3 decline between September and December 2012 mainly reflects the ongoing return of deposits since July (on a monthly basis) or end-June (on a daily basis) and is due to the decline of uncertainty.

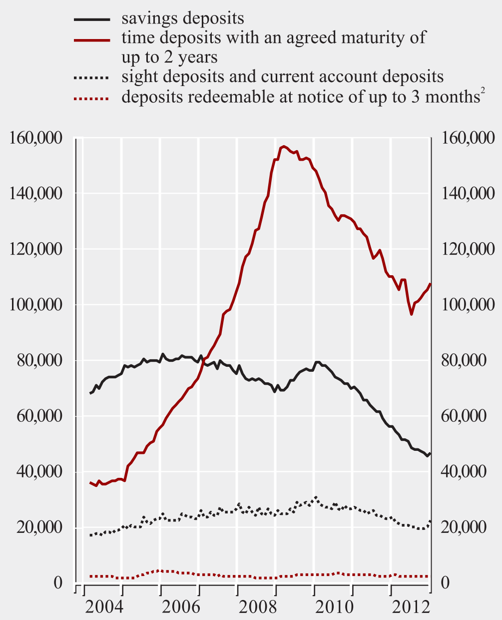
1.A MAIN FACTORS BEHIND THE DEVELOPMENTS IN DEPOSITS, SIGNS AND PROSPECTS OF STABILISATION OR INCREASE

In 2012, outstanding deposits by domestic enterprises and households with credit institutions active in Greece declined by 7.3% and stood at €161.5 billion in December. Relative to September 2009,[2] outstanding deposits by domestic enterprises and households had fallen by December 2012 by approximately 33%, i.e. outflows amounting to €77.8 billion were recorded.

Over the September-December 2012 period, the drop in the deposits of enterprises and non-financial corporations reached 39% and 45%, respectively, exceeding by far the drop in household deposits (-31%). On average, term deposits accounted for about 60% of total deposits by domestic enterprises and

Chart X.1 Deposits in Greece[1] (January 2004 - December 2012)

(end-of-period balances; million euro)



Source: Bank of Greece.
1 These aggregates are included in M3 together with repurchase agreements (repos), money market fund shares/units, and debt securities with a maturity of up to two years, issued by domestic MFIs (minus domestic MFI holdings of debt securities issued by MFIs of other euro area countries) according to the ECB definition.
2 Including savings deposits in currencies other than the euro.

1 Comprising deposits not included in M3 (e.g. redeemable at notice of over three months).
2 After this month, the yield spread between Greek and German government bonds started to widen, as markets, in the light of new fiscal data releases and in a context of excessive risk aversion following the default of Lehman Brothers, reassessed the seriousness of the imbalances that had accumulated in the Greek economy for decades.

Table X.1 Main monetary aggregates in Greece

(non-seasonally adjusted data)

	Outstanding balances on 31.12.2012 (million euro)	Annual percentage changes[1]											
		2008	2009	2010	2011		2012						
		Q4[2]	Q4[2]	Q4[2]	Q4[2]	Dec.[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	Oct.[3]	Nov.[3]	Dec.[3]
1. Overnight deposits	65,355	-7.0	11.4	-8.0	-17.3	-18.0	-20.2	-20.8	-21.5	-17.0	-18.0	-17.2	-12.3
1.1 Sight deposits and current account deposits	22,699	-3.6	15.7	-7.6	-12.8	-12.2	-17.1	-18.9	-19.5	-13.6	-15.3	-14.9	-4.2
1.2 Savings deposits	42,656	-7.9	9.5	-8.1	-19.3	-20.3	-21.4	-21.2	-22.0	-18.4	-19.0	-18.1	-16.2
2. Time deposits with an agreed maturity of up to 2 years	97,489	39.1	2.7	-13.8	-14.6	-15.3	-15.9	-15.5	-16.0	-6.5	-7.5	-4.5	-2.2
3. Deposits redeemable at notice of up to 3 months[4]	2,250	-24.1	64.2	-7.0	-14.9	-13.6	-13.3	-15.9	-15.6	-14.7	-15.4	-14.8	-14.7
4. Total deposits (1+2+3)	165,094	15.3	6.6	-11.3	-15.7	-16.4	-17.7	-17.7	-18.3	-11.0	-12.0	-10.0	-6.6
5. M3 excluding currency in circulation	166,519	14.4	4.8	-11.8	-15.8	-16.5	-17.7	-17.8	-18.3	-10.8	-11.8	-9.9	-6.2

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 the 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 Including deposits, repurchase agreements, money market fund shares/units and debt securities with a maturity of up to two years issued by domestic MFIs (less the outstanding amounts of debt securities of similar maturities issued by MFIs in other euro area Member States and held by domestic MFIs). This aggregate is the Greek contribution to the euro area M3.

households in 2012, remaining broadly unchanged relative to the January-September 2009 period. The corresponding share of the other deposit categories (mainly overnight deposits) did not change significantly between the first nine months of 2009 and 2012 as a whole, but remained close to 40%. It should be noted that the share of term deposits in total deposits did not grow, despite the fact that interest rates on term deposits gradually rose during most of the period between end-2009 and end-2012.[3] Furthermore, banks made certain features of these deposits more attractive (e.g. by reducing the minimum deposit amount). On the other hand, interest rates on overnight deposits remained virtually unchanged.

Demand for deposits, namely the stock of deposits held in real terms, is a positive function of, among other things, real GDP and real total wealth to be allocated among alternative assets. The decline in real GDP growth from 2008 onwards, compounded by the decreasing market prices of houses, shares and Greek government bonds, contributed initially to a slowdown and eventually to a continuous drop in bank deposits by domestic firms and households from October 2009 up to June 2012.

The outflow[4] of deposits from the Greek banking system was stronger during months of heightened uncertainty, whereas in months of strengthened confidence, when it was believed that the debt crisis in Greece would be overcome, outstanding deposits increased, that is, an inflow of deposits into the Greek banking system was observed.

For instance, May 2012, at the beginning of which an inconclusive general election was held, saw the largest monthly outflow of deposits by domestic enterprises and households since the onset of the crisis (€-9.2 billion). From July 2012, the first full month after the new coalition government took office, up to December 2012, a virtually uninterrupted inflow of deposits by domestic enterprises and households into the Greek banking system was observed, totalling €11.4 billion.

These developments show that, in addition to the declines in GDP and total wealth, another factor behind the fall in deposits were uncertainties arising from the crisis, most importantly the uncertainty surrounding the continued participation of the country in the euro area. The risk of a Greek euro area exit was averted thanks to the progress achieved in the negotiations with the country's international lenders, which allowed the resumption of disbursements under the second financial support programme, while the recapitalisation and restructuring of the Greek banking system also made considerable headway. These developments boosted depositors' confidence in the domestic banking system, which is mirrored in the return of deposits during the second half of 2012, especially in December, when deposit inflows recorded a three-year high.

On the supply side, between end-2009 and end-2012, the fact that Greek banks were shut out of markets and the shrinking of deposits contributed to a slowdown in credit expansion to the private (non-financial) sector of the economy, which eventually turned negative.

Compared with September 2009, in December 2012 bank credit to domestic non-financial corporations, the self-employed, farmers, sole proprietorships and households declined by about €14 billion (-6%)[5] in nominal terms (around -15% in real terms). The contraction

3 For instance, the interest rate on the most important term deposit category, i.e. deposits with an agreed maturity of up to one year, increased by 2.7 percentage points between November 2009, when it had reached a three-year low, and December 2012.

4 Any changes in the outstanding deposits of domestic firms and households arising from fluctuations in the exchange rate of the euro (as is the case with foreign currency deposits valued in euro when calculating outstanding total deposits by domestic enterprises and households) or from the reclassification of deposits from other sectors to the sector of domestic enterprises and households, and vice versa, are not taken into account as inflows/outflows of deposits into/from the banking system, respectively.

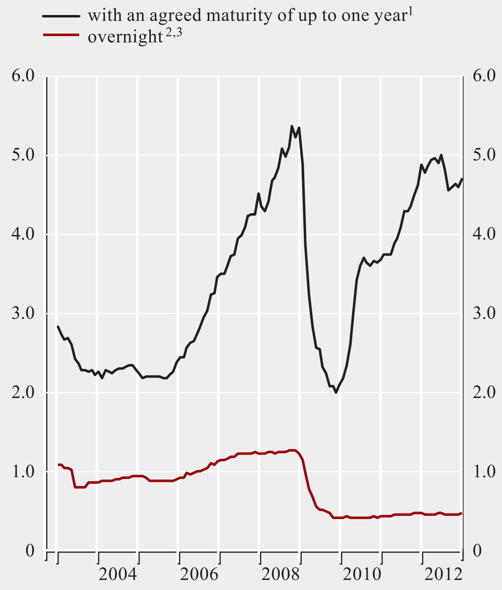
5 Excluding the decrease in outstanding financing due to loan write-downs/write-offs or foreign exchange variations, etc., as measured by calculating the cumulative net flow of financing over the October 2009-September 2012 period.

of bank credit to the real economy would be greater if banks did not have access to increased liquidity provision by the Bank of Greece and the Eurosystem, through ELA and the ECB's monetary policy operations, respectively.[6]

The extensive support provided to Greek banks by the Eurosystem's mechanisms and facilities averted an imminent risk of a credit crunch as a result of lack of access to market funding amid conditions of a shrinking deposit base. Eventually, for the economy as a whole, negative credit growth remained milder than negative economic growth. In fact, as a percentage of nominal GDP,[7] bank credit to non-financial corporations, the self-employed, farmers, sole proprietorships and households displayed a slightly upward trend between 2010 and 2012, from 104%[8] in the third quarter of 2009 to 110% in the third quarter of 2012.[9] The support of the Eurosystem to domestic credit institutions ensured that the decline in bank credit to the real economy was smaller than the contraction of the aggregate Greek economy, as measured by GDP.

Chart X.2 Bank interest rates on new deposits by households in Greece (January 2003 - December 2012)

(percentages per annum)



Sources: Bank of Greece and ECB.
1 Monthly average rate.
2 Represented by the interest rate on savings deposits, which make up the bulk of overnight deposits.
3 End-of-month rate.

2 BANK DEPOSIT RATES

• In contrast with their sharp rise observed from late 2009 up to the first half of 2012, deposit rates declined slightly over the July-December 2012 period. The upward path that interest rates on time deposits had been following for almost three years reflects banks' efforts to stem the large outflows of retail deposits observed during the crisis. Conversely, the gradual return of deposits to the Greek banking system in the second half of 2012 has contributed to an easing of upward pressures on interest rates.

• The interest rate on the most important category of deposits in Greece, namely household deposits with an agreed maturity of up to one year, which is the highest rate across the euro area, fell by 18 basis points to 4.70% over the January-December 2012 period (see Table X.2 and Chart X.2), against an increase of 120 basis points in 2011.

• The positive differential between the average deposit rates in Greece and the euro area as a whole widened, as the drop in deposit rates in the euro area was larger and more broadly based than in Greece, which reveals the comparatively tighter liquidity constraints facing Greek banks.

6 Actually, banks faced a shortage of collateral (which is required to back central bank financing), as they saw the value of their sovereign debt holdings that were eligible collateral decline. See also Section 4.A below.
7 Bank credit to the private non-financial sector in a given quarter is divided by quarterly GDP in the same quarter multiplied by 4.
8 This percentage was calculated alternatively by dividing outstanding bank financing in quarter T by the sum of quarterly GDP in quarters T-3, T-2, T-1 and T, instead of GDP in quarter T multiplied by 4 (see footnote 7). If calculated in this way, the percentage appears to have increased between early 2010 and mid-2012 from 108% to 116%, but subsequently to have decreased slightly (by one percentage point).
9 For this calculation, the time series for bank credit has been properly adjusted to ensure a uniform statistical treatment of certain shipping loans over the 2009-2012 period.

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

(percentages per annum)

	December 2011	December 2012	Change Dec. 2012/ Dec. 2011 (percentage points)
Overnight[1]			
Weighted average interest rate in the euro area	0.54	0.39	-0.15
Maximum interest rate	1.10	1.10	0.00
Minimum interest rate	0.09	0.02	-0.07
Interest rate in Greece	0.48	0.49	0.01
Interest rate differential between Greece and the euro area	-0.06	0.10	0.16
With an agreed maturity of up to one year[2]			
Weighted average interest rate in the euro area	2.78	2.71	-0.07
Maximum interest rate	4.88	4.70	-0.18
Minimum interest rate	0.98	0.41	-0.57
Interest rate in Greece	4.88	4.70	-0.18
Interest rate differential between Greece and the euro area	2.10	1.99	-0.11

Sources: ECB and euro area NCBs.
1 End-of-month rates.
2 Monthly averages.

• Real interest rates[10] on new bank deposits rose considerably in 2012, mainly on account of lower inflation (the rise in nominal interest rates also partly affected three categories of deposits[11]). The real interest rate on deposits with an agreed maturity of up to one year stood at 4.37% for households and 3.82% for non-financial corporations in December 2012, up by 166 and 223 basis points respectively during the reviewed period, while the real interest rate on overnight deposits was slightly positive in December as well as in September 2012.

3 BANK LENDING RATES AND THE INTEREST RATE MARGIN

• In 2012 interest rates declined sharply across all categories of new bank loans in Greece (see Chart X.3). This development, against a background of particularly heightened credit risk, can be attributed to the following factors:

– First, the cuts in the Eurosystem's key interest rates, which, coupled with the implementation of non-standard monetary policy measures, contributed to a decline in Euribor rates that are used as reference rates in many loan agreements, notably housing loans.

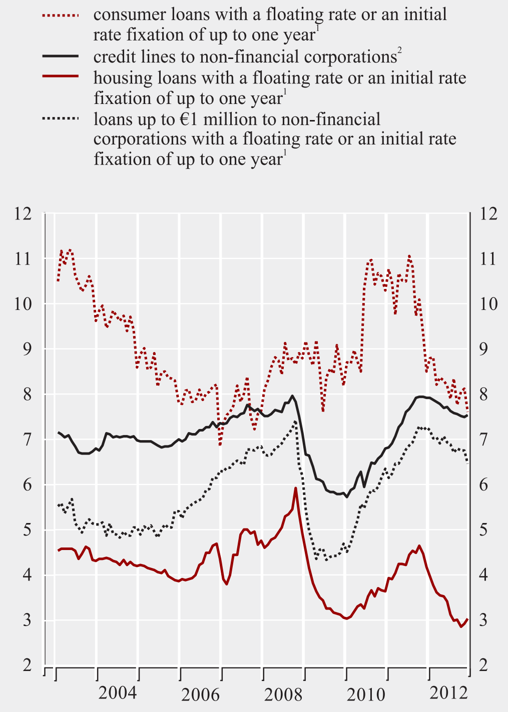
– Second, the extensive restructuring of existing loans[12] by banks, with a view to improving their debt servicing prospects.

– Third, banks' policy to increase their collateral requirements on borrowers relative to the past, regardless of loan category (corporate, consumer loans).

10 The real interest rate in a given month is equal to the month's nominal rate (either average or end-of-month, depending on the category of deposits) less the year-on-year inflation rate of the same month.
11 Over the period under review, interest rates rose on household saving deposits (by 2 b.p.) and household deposits with an agreed maturity of one to two years (by 4 b.p.), as well as on corporate deposits with an agreed maturity of up to one year (by 39 b.p.).
12 Changes in interest rates arising from loan restructuring/rescheduling are recorded in statistics as changes in the interest rates on new loans, thus affecting the average interest rate on new loans.

Chart X.3 Bank interest rates on new loans in Greece (January 2003- December 2012)

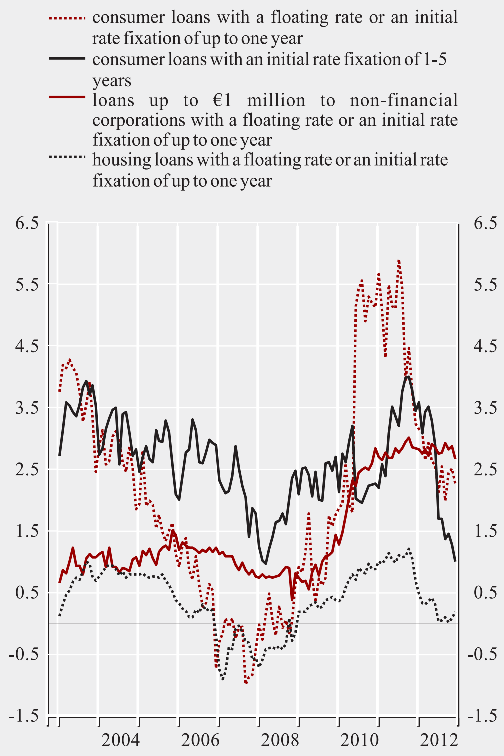
(percentages per annum)



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

Chart X.4 Bank interest rates on new loans: differential between Greece and the euro area (January 2003 - December 2012)

(percentage points)



Sources: Bank of Greece and ECB.

– Fourth, the sharp decline in demand for new loans, as on the one hand households are reluctant to take up debt due to their decreasing incomes and heightened risk of unemployment, while on the other hand enterprises have cut back their output and postponed their investment plans.

• The interest rate differential between Greece and the euro area as a whole narrowed significantly throughout 2012 on new loans to households (see Table X.3 and Chart X.4). This development mainly reflects a decline in Greek lending rates, which was more pronounced than in the euro area, due to large-scale loan restructuring/rescheduling in Greece. As regards loans to non-financial corporations, this differential remained broadly unchanged, on average.

• Unlike the evolution of nominal interest rates, real interest rates on new loans in Greece mostly rose,[13] by 25-170 basis points. This rise mainly reflects a considerable decline in inflation in 2012. For instance, in December 2012 real interest rates on corporate loans, housing loans and consumer loans are estimated at 6.15%, 2.65% and 7.14%, respectively (December 2011: 4.86%, 1.97% and 6.75%, respectively).

• After an upward trend observed since mid-2010, the spread between average new bank lending and deposit rates in Greece narrowed

13 Real interest rates decreased on consumer loans with an initial rate fixation of 1 to 5 years and on loans to the self-employed, farmers and sole proprietorships either with a floating rate or with an initial rate fixation of up to 1 year.

Table X.3 Bank interest rates on new loans in Greece and the euro area

(percentages per annum)

	December 2011	December 2012	Change Dec. 2012/ Dec. 2011 (percentage points)
A. Loans with a floating rate or an initial rate fixation of up to one year[1]			
A.1. Loans up to €1 million to non-financial corporations			
Weighted average interest rate in the euro area	4.44	3.79	-0.65
Maximum interest rate	7.53	7.29	-0.24
Minimum interest rate	2.63	2.10	-0.53
Interest rate in Greece[2]	7.26	6.46	-0.80
Interest rate differential between Greece and the euro area	2.82	2.67	-0.15
A.2. Loans of more than €1 million to non-financial corporations			
Weighted average interest rate in the euro area	3.16	2.28	-0.88
Maximum interest rate	6.64	6.70	0.06
Minimum interest rate	2.24	1.67	-0.57
Interest rate in Greece	6.64	6.07	-0.57
Interest rate differential between Greece and the euro area	3.48	3.79	0.31
A.3. Housing loans			
Weighted average interest rate in the euro area	3.49	2.86	-0.63
Maximum interest rate	5.73	5.32	-0.41
Minimum interest rate	2.41	1.77	-0.64
Interest rate in Greece	4.18	3.04	-1.14
Interest rate differential between Greece and the euro area	0.69	0.18	-0.51
A.4. Consumer loans			
Weighted average interest rate in the euro area	5.27	5.32	0.05
Maximum interest rate	21.33	18.94	-2.39
Minimum interest rate	3.08	3.54	0.46
Interest rate in Greece	8.49	7.59	-0.90
Interest rate differential between Greece and the euro area	3.22	2.27	-0.95
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	3.74	3.24	-0.50
Maximum interest rate	5.58	6.90	1.32
Minimum interest rate	2.57	2.46	-0.11
Interest rate in Greece	3.29	-	-
Interest rate differential between Greece and the euro area	-0.45	-1.32	-0.87
B.2. Consumer loans			
Weighted average interest rate in the euro area	6.44	6.04	-0.40
Maximum interest rate	23.06	21.19	-1.87
Minimum interest rate	4.76	4.30	-0.46
Interest rate in Greece	9.87	7.04	-2.83
Interest rate differential between Greece and the euro area	3.43	1.00	-2.43

Sources: ECB and euro area NCBs.
1 Monthly average rates.
2 As of June 2010, loans to sole proprietors are presented separately and are no longer included in “credit to enterprises”.

Table X.4 Average interest rate spread between new loans and new deposits in Greece and the euro area

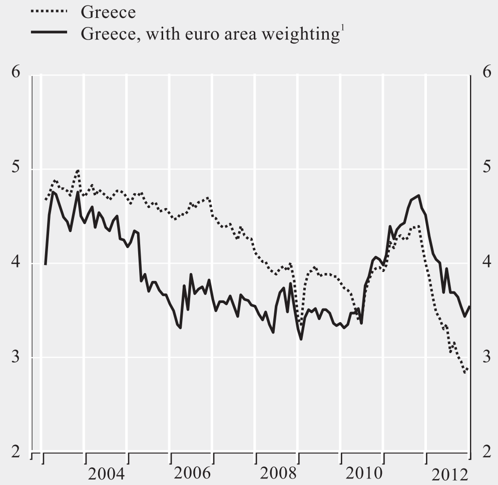
(percentage points)

	Average interest rate on new loans in Greece[1] (percentages per annum)	Average interest rate on new deposits in Greece[1] (percentages per annum)	Interest rate spread in Greece (percentage points)	Interest rate spread in Greece with euro area weighting	Interest rate spread in the euro area (percentage points)
December 1998	16.21	8.12	8.09	...	...
December 1999	14.02	6.98	7.04	...	...
December 2000	9.68	4.00	5.68	...	...
December 2001	7.26	1.96	5.30	...	...
December 2002	6.29	1.67	4.62	...	...
December 2003	5.91	1.20	4.71	4.43	2.75
December 2004	5.91	1.22	4.69	4.18	2.52
December 2005	5.80	1.27	4.53	3.57	2.53
December 2006	6.36	1.87	4.49	3.63	2.87
December 2007	6.65	2.53	4.12	3.55	3.12
December 2008	6.68	3.27	3.41	3.30	2.63
December 2009	5.12	1.32	3.80	3.36	2.26
December 2010	6.07	2.15	3.92	3.99	2.21
December 2011	6.82	2.81	4.01	4.52	2.44
December 2012	5.76	2.85	2.91	3.56	2.02

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

Chart X.5 Average interest rate spread between new loans and new deposits in Greece (January 2003 - December 2012)

(percentage points)



Sources: Bank of Greece and ECB.
1 That is, the spread between the average rate on new bank lending and the average deposit rate, had the composition of loans and deposits in Greece been the same as the euro area average.

and reached an over ten-year low (see Chart X.5 and Table X.4).

4 CREDIT AGGREGATES

- In 2012, the annual rate of change in total financing of the Greek economy (general government and private sector) by domestic MFIs became increasingly negative on an almost continuous basis (December 2012: -4.9%, December 2011: -1.9%). The annual rate of change in bank credit to the general government did not follow a clear pattern, but exhibited considerable volatility (December 2012: -8.0%, December 2011: 2.0% – see Chart X.6 and Table X.5).

- As regards the private sector, the annual rate of decline in bank credit to non-financial corporations strengthened gradually (albeit not uninterruptedly) until September 2012, but weakened over the last months of the year

Table X.5 Credit[1] to the economy by domestic MFIs

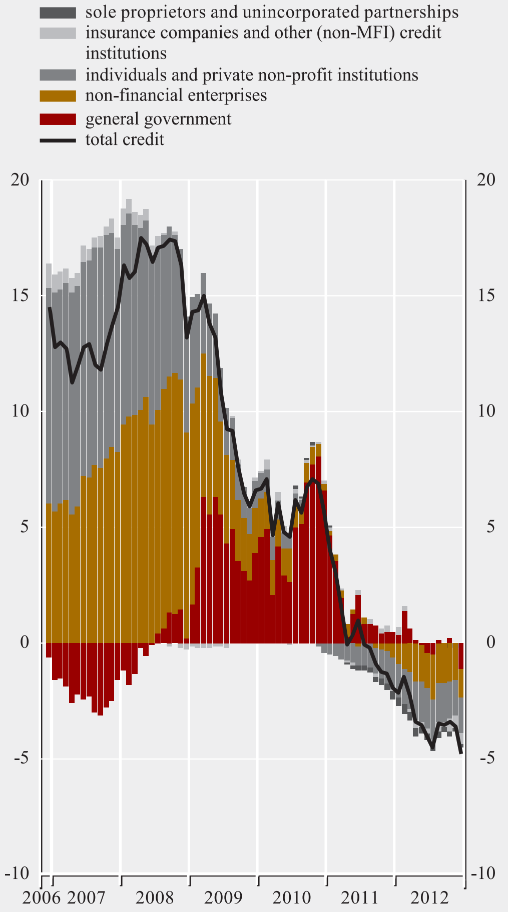
(annual percentage changes; non-seasonally adjusted data)

	2008	2009	2010	2011		2012						
	Q4[2]	Q4[2]	Q4[2]	Q4[2]	Dec.[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	Oct.[3]	Nov.[3]	Dec.[3]
1. Total MFI credit	**16.3**	**6.5**	**6.7**	**-1.3**	**-1.9**	**-1.9**	**-3.4**	**-3.9**	**-3.7**	**-3.4**	**-3.6**	**-4.9**
2. Credit to general government	7.3	17.2	32.7	2.3	2.0	3.6	0.3	-1.3	-1.0	1.3	-0.2	-8.0
3. Credit to the private sector	18.3	4.4	0.8	-2.4	-3.1	-3.5	-4.5	-4.7	-4.6	-4.8	-4.6	-4.0
3.1 Enterprises[4]	21.8	5.5	1.9	-0.8	-2.0	-2.4	-4.3	-5.0	-5.2	-5.6	-5.4	-4.4
of which:												
3.1.1 Credit to non-financial corporations	23.8	5.4	1.8	-1.0	-1.8	-2.8	-4.1	-4.7	-4.2	-4.4	-4.1	-3.3
3.1.2 Credit to insurance companies and other financial institutions (non-MFI)	-2.4	7.4	4.2	4.2	-5.2	4.3	-8.2	-11.2	-21.1	-23.5	-24.2	-20.9
3.2 Sole proprietors[4]	-	-	1.3	-6.0	-6.6	-7.3	-6.2	-4.9	-3.3	-3.6	-2.8	-3.0
3.3 Individuals and private non-profit institutions	14.6	3.2	-0.3	-3.6	-3.9	-4.2	-4.4	-4.3	-4.0	-4.1	-3.9	-3.8
of which:												
3.3.1 Housing credit	13.1	3.9	0.5	-2.5	-2.9	-3.1	-3.4	-3.6	-3.6	-3.7	-3.5	-3.4
3.3.2 Consumer credit	18.4	2.4	-3.0	-6.6	-6.4	-6.7	-6.5	-5.7	-5.2	-5.2	-5.1	-5.1

Source: Bank of Greece.
1 Including MFI loans and holdings of corporate bonds and government securities, as well as the outstanding amounts of securitised loans and securitised corporate loans. The rates of change are adjusted for loan write-offs, reclassifications and exchange rate variations in respect of loans denominated in foreign currency and for the impaired value of government securities for public debt restructuring purposes in March-April 2012.
2 The quarterly average is derived from monthly averages (which are calculated as the 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*). Then the average quarterly rate of average annual rates is taken for the months comprising this quarter.
3 Based on end-of-month levels.
4 As of June 2010, loans to sole proprietors are presented separately and are no longer included in "credit to enterprises".

Chart X.6 Sectoral contributions to total domestic MFI credit (December 2006 - December 2012)

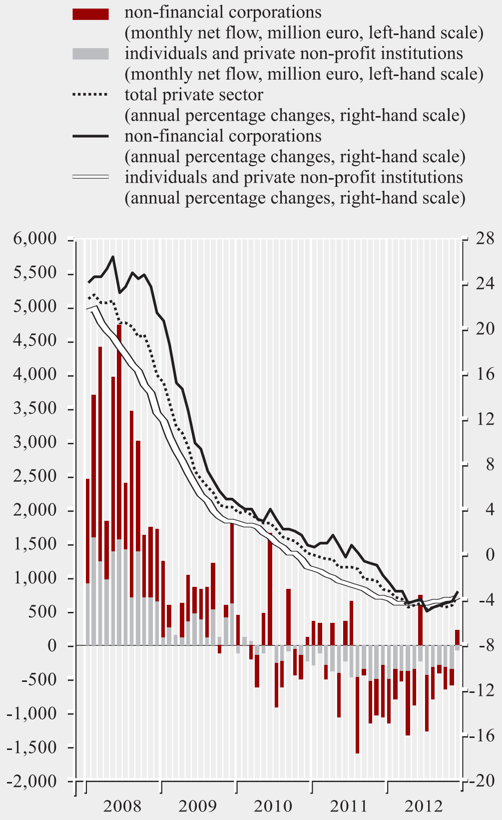
(annual percentage changes; contributions in percentage points)



Source: Bank of Greece.
Note: Total MFI credit comprises MFI credit (stock) to the domestic private sector and the general government, as well as MFI holdings of government debt securities, corporate bonds, securitised loans and securitised corporate bonds. The rates of change are adjusted for exchange rate variations and loan write-offs carried out by banks during the reference period, as well as for the effect of public debt restructuring in early 2012.

Chart X.7 Credit[1] to the domestic private sector by domestic MFIs (January 2008- December 2012)

(monthly net flow[2]; annual percentage changes)



Source: Bank of Greece.
1 Including MFI loans and holdings of corporate bonds, as well as the outstanding amounts of securitised loans and securitised corporate bonds. The annual rates of change are adjusted for loan write-offs and reclassifications and foreign exchange valuation differences on loans denominated in foreign currency.
2 The monthly net flow of credit is calculated as the difference between the outstanding stock of credit at the beginning and the end of a given month, adjusted for foreign exchange valuation differences in respect of loans denominated in foreign currency, loan write-offs and reclassifications during that month.

(December 2012: -3.3%, December 2011: -1.8% see Chart X.7 and Table X.6). This rate had also moderated during May and June 2012. The annual rate of decline in bank loans to individuals and private non-profit institutions (that is, essentially households) has also slowed since August (December 2012: -3.8%, December 2011: -3.9%). Earlier that year, i.e. between February and July 2012, this rate had actually stabilised. In more detail, the annual rate of decline in housing loans remained almost stable between March and July 2012, picked up between August and October, and moderated over the last two months of the year (December 2012: -3.4%, December 2011: -2.9%). The annual rate of decline in consumer loans gathered pace at the beginning of the year, before decelerating between April and November, and remained unchanged in December (December 2012: -5.1%, December 2011: -6.4%).

Table X.6 Credit[1] to the domestic private sector by domestic MFIs

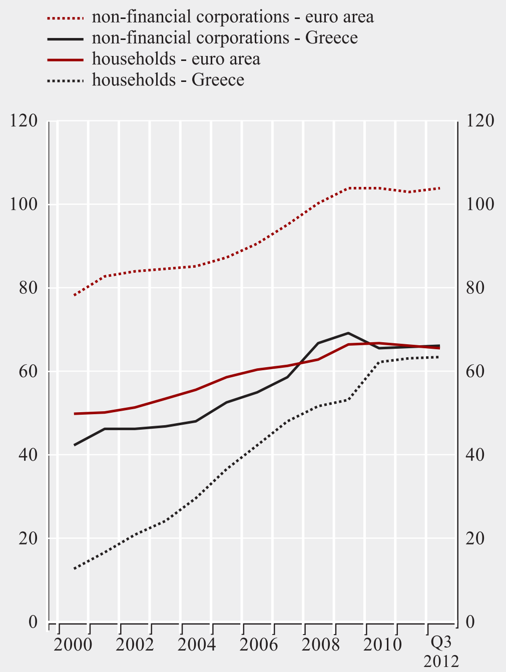
(annual percentage changes; non-seasonally adjusted data)

	Outstanding balances on 31.12.12 (million euro)	2008	2009	2010	2011		2012				
		Q4[2]	Q4[2]	Q4[2]	Q4[2]	December[3]	Q1[2]	Q2[2]	Q3[2]	Q4[2]	December[3]
A. Enterprises[4,5]	**107,335**	**21.8**	**5.5**	**1.9**	**-0.8**	**-2.0**	**-2.4**	**-4.3**	**-5.0**	**-5.2**	**-4.4**
A.1 Non-financial corporations	**100,758**	**23.8**	**5.4**	**1.8**	**-1.0**	**-1.8**	**-2.8**	**-4.1**	**-4.7**	**-4.2**	**-3.3**
1. Trade	22,167	22.2	5.0	-2.1	-5.7	-6.0	-6.9	-8.3	-8.5	-8.2	-7.4
2. Industry[6]	22,162	17.4	-2.8	-1.3	0.4	0.1	-1.9	-3.5	-5.3	-3.9	-2.1
3. Shipping	12,442	24.6	3.9	6.9	1.1	2.4	0.2	-0.6	-2.1	-3.4	-3.4
4. Construction	10,286	37.4	2.2	2.3	-3.6	-7.4	-7.0	-7.1	-7.2	-4.9	-1.9
5. Tourism	7,501	24.4	6.4	4.0	-1.0	-2.3	-1.5	-0.4	-0.6	0.2	1.1
6. Electricity - gas - water supply	6,057	36.5	14.8	23.1	13.9	12.3	10.7	5.9	6.1	6.8	4.5
7. Agriculture	1,412	20.5	3.7	0.6	-5.0	-5.6	-8.5	-10.4	-8.6	-7.4	-6.3
8. Transport (excluding shipping)	1,119	35.7	19.5	-3.8	-7.9	-3.7	-5.0	-6.3	-7.3	-7.0	-8.1
9. Other sectors	17,612	23.8	12.3	5.0	0.1	-2.1	-2.3	-3.8	-3.8	-3.8	-3.5
A.2 Insurance companies and other financial institutions (non-MFI)	**6,577**	**-2.4**	**7.4**	**4.2**	**4.2**	**-5.2**	**4.3**	**-8.2**	**-11.2**	**-21.1**	**-20.9**
B. Sole proprietors[5]	**13,790**	**-**	**-**	**1.3**	**-6.0**	**-6.6**	**-7.3**	**-6.2**	**-4.9**	**-3.3**	**-3.0**
C. Individuals and private non-profit institutions	**106,530**	**14.6**	**3.2**	**-0.3**	**-3.6**	**-3.9**	**-4.2**	**-4.4**	**-4.3**	**-4.0**	**-3.8**
1. Housing loans	74,634	13.1	3.9	0.5	-2.5	-2.9	-3.1	-3.4	-3.6	-3.6	-3.4
2. Consumer loans	30,236	18.4	2.4	-3.0	-6.6	-6.4	-6.7	-6.5	-5.7	-5.2	-5.1
– Credit cards	6,471	12.4	-0.4	-4.8	-9.9	-9.9	-10.2	-10.1	-9.0	-7.5	-6.8
– Other consumer loans[7]	23,765	20.9	3.4	-2.4	-5.6	-5.3	-5.6	-5.4	-4.7	-4.6	-4.6
3. Other loans	1,660	7.5	-2.3	9.6	3.8	-2.2	-2.1	-4.4	-9.4	-0.2	3.0
TOTAL	**227,655**	**18.3**	**4.4**	**0.8**	**-2.4**	**-3.1**	**-3.5**	**-4.5**	**-4.7**	**-4.6**	**-4.0**

Source: Bank of Greece.
1 Including MFI loans and holdings of corporate bonds as well as the outstanding amounts of securitised loans and securitised corporate loans. The rates of change are also adjusted for writhe-offs, reclassifications and exchange rate variations.
2 The quarterly average is derived from monthly averages (which are calculated as the 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*). Then the average quarterly rate of average annual rates is taken for the months comprising this quarter.
3 Based on end-of-month levels.
4 Sectors are listed in descending order according to their share in total credit, with the exception of "other sectors".
5 As of June 2010, loans to sole proprietors are presented separately and are no longer included in "credit to enterprises".
6 Comprising manufacturing and mining/quarrying.
7 Comprising personal loans and loans against supporting documents.

Chart X.8 Debt of non-financial corporations[1] and households[2] in the euro area and Greece (2000-Q3 2012)[3]

(percentages of GDP)



Sources: Bank of Greece and ECB (outstanding debt), Eurostat and ELSTAT (GDP). GDP figures for 2012 are calculated as the sum of four quarters up to Q3 2012.

1 The debt of non-financial corporations comprises loans, debt securities issued, as well as pension fund reserves.

2 Household debt comprises the overall stock of household loans and securitised loans. Debt data are derived from the financial accounts of the household sector, which record the sector's total financial assets and liabilities.

3 Due to a reclassification (from June 2010 onwards), loans to sole proprietors, previously included in "credit to enterprises", are now classified as "credit to households". This change increases the debt stock of households (compared with December 2009) and decreases that of non-financial corporations.

- According to the results of the Bank Lending Survey,[14] Greek banks tightened their credit standards in the fourth quarter of 2012, compared with the fourth quarter of 2011. However, the tightening of credit standards eased quarter-on-quarter in 2012. Banks reported a decline in household demand for loans throughout 2012 and in demand for credit by non-financial corporations over the last three quarters of 2012. Overall, banks estimate that the quarter-on-quarter decline in loan demand in 2012 was weaker relative to the fourth quarter of 2011.

- The ratio of outstanding debt of the non-financial private sector (i.e. non-financial corporations and households[15]) to nominal GDP, according to the financial accounts data published by the Bank of Greece,[16] appears to be marginally higher in the third quarter of 2012 compared with the fourth quarter of 2011. More specifically, the private debt ratio came to 66.0% for non-financial corporations in the third quarter of 2012,[17] against 65.9% in the fourth quarter of 2011, and to 63.3% for households, against 63.2% in the fourth quarter of 2011 (see Chart X.8).

4.A THE EVOLUTION OF CREDIT EXPANSION MAINLY TO FIRMS, ITS KEY DETERMINANTS AND ITS IMPACT ON ECONOMIC ACTIVITY

The monthly net flows of MFI credit to non-financial corporations, to the self-employed, farmers and sole proprietorships, and to households have mostly been negative for several months. After slowing down for a number of years, the respective annual rates of change also turned negative eventually. Recently though, the annual rates of decline in these credit aggregates ceased to rise and have either stabilised or moderated.

Credit contraction reflects a synchronised decline in bank loan demand and supply. Underlying the weakened demand for bank loans were the following factors: (a) a shrinking GDP, (b) the uncertainty that discourages investment activity or even current output, (c) rising bank lending rates, both in nominal and in real terms, during most of the period starting from late 2009. Demand for housing loans

14 The Bank Lending Survey is conducted by the Bank of Greece on a quarterly basis as part of a Eurosystem-wide survey.

15 As from June 2012, the financial data on the self-employed are included in households and not in non-financial corporations.

16 According to financial accounts data (Bank of Greece, see http://www.bankofgreece.gr/Pages/en/Statistics/accounts.aspx), the financing of non-financial corporations comprises, in addition to domestic MFI credit, also loans from other financial institutions (such as insurance corporations, leasing companies, etc.), the general government and foreign banks, as well as corporate bonds. In the case of households, financing according to financial accounts data comprises, in addition to domestic MFI credit, also loans from other financial institutions, the general government and foreign banks.

17 Latest available data from the financial accounts on the debt of non-financial corporations and households.

in particular was adversely affected by the downward path of (1) households' disposable income, (2) asset prices and (3) rents in recent years, as well as by (4) residential property tax hikes.

The main factors behind the weak supply of bank loans include:

(a) Liquidity constraints facing the banking system, as on the one hand Greek credit institutions are shut out of international money and bond markets, and on the other hand retail deposit withdrawals continued unabated until June 2012. Furthermore, the amount of liquidity credit institutions could raise through the Eurosystem was reduced as a result of the decreased value of eligible collateral used in the Eurosystem's monetary policy operations. For instance, Greek government securities and bank bonds guaranteed by the Greek government were occasionally excluded from eligible collateral. Alternatively, credit institutions could draw ELA liquidity from the Bank of Greece, which however implies a higher cost of central bank refinancing.[18]

(b) Pressures on the capital base of credit institutions due to non-performing loans and the Greek public debt restructuring. On the other hand, these pressures were largely offset by the recapitalisation of the core credit institutions by the Hellenic Financial Stability Fund, while private shareholders are expected to contribute private funds within the following months.

(c) A considerable increase in credit risk also in the private sector of the Greek economy (as evidenced by the rise in non-performing loans), mainly on the back of the deep economic recession and the fiscal crisis.

(d) The fears of a Greek euro area exit during most of the period since 2010.

The external[19] financing of businesses facilitates fixed capital investment. In several cases, bank credit is the only available, or the most attractive form of financing. This applies *a fortiori* to the financing of households' expenditure for the purchase of a house or consumer durables. Besides, working capital credit is quite often vital in the overall production process.[20] Therefore, credit shortfall may bring about a drop in both current output (i.e. aggregate supply of products) and aggregate demand for products.

As regards Greek businesses, there is evidence indicating that, at least for long stretches of time since the intensification of the crisis in late 2009, bank credit supply fell short of demand. Naturally, this was also the case for household credit. Indeed, many surveys show that firms did not manage to obtain as many bank loans as they actually needed (see Chart X.9). For instance, as evidenced by the latest survey of the Eurosystem and the European Commission on SMEs' access to financing, between April and September 2012 in Greece the loan rejection rate was the highest, whereas the percentage of applications that were fully satisfied by banks was among the lowest in the euro area (Chart X.10).[21] The same picture emerges from all rounds of the Survey since the first half of 2009 (this Survey is conducted by the Eurosystem and the European Commission twice a year from 2009 onwards).

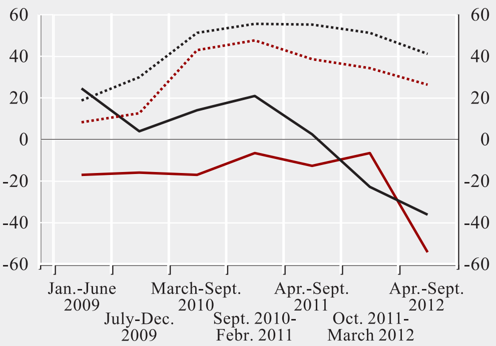
It should also be noted that the rejection rate for Greek SMEs applying for new loans followed an upward trend during the past three years (2010-2012), while the percentage of loan applications that are fully satisfied (see Chart X.10), as well as that of loan applications that are partly satisfied, albeit with some

18 The transfer of EFSF notes to domestic MFIs (see footnote 36) contributed to a reduction in funding costs and improved credit institutions' access to central bank financing.
19 That is financing with borrowed funds, in addition to retained earnings or other own funds.
20 Intercompany trade credit is also vital for ensuring liquidity in the economy. As reported in the SME surveys (see next), a significant decline in trade credit has been observed in Greece during the crisis (see Chart X.9).
21 This percentage was even lower in Ireland and the Netherlands.

Chart X.9 Availability of external financing to SMEs[1]

(net percentage of enterprises)

- bank loans, credit lines and bank overdrafts from current accounts or credit cards – Greece[2]
- trade credit – Greece
- bank loans, credit lines and bank overdrafts from current accounts or credit cards – euro area[2]
- trade credit – euro area

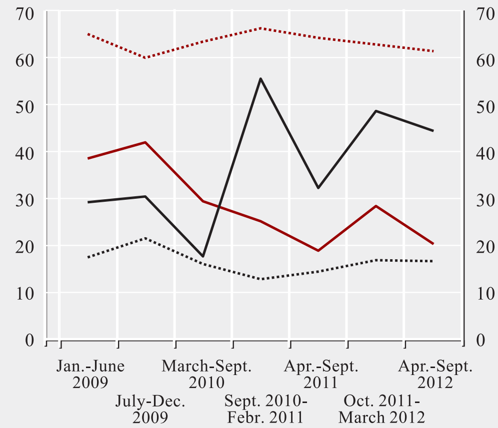


1 The net percentage shown on the vertical axis is the sum of the percentage of enterprises reporting that the availability of the specific type of financing either increased or remained unchanged, minus the percentage of enterprises reporting that the availability of the specific type of financing decreased.
2 In the first two Surveys (2009), data on bank financing refer to the availability of bank loans only.

Chart X.10 Outcome of bank loan applications of SMEs[1]

(percentage of respondents)

- applied and got everything – Greece
- applied but was rejected or refused because cost too high – Greece
- applied and got everything – euro area
- applied but was rejected or refused because cost too high – euro area

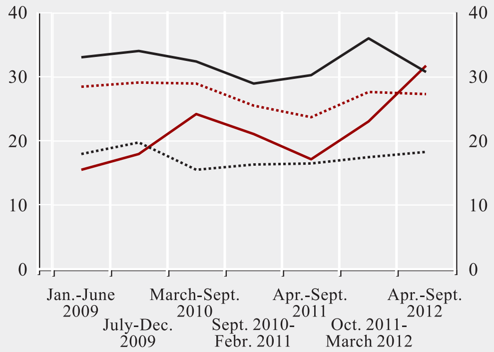


1 Bank loans, credit lines and bank overdrafts from current accounts or credit cards. In the first two Surveys (2009), data on the outcome of applications refer to bank loans only.

Chart X.11 The most pressing problem faced by SMEs

(percentage of respondents)

- finding customers[1] – Greece
- access to finance[2] – Greece
- finding customers[1] – euro area
- access to finance[2] – euro area

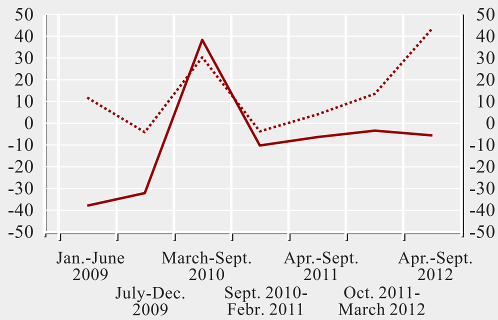


1 Percentage of respondent enterprises reporting that the most pressing problem is finding customers.
2 Percentage of respondent enterprises reporting that the most pressing problem is access to finance.

Chart X.12 Non-price terms and conditions of financing for SMEs in Greece

(net percentage of enterprises %)

- available size of loan or credit line[1]
- level of collateral requirements[2]



1 The net percentage on the vertical axis is the difference between the percentage of enterprises reporting that the available size of loan/credit line decreased and the percentage of enterprises reporting either that it remained unchanged or that it increased.
2 The net percentage on the vertical axis is the difference between the percentage of enterprises reporting that the level of collateral requirements increased and the percentage of enterprises reporting either that it remained unchanged or that it decreased.

Source: EC/ECB, Survey on the access to finance of SMEs (SAFE).
Notes: (a) As from the fourth wave of the Survey (Sept. 2010-Feb. 2011), a significantly larger sample is used, implying that the results for the first three Survey waves in Greece are not fully comparable with those of subsequent rounds. (b) Enterprises reporting "Don't Know" are not included in the above percentages.

fluctuations, dropped sharply after the second half of 2009. Other interesting findings of the Survey are as follows:

(a) About 50% of small and medium-sized enterprises in Greece believe that banks were even more reluctant to extend loans over the reviewed six months than in the past.

(b) The expectations of enterprises regarding the availability of bank credit over the next six months, i.e. October 2012-March 2013, are the most pessimistic across euro area countries.

(c) In the past two years, the number of enterprises that do not even apply for a new loan has increased, as they think that their application will any way be rejected by the bank.

(d) A much higher percentage of Greek firms relative to the other euro area countries report the lack of financing resources, *including trade credit*, as the most pressing problem they are facing (see Charts X.9 and X.11). As a matter of fact, this percentage gradually increased between September 2010-February 2011 and October 2011-March 2012, but fell over April-September 2012. Other pressing problems that firms had to choose from are finding customers, high labour or other input costs, strong competition, etc.

Besides the fact that for a protracted period of time during the crisis lending rates rose both in nominal and in real terms,[22] compounded by a decline in bank financing of the real economy (in nominal and real terms), implies a decrease in bank credit supply. In addition, among the findings of the aforementioned Survey, the gradual tightening of credit standards other than interest rates, such as banks' increased collateral requirements from borrowers (see Chart X.12), clearly signals a decline in bank loan supply. The tightening of credit standards other than interest rates is also confirmed – as regards loans to both non-financial corporations and households – by the Bank Lending Survey conducted by the Eurosystem.

The reduction in bank financing during the crisis varied across economic sectors. Between September 2009[23] and December 2012, a drop in bank credit[24] was reported in transport excluding shipping (-22.5%), mining and quarrying (-22.0%),[25] trade (-13.8%), construction (-5.5%), manufacturing (-5.0%),[26] industry (-4.9%)[27] and agriculture (-4.7%). Conversely, an increase in financing was recorded in the sectors of electricity-gas-water supply (52.5%), tourism (4.3%) and shipping (2.3%).

Out of the three economic sectors that benefited from an increase in bank financing amidst a credit squeeze, two are clearly outward-oriented (tourism, shipping). However, there is evidence that some of the sectors that suffered from a substantial decline in bank credit supply (e.g. mining/quarrying and manufacturing) are also outward-oriented.[28] On the other hand, trade (in particular retail), to which bank credit declined sharply, does not present any remarkable export activity (but is rather associated with imports). As a result, credit contraction, which most probably is not just a result of the economic downturn, but rather contributes in itself to a contraction in output and investment, does not appear to hit

22 Certainly, this development is also associated with higher credit risk premia embedded in bank lending rates, in contrast with reduced credit supply due to other reasons.
23 After this month, the yield spread between Greek and German government bonds started to widen, as markets, in the light of new fiscal data releases and in a context of excessive risk aversion following the default of Lehman Brothers, reassessed the seriousness of the imbalances that had accumulated in the Greek economy for decades.
24 The decrease in outstanding loans in foreign currency due to exchange rate variations or in the outstanding stock of credit due to loan write-offs/write-downs or in the value of MFI holdings of securities resulting from a drop in bond prices, etc. are not taken into account in the reduction in bank financing.
25 Available data on this sector are comparable between June 2010 and December 2012.
26 See preceding footnote.
27 This sector comprises manufacturing and mining/quarrying. For the sector as a whole, the percentage decline in credit can be calculated for the period between September 2009 and December 2012 and is therefore given above.
28 On the basis of available data, it is not possible to examine the evolution of bank credit to individual subsectors of manufacturing or whether credit supply varied between more and less outward-looking subsectors.

disproportionately harder those economic sectors which are relatively more outward-looking.[29]

It should not be overlooked that Greek enterprises can also obtain credit through EU financial support mechanisms. For instance, the European Investment Bank (EIB), covered in part by Greek government guarantees or NSRF appropriations, has undertaken to allocate funds (exceeding the guarantees provided) to Greek banks, which in turn will channel those funds to SMEs in the form of loans. The EIB will also contribute to the establishment of a Risk Sharing Finance Facility with a view to financing infrastructure projects and productive investment (such as the construction of motorways), while NSRF funds will be earmarked as guarantees in favour of the EIB, which will provide funds of a much greater value than these guarantees.

Given that foreign suppliers require Greek firms to pay them in advance and given Greek banks' limited capacity to finance such payments, a new mechanism is scheduled to operate soon, under which the European Investment Fund (an affiliated EIB body) will extend short-term credit to Greek SMEs to help them finance the supply of raw materials from abroad.

Lastly, the National Hellenic Fund for Entrepreneurship and Development (ETEAN) provides guarantees for certain types of MFI credit to non-financial corporations. It also provides (almost entirely NSRF) funds mainly for business investment, which is co-financed with much higher funds provided by banks.

5 THE BOND MARKET

• Developments in the market for Greek government bonds in 2012 were chiefly marked by the high volatility of bond yields, indicative of high uncertainty about the outcome of the crisis. The simultaneous correlation coefficient between fiscal aggregates (e.g. general government deficit) and Greek bond yields was negative, especially during the second quarter of 2012, highlighting the importance of concerns about future macroeconomic developments, the country's prospects in the euro area etc. as a determinant of the course of Greek bond yields. However, these concerns were not confirmed and during the second half of the year Greek government bond yields recorded a substantial decline (see Chart X.13), which can be largely interpreted as an improvement in investor confidence[30] after the formation of the coalition government in late June 2012, the more favourable treatment of the country by the international community and the implementation of various economic policy measures.

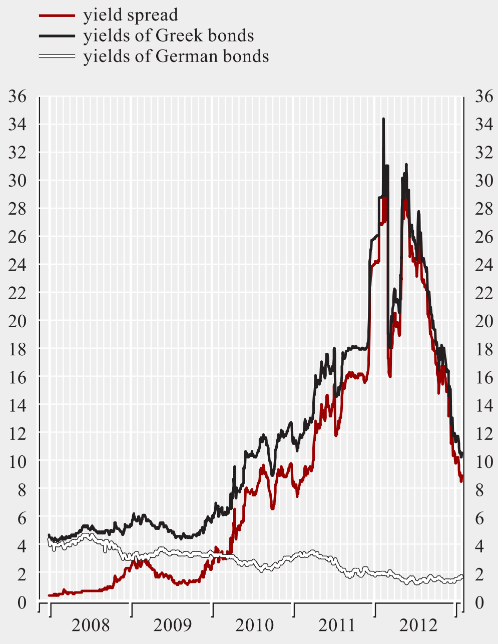
• Specifically, a large increase in Greek government bond yields was observed in the March-June 2012 period. For instance, the 10-year Greek government bond yield reached 31.1% on 31 May 2012, from 19.0% on 12 March 2012. During the second half of 2012 and January 2013, there was a sharp decline in yields on Greek bonds (Greek 10-year bond yield on 31 December 2012: 11.9%, 31 January 2013: 10.6%). Consequently, the yield spread between the Greek and the German bench-

29 The Panhellenic Exporters Association (PEA) has recently announced (press release of 16.10.2012) that about 2/5 of exporters included in a stratified sample faced serious liquidity constraints and difficulties in accessing new credit lines in 2012 (against 1/4 in 2011). The PSE press release also refers to a finding of a previous survey, conducted in cooperation with the Greek Ministry of Development and Competitiveness (2011), that the vast majority of exporters reports "access to working capital credit from €500,000 to €1 million as a sufficient condition of sustainability and expansion of their export activities", particularly in order to pre-finance exports (purchasing raw materials, meeting packaging and transport costs, etc.). Nevertheless, according to the relevant business survey on SMEs conducted by the National Bank of Greece and published on 26.7.2012, liquidity constraints were harsher for non-export firms than for exporters in each one of the surveyed sectors (industry, services, trade, and construction).

30 Indicatively, the ECB decided to accept again Greek bonds as collateral in monetary policy operations and Greece's credit rating was upgraded after the completion of the Greek government bond buy-back exercise on 17.12.2012. In particular, Standard and Poor's upgraded Greek sovereign debt by six notches on 18.12.2012 from SD (selective default) to B-. It is worth noting that the country's credit rating is expected to be further upgraded, provided that the policy reform framework for the Greek economy is implemented consistently (see the relevant Fitch report entitled "Greece – full rating report", 9 November 2012).

Chart X.13 10-year Greek and German government bond yields[1] (January 2008-January 2013)

(daily data; percentages per annum; spread in percentage points)



Source: Bank of Greece.

1 As Greek government bonds are traded on several regulated markets (e.g. HDAT, BrokerTec, MTS, ICAP etc.), as well as on electronic OTC trading platforms (e.g. Reuters, Bloomberg), divergences in prices (and relevant yields) are often observed across data providers. These divergences became more apparent in Q4 2011 due to considerably lower transactions in Greek bonds; therafter they narrowed, but have not been eliminated.

mark bond narrowed significantly from 2,982 basis points on 31 May 2012 to 891 basis points on 31 January 2013.

- Transactions on the secondary market contracted further in 2012. The average daily value of transactions on the Electronic Secondary Securities Market (HDAT) was €2.8 million in 2012 (January 2013: €4.6 million), compared to €20.6 million in 2011, while in 2012 the average daily value of transactions in the Dematerialised Securities System (SAT)[31] amounted to €410.5 million in 2012, compared to €712 million in 2011 (January 2013: €286.2 million).

- In 2012, the Greek government continued to issue regularly six-month, three-month and one-month Treasury bills, raising about €49 billion in total on a gross basis until the end of December 2012. It should be noted that in 2012 the Greek government rolled over the Treasury bill issues of previous years, as there was no significant increase in the funds raised on a net basis. The average weighted interest rate in 2012 dropped to 4.35%, from 4.67% in 2011.

5.A DESCRIPTION OF THE DEBT BUY-BACK OPERATION

On 3 December 2012, pursuant to the Eurogroup statement of 27 November 2012 on further reducing Greece's debt, the Public Debt Management Agency (PDMA) issued an invitation of the Hellenic Republic to eligible holders of designated Greek government bonds (GGBs) to submit offers to exchange such securities. The buy-back process applied to the new sovereign bonds that had been issued in the context of the PSI, which was conducted in March and April 2012. Eligible bondholders would submit offers to exchange such securities in a modified Dutch auction. In a typical Dutch auction, the auctioneer offers securities or goods, and sets the prices asked. The auction is completed to the highest bid, when supply is balanced by demand. In the case of the GGB buy-back, the Greek government, i.e. the buyer, initiated the auction by determining the price range and the quantity asked. The procedure was therefore a "modified Dutch auction", and its completion was subject to certain conditions, including delivery of EFSF Notes and satisfactory response by GGB holders.

This procedure aimed at the exchange of GGBs with a remaining maturity of 10 to 29 years for six-month EFSF notes. Based on the aforementioned Eurogroup decision, the aggregate nominal amount of EFSF notes expected to be delivered was €10 billion, with

31 The transactions on SAT include, in addition to HDAT transactions, securities transactions and repos on other electronic trading platforms, as well as over-the-counter transactions, since SAT serves as a depository for Greek government securities.

the aim to reduce the country's debt by more than €20 billion. Therefore, the eligible price range, i.e. the percentage of the nominal value of GGBs that the Greek government would cover through their exchange with EFSF notes, was fixed. The purchase price of GGBs set in the context of the above-mentioned buy-back operation ranged from a minimum of 30.2%, for GGBs with a maturity of 30 years, to a maximum of 40.1%, for GGBs with a maturity of ten years. These rates applied to the designated securities, with a spread of 2 percentage points between the highest and lowest price offered for each bond. The initial deadline for expression of interest by GGB holders to exchange securities was 7 December 2012.

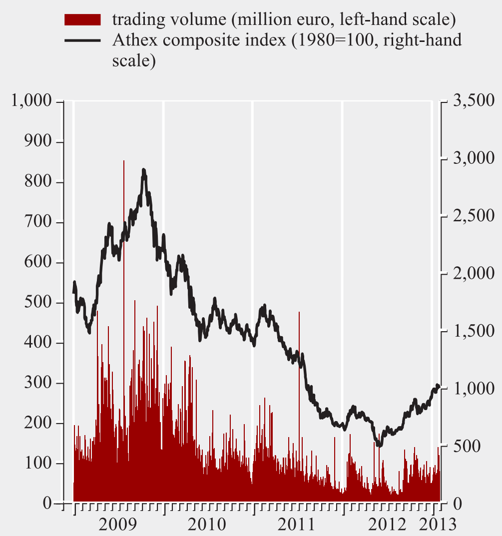
Finally, after an extension of the invitation period, the PDMA announced on December 12 that the aggregate amount validly offered was €31.9 billion, exceeding the initial estimates of the participation in the buy-back process, while the weighted average price to be paid stood at 33.8% of the nominal value of each bond. Moreover, the Greek government announced its intention to exchange all validly offered securities subject to an increase in the aggregate nominal value of EFSF notes to €11.3 billion. This operation was finalised and settled on 18 December 2012.

6 THE STOCK MARKET

- After the strong decline recorded in 2010 and 2011, share prices on the Athens Exchange (Athex) rose significantly in 2012. The course of stock prices in Greece was affected initially by (a) investors' uncertainty, especially in the first half of the year, about the progress of the economic and financial adjustment programme and Greece's stay in the euro area; (b) the deep economic recession; and (c) losses by companies listed on the Athex.[32] The investment climate improved in the second half of 2012 as a result of the formation of a coalition government and the important economic policy measures taken,

Chart X.14 Athens Exchange: composite share price index and trading volume (January 2009 -January 2013)

(daily data)



Source: Athens Exchange.

as well as the initiation of the recapitalisation and restructuring of the banking system. Specifically, the Athex composite index saw a remarkable increase for over six months, following a sharp drop recorded in the January – mid-June 2012 period. Overall, the Athex composite index rose by 33% in 2012 (January 2013: 9%), in contrast to the large decrease observed in 2011 (-52%, see Chart X.14).

- However, in 2012 the average daily value of transactions on the Athex fell by 37%. Nevertheless, during the September-December 2012 period, the average daily value of transactions showed a significant increase over each corresponding month in 2011 and was constantly higher than the average daily value of transactions in 2012. The market value of shares at end-December 2012 reached €34 billion, up by 26% compared to end-December 2011.[33]

32 For the results of listed non-financial companies during January-September 2012, see Section VII.4

33 Foreign investors' share in the capitalisation of the Athex was marginally lower in December 2012 (50%), compared to December 2011 (51%). Outflows of foreign investors' funds from the Athex amounted to €84 million in 2012, compared to €262 million in 2011.

Finally, total funds raised through the stock market amounted to €132 million in 2012, considerably down from €3.2 billion in 2011. As in 2011, the bulk of funds raised in 2012 involved financial corporations.

• In contrast to the rise in the Athex composite index, the banking sector index declined (-14%) in 2012, but not as strongly as in 2011 (-79%). Although Greek banks face various significant difficulties,[34] banking sector stock prices benefited considerably between June-October 2012 from the completion of the preliminary phase of the recapitalisation of core banks and from the overall progress made towards the resolution and restructuring of the banking system. Thus, after its decline (-31%) between January-May 2012, the banking sector share price index rose significantly in the following five months (66%). By contrast, in the November-December 2012 period, investors' uncertainty about the participation of banks in the Greek government bond buy-back operation and the consequent impact on their capital base, as well as about the private sector's potential to cover the required 10% in bank's recapitalisation, had an adverse effect, resulting in a drop of the banking index (-24%), which continued in January 2013 (-9%).

7 SUMMARY OF DEVELOPMENTS IN THE BANKING SECTOR

• In 2012 the banking system came under strong pressure on its capital base and liquidity, while the quality of Greek banks' loan portfolios deteriorated further. It is worth mentioning, however, that despite the extremely adverse circumstances, the action taken by the government and the Bank of Greece ensured that no depositor lost a single euro of their savings. Another achievement was that demand for cash by the public was fully met without any disruption, despite the fact that not only growth in demand for banknotes was volatile, but also there were repeated spikes in cash outflows.

• The bridge recapitalisation of core banks (in alphabetical order: Alpha Bank, Eurobank, National Bank of Greece and Piraeus Bank) and the gradual adaptation of the banking system through consolidation measures and the utilisation of synergies are crucial for the future of the banking system in the new conditions.

• Based on published financial data for the January-September 2012 period, after-tax losses of Athex-listed Greek commercial banks[35] were €5.7 billion, and €5.1 billion for banking groups (compared to losses of €4.7 billion and €4.3 billion, respectively, in the January-September 2011 period – see Table X.7). This development was mainly due to:

– the decline in net interest and commission income, due to downsized banking operations and increased funding costs, as a result of the upward course of retail deposit rates throughout most of 2012, as well as due to credit institutions' increased recourse to ELA liquidity from the Bank of Greece;

– losses from financial operations;

– higher provisioning for credit risk, as the adverse macroeconomic conditions have a negative impact on the financial condition of households and businesses;

– increased provisioning as a result of the PSI.

• The decline in operating costs due to a reduction in personnel outlays and administrative expenses had a small positive effect on operating results. However, this reduction in operating costs is not sufficient, given the challenges that the industry faces and the significant reduction in operating income (the ratio of operating costs to operating income rose).

34 For more details, see Section 7 of this chapter.
35 Financial statements for the January-September 2012 period have been published by the following banks, in alphabetical order: Alpha, Eurobank, Attica Bank, Geniki Bank, National Bank of Greece and Piraeus Bank.

Table X.7 Financial results of Greek commercial banks and banking groups (Jan.-Sept. 2011 - Jan.-Sept. 2012)

(thousand euro)

	Banks			Banking groups		
	Jan.-Sept. 2011	Jan.-Sept. 2012	Change (%)	Jan.-Sept. 2011	Jan.-Sept. 2012	Change (%)
Operating income	**4,999,982**	**2,997,987**	**-40.0**	**8,183,946**	**6,367,804**	**-22.2**
Net interest income	4,440,881	3,413,263	-23.1	6,796,897	5,666,115	-16.6
– Interest income	10,695,570	9,172,671	-14.2	13,731,711	12,397,099	-9.7
– Interest expenses	6,254,689	5,759,408	-7.9	6,934,814	6,730,984	-2.9
Net non-interest income	559,101	-415,276	-	1,387,049	701,689	-49.4
– Net fee income	436,231	318,522	-27.0	974,927	889,229	-8.8
– Income from financial operations	-139,543	-642,370	-	30,238	-366,169	-
– Other income	262,413	-91,428	-	381,884	178,629	-53.2
Operating costs	**2,624,348**	**2,496,988**	**-4.9**	**4,217,985**	**4,293,369**	**1.8**
Staff costs	1,513,664	1,449,063	-4.3	2,374,912	2,276,479	-4.1
Administrative costs	922,310	849,949	-7.8	1,432,066	1,387,469	-3.1
Depreciation	186,048	190,706	2.5	385,465	388,694	0.8
Other costs	2,326	7,270	212.6	25,542	240,727	842.5
Net income (operating income less costs)	**2,375,634**	**500,999**	**-78.9**	**3,965,961**	**2,074,435**	**-47.7**
Provisions for credit risk	3,815,494	5,646,806	48.0	4,638,644	6,360,114	37.1
Impairment losses on Greek government bonds[1]	4,342,679	1,594,395	-63.3	4,598,320	1,622,445	-64.7
Other impairment losses[2]		244,893	-		286,078	-
Share of profit (loss) of associates				-16,100	14,063	-
Pre-tax profits	**-5,782,539**	**-6,985,095**	**-**	**-5,287,103**	**-6,180,139**	**-**
Taxes	-1,072,006	-1,250,164	-	-947,475	-1,107,258	-
After tax profits	**-4,710,533**	**-5,734,931**	**-**	**-4,339,628**	**-5,072,881**	**-**

Source: Financial statements of Alpha Bank, Attika Bank, Geniki Bank, National Bank of Greece, Eurobank and Piraeus Bank. The financial results for Piraeus Bank also include data for the 27.7.2012-30.9.2012 period which cover the "healthy" parts of the Agricultural Bank of Greece transferred to Piraeus Bank (Bank of Greece, Resolution Measures Committee Decision – Meeting 4/27.7.12, Government Gazette 2209/27 July 2012).
1 Aggregates for the Jan.-Sep. 2011 period concern banks' PSI provisions associated with the agreement of 21 July 2011 for the restructuring of Greek government debt. Aggregates for the Jan.-Sept. 2012 period concern further impairment losses associated with the PSI agreements of 26 October 2011 and 21 February 2012 for the restructuring of Greek government debt, which had not been recorded in the 2011 financial statements of banks and banking groups.
2 Impairment losses from corporate bonds, mutual funds and shares and write-downs in the face value of tangible and intangible assets.

• Further rationalisation of banks' operating costs is imperative. On the positive side, the first important steps have been taken towards a more concentrated banking system. It has become widely understood that in the new era the Greek banking system could not continue as it stood.

• Greek commercial banks' loan portfolio quality deteriorated further across all categories of corporate and household loans. The ratio of non-performing loans to total loans (NPL ratio) rose to 22.5% at end-September 2012, from 16.0% at end-December 2011. The NPL ratio for consumer loans increased sharply, from 28.8% in December 2011 to 36.3% in September 2012. The NPL ratio rose considerably for both business loans (September 2012: 21.0%, December 2011: 14.2%) and housing loans (September 2012: 20.2%, December 2011: 14.9%).

• Credit institutions' liquidity constraints worsened during the first half of 2012, due to outflows of business and household deposits and to a decline in the value and the range of eligible collateral against which credit institutions may draw liquidity from the Eurosystem and/or the Bank of Greece through ELA. Liquidity constraints were tackled effectively through refinancing operations conducted by the Bank of Greece against adequate collateral provided by credit institutions.

• Credit institutions' liquidity constraints eased during the second half of 2012, as a result of an increase in business and household deposits by about €11 billion during the said period, i.e. by 7.1% compared with the end of June 2012. Moreover, Greek banks' trading portfolios were supplemented with EFSF notes, which carry a high credit rating and can be used as collateral for drawing liquidity on favourable terms.[36] Finally, as of 21 December 2012, the ECB accepted once again Greek government bonds and Treasury bills, as well as other securities guaranteed by the Greek government, as eligible collateral in the Eurosystem monetary policy operations.

• Besides the PSI, other developments that occurred during 2012 and early 2013 and affected banks include:

– disbursement of tranches (in December 2012 and January 2013) under the Support Mechanism for the Greek economy. These funds have made possible the recapitalisation of core banks and will contribute to the restructuring of the banking system;

– the bridge recapitalisation of core banks by the Hellenic Financial Stability Fund (in May and December 2012) through the delivery of EFSF notes;

– the resolution of the Agricultural Bank of Greece (July 2012) and TT Hellenic Postbank (in January 2013), as prior actions under the Memorandums of Economic and Financial Policies of March and December 2012;

– the participation of Greek banks in the voluntary buy-back of Greek government bonds in exchange for EFSF notes, which was successfully completed in early December 2012;

– the acquisition of Emporiki Bank by Alpha Bank and of Geniki Bank by Piraeus Bank, as well as the proposal for the acquisition of Eurobank by the National Bank of Greece, which has been approved by the Boards of Directors of both banks and is in the process of implementation;

– the preparation by the Bank of Greece and the publication of the *Report on the Recapitalisation and Restructuring of the Greek Banking Sector* in late December 2012.

• The restructuring of the banking sector along with its recapitalisation are crucial structural reforms that will decisively contribute to gradually restoring confidence in the prospects of the Greek economy and are key to economic recovery, as discussed below. The gradual return of household and business deposits is a first sign of an improved outlook of the banking sector (see Sections 1 and 1A of this chapter). The continued return of deposits and the completion of the recapitalisation process, which has been scheduled for the first months of 2013, will contribute, over the medium term, to a gradual reopening of international money and capital markets to Greek banks. Generally, the restoration of banks' capital adequacy and the enhancement of their liquidity create the conditions for increasing the supply of bank credit, which will facilitate the financing of production, investment and exports, thus helping to establish the conditions for sustainable growth.

• Especially as regards the recapitalisation of banks, the following should be noted:

36 The Greek banks acquired EFSF notes as a result of: (a) their participation in the Greek debt buy-back operation; (b) the completion of both phases of core banks' bridge recapitalisation, in May and December 2012; and (c) the resolution of the Agricultural Bank of Greece and the subsequent coverage of its funding gap by the Hellenic Financial Stability Fund (HFSF).

– The overall framework for the recapitalisation of Greek banks was outlined initially in the March 2012 Memorandum and was subsequently updated in the December 2012 revised Memorandum, while the specific tools and conditions of recapitalisation by the HFSF are described in Cabinet Act 38/9.11.2012.

– The March 2012 Memorandum of Understanding provided for an expansion of the capacity of the Hellenic Financial Stability Fund (HFSF) to €50 billion.

– The capital needs assessment was conducted in the first months of 2012 by the Bank of Greece. The objective of this exercise was to conservatively estimate the capital needs of all banks, so as to ensure minimum Core Tier 1 capital levels over the period 2012-2014.

– The Bank of Greece also conducted in March 2012 a strategic assessment of the banking sector. The analysis assessed the viability of banks on the basis of a much broader set of criteria (comprising regulatory and business criteria), as provided for in the March 2012 Memorandum of Understanding.[37] The strategic assessment identified four core banks, namely, in alphabetical order, Alpha Bank, Eurobank, National Bank of Greece and Piraeus Bank, which were deemed suitable candidates for recapitalisation using programme funds.

– The banks' capital needs were estimated on the basis of two macroeconomic assumptions scenarios, taking into account: (i) loss incurred from the PSI; (ii) Credit Loss Projections; and (iii) the banks' expected internal capital generation[38] over the 2012-2014 period.

– The capital needs for all Greek commercial banks were estimated in May 2012 at €40.5 billion, of which the €27.5 billion correspond to the four "core banks".

– In October 2012, the Bank of Greece reviewed the capital needs assessment estimated earlier this year in light of the first half of 2012 preliminary financial results and confirmed that the conservatively estimated capital needs were adequate.

– In December 2012, the Bank of Greece reviewed the adequacy of the Financial Envelope, i.e. of the level of public resources required as a backstop facility for the Greek banking sector's recapitalisation needs and restructuring costs over the 2012-2014 period. Under reasonable levels of economic uncertainty, the amount of €50 billion is appropriate to cover the Greek banking sector's recapitalisation and restructuring costs. It is noted that this includes a capital buffer deemed appropriate, taking into account the potential developments that could increase the needed funds.

– After the completion of the bridge recapitalisation of the four core banks in December 2012, the following stages include the issuance of contingent convertible bonds (CoCos) and the completion of share capital increases with the participation of the private sector, by end-April 2013. Private shareholders will retain control of the "core banks", provided they have subscribed no less than 10% of the newly issued common shares.

– "Non-core banks", as stated in the December 2012 Memorandum, must be recapitalised from private sources by end-April 2013. They may also merge with other banks provided they can submit a credible Business Plan and meet recapitalisation needs by April 2013. If private shareholders are unable to support these banks, the Bank of Greece will proceed with the required steps for an orderly resolution by no later than June 2013, thus safe-

37 According to the March 2012 Memorandum, the strategic assessment (viability study) of the banking sector would be carried out "using a set of quantitative and qualitative criteria. The criteria will include in non-exhaustive terms: shareholders' soundness and willingness to inject new capital; quality of management and risk management systems; capital, liquidity and profitability metrics (both forward and backward looking); the Bank of Greece's assigned ratings to bank risks; and a sustainable business model."
38 Namely, the ability to raise capital through the accumulation of retained earnings.

guarding financial stability and depositors' interests.

The Bank of Greece shall continue to act with a view to safeguarding the stability of the banking sector, protecting depositors and creating a long-term viable and well-capitalised banking system, which is a *sine qua non* for the support of the real economy.

8 DEVELOPMENTS IN THE PRIVATE INSURANCE MARKET AND ITS SUPERVISION

- The Greek insurance market comprises seventy-five (75) insurance firms, 55 of which are based in Greece and 20 are branches of companies based in the EU and the European Economic Area (EEA), with total assets of €14 billion. In terms of gross written premiums, the market share of Greek-based insurance undertakings is 48.7%, of EU groups subsidiaries: 41.8%, of branches of non-EU firms 5.4% and of branches based in EU member-states: 4.1%. As regards market concentration in terms of gross written premiums, the 5 and 10 largest insurance companies account for 67.2% and 92.7% of the life insurance market and 37.2% and 62.2% of the non-life insurance market, respectively. These shares are slightly lower relative to 2011.

- In the January-September 2012 period, the insurance market was marked by a decline in the number of new contracts, for the second consecutive year, and a significant increase in the number of redemptions, while there was also a decline in the value of insurance firms' investment holdings, mostly Greek government bonds (GGBs), as a result of the PSI+ and the buy-back operation.

- In order to counter the impact from these developments, capital increases of €1.5 billion were carried out; in particular in order to tackle the impact from the PSI+, insurance firms were granted derogation in the valuation of GGBs and were allowed to gradually cover the loss by the end of 2013. Of the 55 Greek-based insurance firms, 23 have made use of the derogation.

- In the January-September 2012 period, all premium income categories fell by 11.4% compared to the corresponding period of 2011, amounting to €3,372 million, of which 42% for life insurance and 58% for non-life insurance. As regards individual lines of business, life insurance premium income dropped by 9.7%, while non-life insurance premium income declined by 12.6%. Total technical reserves amounted to €12.0 billion (Jan.-Sept. 2011: €12.3 billion). This reflects a 7.5% decline in typical life insurance due to redemptions, as well as a decline in gross written premiums, as there was an increase of 4.3% in non-life insurance.[39]

- Work on the finalisation of the draft of the Omnibus II Directive amending Solvency II Directive continued throughout 2012, leading the European Insurance and Occupational Pensions Authority (EIOPA) to issue an opinion on interim implementation, in order to promote convergence of the institutional framework of EU Member States with part of the Solvency II Directive, with effect from 1.1.2014. The Bank of Greece plans its actions in coordination with EIOPA for the implementation of the above opinion. Moreover, the Bank of Greece has tightened its supervision, increasing the number and frequency of reporting requirements, and conducting more than 120 field reviews. The Bank of Greece has also had a series of meetings with the managements and officers of insurance companies, highlighting organisational and compliance issues and other structural weaknesses, with a focus on the gradual adaptation of market practices and companies' internal organisation to the new requirements. In the context of finalisation of the draft of the Omnibus II Directive, the European Commission, the Council of the European Union and the European Parliament have asked EIOPA to design and conduct a

39 In this class, motor insurance rose by 8% in 2012 compared to 2011.

European quantitative impact assessment for the supervisory measures that will be included in the new Solvency II framework. In response, the EIOPA continues to conduct exercises, with an emphasis on quantitative data, such as the European Impact Assessment Exercise for the set of regulations relating to long-term guarantees (Long-Term Guarantees Assessment – LTGA). In Greece, the exercise is currently underway. Moreover, EIOPA plans the coordination for a European-wide stress test in the insurance market in 2013.

• In addition, with a view to a more accurate calculation of technical provisions and proper risk assessment, the Department of Private Insurance Supervision of the Bank of Greece will coordinate the preparation of eight studies in partnership with insurance firms, universities, consulting firms and other insurance market stakeholders. The first meeting of each of the eight working groups was held in December 2012, with the participation of all insurance firms.

• Finally, the examinations for the certification of insurance intermediaries continued in 2012 with 8,496 candidates, satisfying the need to feed the insurance market with highly qualified staff.

XI ENVIRONMENT, ENERGY AND CLIMATE CHANGE

1 CLIMATE CHANGE RESEARCH AND PUBLIC POLICY: INTERNATIONAL DEVELOPMENTS

1.1 SCIENTIFIC FINDINGS AND REPORTS RELEASED IN 2012 THROUGH EARLY 2013

Following the OECD report on the environmental outlook to 2050, released on 15 March 2012 and already presented by the Bank of Greece in last year's *Annual Report*,[1] the World Bank released its own report on 8 November 2012 called *Turn Down the Heat – Why a 4°C Warmer World Must be Avoided*.[2] As this snapshot of the latest climate science clearly spells out, without serious policy changes from the global community, the world is plausibly on a path to 4°C warming within the century and the full implementation of *current pledges* to reduce greenhouse gas emissions will not reduce this likelihood by much. For millions of people, the devastating consequences of a 4°C warming would include: the inundation of coastal regions; increasing risks for food production, potentially leading to decreased food security and to much higher under-nutrition and malnutrition rates among the world population; dry regions becoming drier, wet regions becoming wetter; unprecedented heat waves; water scarcity; and irreversible loss of biodiversity. Under this nightmare scenario, the world's poor regions would be hit hardest. As pointed out by Hans Joachim Schellnhuber, Director of the Potsdam Institute for Climate Impact Research (PIK) conducting the reasearch, the Earth system's responses to climate change appear to be *non-linear*; thus, if we venture far beyond the 2°C guardrail, the risk of crossing tipping points rises sharply.

Another major study, conducted by a team of researchers from the UK and Germany and published in mid-January 2013,[3] presents a first global-scale multi-sectoral regional assessment of the climate change impacts that could be avoided through alternative emission policies. According to the analysis, the most stringent emissions policy considered gives a 50% chance of remaining below a 2°C temperature rise target by 2100, and reduces impacts by 20-65% relative to a business-as-usual pathway conducive to a 4°C warming. The beneficial effects of mitigation policies vary across sectors and regions and, although not very noticeable before 2030, they can strongly influence what will happen by 2100. The magnitude of the impacts avoided is more strongly influenced by the *point in time* (e.g. 2016 or 2030) and the level at which emissions peak, with an earlier and lower emissions peak resulting in reduced impacts. Under the more stringent mitigation policy scenarios, emissions peak in either 2016 or 2030, and decline thereafter at either 2% or 5% per year. Only when emissions peak in 2016 and subsequently decline at a rate of 5% (*pathway 1*) is the temperature rise by 2100 just above 2°C. If emissions peak in 2030 (*pathway 2*), the temperature rise is likely to reach 2.5°C. Under the two "no mitigation" scenarios considered (*pathway 3*), the rise in global average temperature reaches between 4°C and 5.6°C by 2100.

In terms of impacts:

– The global average sea level rise (SLR) by 2100 will reach 30 cm (pathway 1), 35 cm (pathway 2) or 47-55 cm (pathway 3). By comparing the three pathways, it was estimated that some 100 to 161 million people would be spared exposure to greater flooding by 2050 if emissions peak in 2016, against 52 to 120 million if emissions continue to rise until 2030.

– If emissions peak in 2016, between 39 and 68 million fewer people would be exposed to drought by 2050, compared with just 17 to 48 million if emissions peak in 2030.

1 OECD (2012), Environmental Outlook to 2050: The Consequences of Inaction. See Bank of Greece, Annual Report 2011, pp. 151-152.
2 The report was prepared for the World Bank by the Potsdam Institute for Climate Impact Research (PIK) and Climate Analytics.
3 See N.W. Arnell, J.A. Lowe, S. Brown, S.N. Gosling, P. Gottschalk, J. Hinkel, B. Lloyd-Hughes, R.J. Nicholls, T.J. Osborn, T.M. Osborne, G.A. Rose, P. Smith & R.F. Warren (2013), "A global assessment of the effects of climate policy on the impacts of climate change", Nature Climate Change, advance online publication, 13 January 2013. For a summary of conclusions, see "Climat: le coût humain de l'inaction en détail", Le Monde, 15.1.2013.

– The *decline in crop productivity* could be contained and delayed with stringent emissions policies. For instance, spring wheat productivity could drop by 20% by the 2050s, but such a drop in yields is held off until 2100 if stringent mitigation policies are implemented. Otherwise, productivity could fall by 60%.

1.2 POLICY DECISIONS AND CONSIDERATIONS

The 18th United Nations Convention on Climate Change in Doha, Qatar came to a close on 8 December 2012, without any major breakthroughs. Nevertheless, the delegates of some 190 nations agreed on an 8-year extension of the Kyoto Protocol (due to expire) and reiterated the decision taken in Durban in 2011, to continue talks so that a new, comprehensive agreement with enhanced mitigation ambitions may be reached by developed and developing nations by 2015 and brought into effect from 2020 (the Kyoto Protocol is legally binding only for developed nations). Moreover, developed countries committed to revisit their emissions reduction commitments at the latest by 2014, thereby satisfying a demand put forward by developing nations and by the Intergovernmental Panel on Climate Change (IPCC). Among the developed nations, the EU played a critical role in the adoption of these decisions.[4] However, real progress has yet to be seen with the Green Climate Fund, the establishment of which was decided in Durban and the aim of which is to mobilise an annual USD 100 billion in aid by 2020 to help poor (and hard-hit) nations deal with climate change. The developed nations have put off their final decision until end-2013 and till then pledged to contribute as much as they had done in the previous three years.[5]

Despite the slow progress, awareness of the severity of the issue is taking hold. According to "*Global Risks 2013*", released by the World Economic Forum (WEF) on 8 January 2013 and developed from an annual survey of over 1,000 experts and high-level leaders worldwide, climate change ranks among the top three global risks, together with severe income disparity and chronic fiscal imbalances. While recognising that economic difficulties in many countries have diverted attention from other significant challenges, including environmental ones, the report also warns that "the Earth's environmental system is simultaneously coming under increasing stress. Future simultaneous shocks to both systems could trigger the 'perfect global storm', with potentially insurmountable consequences."

How have policy-makers responded to these findings? On the occasion of the release of the World Bank report, mentioned previously, World Bank President Jim Yong Kim warned that "a 4°C warmer world can, and must be, avoided" and that "lack of action on climate change threatens to make the world our children inherit a completely different world than we are living in today (...)". According to Kim, "greater adaptation and mitigation efforts are essential (...). We need a global response equal to the scale of the climate problem (...). But time is very short". Speaking in Davos on 26 January 2013, Kim stressed that a temperature increase of 4°C would result in "water and food fights everywhere", and that the 2012 droughts in the US, which pushed up cereal prices, had led to the world's poor eating less, while, for the first time, extreme weather had been attributed to man-made climate change.

These findings and warnings come with concrete policy proposals:[6] "*... there is a need for urgent action outside the conventions. People everywhere must focus on where we will get the most impact to reduce emissions and build resilience in cities, communities and countries. Strong leadership must come from the six big economies that account for two-thirds of the energy sector's global carbon dioxide emissions. (...) The world's top priority must be to get*

4 See also article by EU Climate Action Commissioner, Connie Hedegaard, "Viser l'accord sur le climat de 2015", Le Monde, 14.12.2012.

5 Jeffrey Sachs recently criticised the developed nations for not honouring their pledges and presented a straightforward and fair way of financing the Green Climate Fund ("How to make rich countries pay for climate change", Financial Times, 23.10.2012).

6 See the article by World Bank President Jim Yong Kim "Make climate change a priority", The Washington Post, 24 January 2013.

finance flowing and get prices right on all aspects of energy costs to support low-carbon growth. (…) A second immediate step is to end harmful fuel subsidies globally, which could lead to a 5 percent fall in emissions by 2020.[7] *Countries spend more than $500 billion annually in fossil-fuel subsidies and an additional $500 billion in other subsidies, often related to agriculture and water, that are, ultimately, environmentally harmful. That trillion dollars could be put to better use for the jobs of the future, social safety nets or vaccines. A third focus is on cities. The largest 100 cities that contribute 67 percent of energy-related emissions are both the center of innovation for green growth and the most vulnerable to climate change. We have seen great leadership, for example, in New York and Rio de Janeiro on low-carbon growth and tackling practices that fuel climate change. (…) Just as the Bretton Woods institutions were created to prevent a third world war, the world needs a bold global approach to help avoid the climate catastrophe it faces today.*"

In a similar vein, US President Obama in his second-term inaugural address on 21 January 2013 pledged to "respond to the threat of climate change, knowing that the failure to do so would betray our children and future generations", noting that "some may still deny the overwhelming judgment of science, but none can avoid the devastating impact of raging fires and crippling drought and more powerful storms. The path towards sustainable energy sources will be long and sometimes difficult. But America cannot resist this transition, we must lead it". In his 2013 State of the Union address (12 February 2013), President Obama went further to say that if Congress did not act soon, he would instruct his Cabinet to take executive action to reduce pollution, prepare for the consequences of climate change and speed up the transition to more sustainable sources of energy.

Lastly, an OECD scoping paper, dated 30 January 2013, of the initiative "New Approaches to Economic Challenges", makes two major points:

(a) *Economic growth and human development have always depended on access to natural resources and the environment's ability to absorb waste. The scale of human pressure on these resources is starting to pose potentially large risks to future economic growth and development. The distribution of these risks is likely to be uneven.*

(b) *Global economic growth over the past decades has come at an increasingly significant cost to the environment and has locked-in future environmental change that will affect future generations. Unless more significant policy action is taken now, continued environmental degradation in the future is likely to pose risks to the economy and to human well-being.*

2 RECENT DATA ON GREENHOUSE GAS EMISSIONS IN THE EU AND GREECE (2010-2011)

In 2010, EU-27 greenhouse gas (GHG) emissions, excluding land use, land-use change and forestry, came to 4,721 million tonnes of CO_2 equivalent, down by 15.4% from 1990 levels. EU-15 GHG emissions in 2010 came to 3,798 million tonnes (10.6% less than in 1990), accounting for 80.4% of EU-27 emissions (against 76.1% in 1990). Among the older Member States, Germany and the UK accounted for the largest share of European GHG emissions in 2010 (with a combined 32.3% of EU-27 emissions and 40.2% of EU-15 emissions), followed by France (11.1% of EU-27 emissions in 2010) and Italy (10.6%) (see Table XI.1).

As regards the trends in GHG emissions vis-à-vis the targets set under the Kyoto Protocol, it is worth noting that most of the EU-27 Member States are on track to meeting their national targets (see Table XI.1). Among the

7 Two OECD studies ("Taxing Energy Use" and "The Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels"), published in late January 2013, provide ample documentation on: (a) taxation and energy use and (b) fossil fuel subsidies.

Table XI.1 Greenhouse gas emissions[1] and the Kyoto Protocol targets

Country	2010 data							Provisional estimates 2011	
	1990	Kyoto Protocol (base year)[2]	2010	Change 2010 over 2009	Change 2010 over 1990	Change of base year-2010	Kyoto targets 2008-2012	Change 2011 over 2010	Change 2011 over 1990
	(in million tonnes of CO_2 equivalents)			(percentage changes)				(percentage changes)	
Austria	78.2	79.0	84.6	6.1	8.2	7.0	-13.0	-2.3	5.8
Belgium	143.3	145.7	132.5	5.8	-7.6	-9.1	-7.5	-8.4	-15.3
Denmark	68.6	69.3	61.1	0.6	-11.0	-11.9	-21.0	-7.5	-17.7
Finland	70.4	71.0	74.6	12.8	6.0	5.0	0.0	-8.2	-2.8
France	559.9	563.9	522.4	1.5	-6.6	-7.4	0.0	-4.6	-10.9
Germany	1,246.1	1,232.4	936.5	2.7	-24.8	-24.0	-21.0	-1.8	-26.2
Greece	*105.0*	*107.0*	*118.3*	*-5.1*	*12.6*	*10.6*	*25.0*	*-1.3*	*11.2*
Ireland	55.2	55.6	61.3	-0.7	11.2	10.3	13.0	-5.6	5.0
Italy	519.2	516.9	501.3	2.0	-3.5	-3.0	-6.5	-2.2	-5.6
Luxembourg	12.8	13.2	12.1	4.9	-5.9	-8.3	-28.0	-1.8	-7.6
Netherlands	212.0	213.0	210.1	5.6	-0.9	-1.4	-6.0	-6.0	-6.8
Portugal	60.1	60.1	70.6	-5.1	17.5	17.4	27.0	-0.9	16.5
Spain	282.8	289.8	355.9	-2.8	25.8	22.8	15.0	0.1	25.9
Sweden	72.8	72.2	66.2	11.0	-9.0	-8.2	4.0	-5.1	-13.6
United Kingdom	763.9	776.3	590.2	3.1	-22.7	-24.0	-12.5	-6.1	-27.4
EU-15 (older Member States)	**4,249.3**	**4,265.5**	**3,797.6**	**2.1**	**-10.6**	**-11.0**	**-8.0**	**-3.5**	**-13.8**
EU-27	**5,583.1**	**...**	**4,720.9**	**2.4**	**-15.4**	**...**	**...**	**-2.5**	**-17.5**

Source: For 2010: European Environment Agency Technical Report no. 3/2012, *Annual European Union greenhouse gas inventory 1990-2010 and inventory report 2012*, 27.5.2012. For 2011: European Environment Agency Technical Report no. 13/2012, *Approximated EU GHG inventory: Early Estimates for 2011*, 24.10.2012.
1 Total emissions excluding the "land use change and forestry" sector.
2 For CO_2, CH_4 and N_2O, all Member States chose 1990 as their base year. For HFC, PFC and SF_6, 12 Member States chose 1995 as their base year, while Austria, France and Italy chose 1990. For Cyprus, Malta and EU-27 neither Kyoto Protocol targets nor respective base year data have been set.

EU-15, eight countries (including Greece) have already overshot their Kyoto targets, while the remaining seven still have some way to go. ***The target set for Greece under the Kyoto Protocol was for the increase in GHG emissions over the period 2008-2012, relative to the base year, to be contained at 25%. In 2010, Greece's GHG emissions were just 10.6% above 1990 levels, putting the country well on track****, a development at least to some extent attributable to the economic downturn.*

Turning to 2011, early estimates published by the European Environment Agency (EEA) in October 2012 indicate that GHG emissions excluding land use, land-use change and forestry fell between 2010 and 2011 by 1.3% in Greece, 3.5% in EU-15 and 2.5% in EU-27 (see Table XI.1).

3 RECENT GREEK LEGISLATION AND OTHER MEASURES ON THE ENVIRONMENT, ENERGY AND CLIMATE CHANGE

– Law 4042/2012 (on the penal protection of the environment and transposition of Directive 2008/99/EC, as well as on the general framework for waste generation and management and transposition of Directive 2008/98/EC) and

Law 4062/2012 (on Project HELIOS and the promotion of the use of energy from renewable sources and transposition of 2009/28/EC, as well as on sustainability criteria for biofuels and bioliquids and transposition of Directive 2009/30/EC) were both presented in last year's *Annual Report*.

– On 9 and 10 August 2012, (a) the Regulatory Authority for Energy (RAE) announced the weighted increase in the special duty for gas emissions reduction (ETMEAR) levied in electricity bills; and (b) the government announced that the licensing process for new photovoltaic (PV) projects would be put on halt (except for PV systems to be mounted on rooftops and projects already fast-tracked) and that it would lower the green energy guaranteed feed-in tariffs (FiTs) for plants licensed but not yet operational.

– On 28 September 2012, the Ministry of Finance announced that it would equate the special consumption tax on heating oil with that of diesel oil, at 80% of the current rate on diesel oil, the lowest level allowed in accordance with EC directives. It also announced the launching of supportive preparations for the disbursement of a heating oil allowance to eligible consumers.

– On 30 October 2012, the Ministries of Finance, Development and Environment presented joint measures to address fuel market distortions. The aims of these measures are to tackle the illegal fuel trade, strengthen competition, modernise legislation and protect consumer interests.

– On 31 October 2012, the adoption of Law 4092/2012 provides for the equating of the consumption tax on heating oil with the consumption tax on diesel oil (Article 5), as well as for the allocation of a heating allowance to eligible households.

– On 3 December 2012, public consultation began on the draft law "Regulation on matters related to Renewable Energy Sources (RES), and other provisions", including provisions to facilitate the conclusion of mature RES projects and to restore trust in the guaranteed access to grid networks nearly congested as a result of inactive grid connection offers. The purpose of the new provisions is, among other aims, to rationalise the procedure for booking grid capacity, and to ensure that licences for projects likely to be completed remain in effect.

– On 10 January 2013, RAE announced a further weighted increase in the special duty for gas emissions reduction (ETMEAR) levied in electricity bills (see Section 5, below).

– On 22 January 2013, the Ministry of Environment, Energy and Climate Change reported that 101,154 bank loan applications had been submitted under the programme "Energy Saving at home" (to promote energy saving within the household), of which roughly half had been pre-approved. In 19,212 cases (corresponding to a total budget of €188.9 million), decisions incorporating them into the programme had already been issued. Half of these beneficiaries have received the full loan amount, while the other half had received a down-payment.

– On 5 February 2013, the draft law on the "Energy Performance of buildings – Transposition of Directive 2010/31/EU of the European Parliament and of the Council, and other provisions", submitted to Parliament on 18 December 2012, was adopted.

* * *

The Greek government had been considering equalising the Special Consumption Tax on heating oil with that on diesel oil since the 2000s as a way of tackling fuel fraud. Apart from the —purely national— motivations behind this measure (and the ensuing increased public revenue), the reduction or removal of fossil fuel subsidies also serves to address climate change, as mentioned previously in Section 1.2. However, the timing of this measure's implementation in Greece (October 2012) coincided with a difficult conjuncture, marked by historically high international oil prices and a serious drop in household disposable income due to the protracted recession. The implementation of this measure therefore illustrates the contradictory results that economic policy can have, especially when fiscal constraints and the inefficiency of public administration prevent comprehensive planning. In this particular instance, the hike in the retail price of heating oil caused a shift towards:

(a) the use of firewood, resulting in a significant increase in urban air pollution (suspended particulates, smog), often above allowable levels (health risks);[8]

(b) the use of air-conditioners for heating purposes, putting an additional strain on an already overburdened network; and

(c) the use of natural gas.

Case (a), i.e. the increased recourse to burning firewood, has direct and indirect impacts on health, while cases (a) and (b), i.e. the increased recourse to burning firewood and to air-conditioner use are, in terms of GHG emissions, just as harmful to the environment as the use of heating oil (given that an important share of Greece's power generation is fired by fossil fuels). Moreover, the public revenue gains from the crackdown on fuel fraud and from the increased Special Consumption Tax are likely to be offset, in part if not in full, by the decrease in consumption of heating oil.

A solution in the medium term would be to expand the natural gas grid, while intensifying efforts to improve the energy performance of buildings (e.g. through better insulation) by extending such programmes as "Energy saving at home".

4 ENERGY SECTOR INVESTMENTS

Power generation from renewable energy sources (RES) has, over the past seven years at least, attracted considerable investment, mainly in wind and photovoltaic (PV) farms. As a result, renewable energy generation (in MWh) increased at an average annual rate of 18% from 2006 to 2011, while in 2011 alone the increase in installed RES capacity relative to one year earlier neared 40%.[9]

With investment in most other sectors having come to a standstill in recent years, the share of energy sector investments in total investment expenditure has risen sharply. In fact, 10 of the 12 projects that qualified for fast-track authorisation under Law 3894/2010 from November 2011 to December 2012 involved renewable energy generation.

Crucial to the future of Greece's energy market will be the privatisation of the Public Gas Corporation (DEPA)-Hellenic Gas Transmission System Operator (DESFA), currently in progress (on 6 November 2012, the Hellenic Republic Asset Management Fund, known as TAIPED, confirmed having received 5 non-binding bids). Apart from the capital inflows, at stake are Greece's energy autonomy; dependence on third non-EU countries; the unbundling of gas transmission services from gas production; and compliance with EU directives.

Energy sector investments, especially those involving generation from renewable energy sources, are considered profitable in the long run in terms of the economy's green balance sheet (lower CO_2 emissions) and permanent job creation. They can also contribute indirectly to sizeably increased value added, when stimulating domestic production of intermediate or capital goods. Such production synergies are expected from some of the fast-tracked energy investments, notably the ones involving photovoltaic (PV) panel production.

8 See the conference on "Atmospheric pollution in Athens today" held by the postgraduate course "Environment and Health" of the Faculty of Medicine of the University of Athens on 1 February 2013.

9 According to an ICAP survey (see Green Tank magazine, published by the newspaper Naftemporiki, issue 12, November 2012).

5 THE FINAL PROPOSALS OF GREECE'S REGULATORY AUTHORITY FOR ENERGY (RAE) FOR RESTRUCTURING THE DOMESTIC ELECTRICITY MARKET

In view of the implementation of the Third Energy Package[10] and of the European Target Model for electricity market integration by 2015,[11] Greece's Regulatory Authority for Energy (RAE) identified the need for significant structural changes to the domestic electricity market's organisation and operation. On 15 November 2012, after public debate and public consultation, it announced its final proposals for the reshaping of the domestic electricity market. These proposals were endorsed by the Ministry of Environment, Energy and Climate Change on 4 February 2013.[12]

The structural changes proposed by RAE aim to:

(a) compress power generation and transmission costs;

(b) create conditions for the domestic market's integration with those of neighbouring countries, as envisaged under the European Target Model;

(c) ensure non-discriminatory access of all market participants to the country's energy resources (mostly lignite and water);

(d) eliminate distortions and cross-subsidies in retail tariffs (especially in the low-voltage tariffs that are still regulated); and

(e) foster reforms in the natural gas market, geared towards reducing infrastructure use costs and strengthening competition in the supply of natural gas.

The proposed structural improvements involve the wholesale electricity market, power generation from renewable energy sources (RES) and the retail electricity market.

The wholesale electricity market

– The most important proposal from RAE for the wholesale market is the *adoption of the French model for a new organisation of the electricity market (NOME–Nouvelle organisation du marché de l'électricité)*, involving the sale/auction of lignite-fired and possibly hydroelectric power generation through forward contracts at a regulated price range.[13] The central aim of the proposed auctioning procedure is to ensure access to the country's lignite and water resources, and the transfer of at least part of the economic surplus from lignite-fired and hydro power generators to domestic end-users.[14] The consumption contracts are to have different durations depending on the zone, while transitional provisions will also be needed for the smooth and gradual third-party acquisition of a retail market share, so that forward contracts may be used.[15]

Other changes proposed for the wholesale electricity market include:

10 The Electricity and Gas Directives of the Third Energy Package (namely Directive 2009/72/EC concerning common rules for the internal market in electricity, and Directive 2009/73/EC concerning common rules for the internal market in natural gas) have already been transposed into Greek law (Law 4001/22 August 2011 on the Operation of Electricity and Natural Gas Markets; Hydrocarbon Exploration, Production and Transmission Networks and other provisions). The purpose of this legislation is to ensure that the necessary conditions are in place for the completion of the single energy market by 2014 in compliance with European Council Decision of 4 February 2011.

11 The aims of the EU Target Model for energy are to achieve market coupling and, at more advanced stages, price coupling so as to ensure more efficient use of Trans-European energy networks (TENs). All Member States are required by 2015, even by strong regulatory action, to have established the necessary conditions in their wholesale and retail energy markets for the Target Model's effective implementation and operation.

12 The aim of the Ministry of Environment, Energy and Climate Change is for the new regulatory framework on the domestic electricity market to have been completed by the end of the first half of 2013.

13 The basic auction design proposed by RAE draws on both the Virtual Power Plant (VPP) approach and the NOME approach for industrial customers. The objective is to combine those features that are most suited to Greece's market conditions, so as to effectively address pressing structural and conjunctural problems in the domestic electricity market.

14 To achieve this aim, auction participants are subject to the following specific limitations: (a) lignite and hydro power forward products may only be used for the supply of electricity to end users; and (b) such products may account for only part (roughly 65%) of the total power/energy provided to the end-users served, with the balance coming from other sources.

15 RAE has proposed a multiple-round auction, to be completed by mid-2014, of forward energy products, amounting to a total capacity of 1600 MW. The auctions will be in blocks of 10 to 50 MW, with minimum/maximum size limits per participant, so that not only large energy-consuming industries and suppliers, but also smaller industries can participate. The auction will be held in three rounds, with a tentative date of September 2013 set for the first round.

– *Redesigning the Capacity Assurance Mechanism*, especially given the gradual decrease in the load factors of thermal power plants. This mechanism is essential to the sustainable and effective co-existence of conventional and RES power plants.

– *Establishing an Additional Reserves Assurance Mechanism* for the transition period 2013-2014 with the primary aim of supporting the operation of reliable plants, without energy limitations. This will help ensure a greater flexibility of response to grid load fluctuations, thereby preventing any serious problems during the launch of the single energy market in 2015.

– *Drawing up a detailed "Management Code for Hydroelectric Power Plants and Water Resources"* and, more importantly, a methodology for calculating the lowest bid price that a hydroelectric power plant can submit in the wholesale electricity market.

Generation from renewable energy sources (RES)

A comprehensive overhaul of the current model for RES development (including guaranteed feed-in tariffs/FiTs and priority grid access to renewable energy producers) is considered necessary to ensure compatibility with the structural and operational changes in the domestic electricity market both during the interim phase 2013-2014 and from 2015 onwards (implementation of the European Target Model for electricity market integration). Proposals in this regard involve reviewing the economic incentives provided by RES support schemes and establishment procedures, as well as the quantitative targets regarding the mix, technological maturity and market penetration of RES technologies so as to ensure that Greece meets its national target in terms of share of RES in gross final energy consumption. RAE also points out the need to contain any further increases in the special duty for gas emissions reduction (ETMEAR) levied on RES and High-Efficiency Cogeneration.[16]

The retail electricity market

Retail market distortions caused by regulated supply tariffs need to be removed, so that *customers pay according to the costs they generate*. In other words, supply rates must fully reflect the underlying long-term supply costs across all market segments.[17]

The proposals made by RAE with regard to residential customers include:

(a) *eliminating discriminatory pricing and offering residential customers two tariff options: a single undifferentiated rate, and a day/night rate;*

(b) *slashing the number of public utility service charges*, from 13 to 4, as a way to reduce present distortions; and

(c) *extending eligibility for the Social Tariff for Residential Customers (KOT)* to broader categories of customers, while also streamlining eligibility requirements and approval procedures.[18]

16 According to a plan by the Ministry of Environment, Energy and Climate Change to gradually reduce and by 2014 to ultimately wipe out the €280 million deficit of the special account used to compensate producers of electricity from RES and High-Efficiency Cogeneration, RAE (by virtue of its decision of 10 January 2013) raised the weighted average special duty for gas emissions reduction (ETMEAR) to €9.3/MWh in 2013, from €8.74 in 2012. This increase, however, entails different percentage changes per customer category. Thus, the ETMEAR duty will cost high-voltage customers 22% less per MWh, but medium-voltage customers 8% more. For households, the impact of the ETMEAR duty increase on their total electricity bills will range from 0.4% to 0.8%, depending on their consumption levels.

17 Cost-reflective pricing for low-voltage customers is expected to take effect as soon as supply tariffs are deregulated, i.e. on 1 July 2013. However, the latest low-voltage tariffs announced by the Public Power Corporation (PPC) on 13 January 2013, with retroactive effect from 1 January 2013, already mark a first step towards aligning tariffs on generation and transmission costs. Based on these latest tariffs, the weighted average increase in low-voltage rates was 3%.

18 On 13 January 2013, the PPC announced an extended Social Tariff for Residential Customers (effective retroactively from 1 January 2013) for broader social categories (low income earners, the long-term unemployed, families with three children, the disabled, etc.), while also keeping in place its special lower tariff for households with four children or more. The new Social Tariff for Residential Customers provides a discount of about 42% on the standard residential tariff in effect since 1 January 2013 and applies to the beneficiary's total consumption. The Ministry of Environment, Energy and Climate Change has thus essentially adopted the new Code on Electricity Supply in accordance with an opinion issued by RAE on 8 January 2013, which modernises the service provision framework and enhances the protection of vulnerable consumers.

RAE has furthermore stressed the need to *fully dissociate* the supplying of electricity from third-party tax collection (municipal tax, municipal fees, extraordinary surtax on real estate/EETHDE, public television licence fee), and to *reduce today's stifling energy taxation* (special consumption tax on natural gas used in gas-fired power plants, special consumption tax on oil used in PPC power plants on islands, special consumption tax on electricity).[19]

Finally, as stressed by RAE, the development of a Long-term Energy Plan remains the most pressing need for Greece's energy sector.

6 PHASE 2 OF THE WORK ASSIGNED TO THE CLIMATE CHANGE IMPACTS STUDY COMMITTEE (CCISC): PREPARATION OF A STUDY FOR A NATIONAL ADAPTATION STRATEGY TO CLIMATE CHANGE[20]

6.1 INTRODUCTION

Following deliberations within the Climate Change Impacts Study Committee (CCISC) in October and December 2012, it was decided that Phase 2 of the CCISC project would focus on contributing to the formulation of a national strategy of *adaptation* to climate change (NSACC). Furthermore, it was agreed that this policy would be:

– aligned with the general orientations of the European Strategy for Adaptation to Climate Change, currently being finalised;

– supported by adequate existing data, in particular the findings of Phase 1 of the Climate Change Impacts study, as reproduced in the technical report,[21] and

– mainstreaming into the broader sectoral policies at the current economic conjuncture, with a focus on potential synergies between growth and climate strategy.

As agreed, the scope of the study will include:

– Homogenisation and enhancement of data available from Phase 1;

– Climate vulnerability analyses of the respective economic sectors;

– Elaboration of a realistic short-list of climate adaptation investment options;

– Formulation of a cohesive methodology for the selection of the optimal adaptation options;

– Proposals for public policy geared towards meeting the adaptation targets.

6.2 THE PROBLEM POSED BY ADAPTATION TO CLIMATE CHANGE

The more experience and insight we gain into the climate adaptation potential in the EU, the more aware we become of the difficulties posed by the need for prior institutional adaptation. These difficulties stem from the fact that adaptation is totally different from emission mitigation. More specifically, while mitigation policies have a very long-term impact on global climate conditions (which are a typical example of a public good), adaptation policies can have a long-term impact on the welfare of specific local populations (typical of a private good). Secondly, emissions mitigation has the advantage of being measurable in terms of a clear and universally-accepted physical unit (i.e. tonnes of CO_2 equivalent). As a result, both the effectiveness of mitigation measures and the ensu-

19 On 24 January 2013, in fulfilment of its consumer protection mandate, RAE released its assessment of the financial repercussions of the new rates recently announced by PPC on the four-month electricity bills of residential and commercial customers. RAE's calculations only cover the electricity supply rates and therefore leave out all taxes (e.g. customs fees, special consumption tax, VAT) and third-party fees for services (real estate tax, municipal fees, public television licence fee) unrelated to the electricity supply. In order to help consumers choose their electricity supplier, RAE intends to release similar assessments on the 2013 rates to be announced by Greece's other electricity suppliers.

20 This Section is based on the working document drawn up by Professors and CCISC members M. Skourtos, A. Kontogianni, C. Zerefos, A. Xepapadeas, A. Papandreou and E. Sartzetakis.

21 See "The environmental, economic and social impacts of climate change in Greece", Athens, 2011. This report can be downloaded from http://www.bankofgreece.gr/ BogEkdoseis/ClimateChange_FullReport_bm.pdf.

ing benefits can be clearly quantified. Such, however, is not the case with climate adaptation: *contrary to what happens with mitigation, the physical result of adaptation can vary across sectors, locations and adaptation technologies.* Consequently, while the results of alternative adaptation measures and technologies in a particular sector should, in principle, be comparable, the variety of metrics in which they are in reality expressed hampers comparability and, ultimately, selection.

It is therefore logical to expect government action and policy for the protection of a public good, such as the climate, but less logical to expect government action for the provision of a private good, such as adaptation to climate change. Taking this reasoning one step further, "autonomous" adaptation to the impacts of climate change, i.e. private adaptation (by producers and consumers through changes in their production and consumption patterns) without explicit policy interventions by governments would appear to be the answer to climate change. A number of factors, however —such as uncertainty about the impacts of climate change and about the effectiveness of adaptation measures— make it essential for the government to assume a leading role in the design and implementation of adaptation actions. Such is the purpose of the European Commission's White Paper "Adapting to climate change: Towards a European framework for action (COM(2009) 147): *to lay the foundations for effective, multi-level governance for adaptation, with distinct roles to be played by the European, the national and the local authorities.*

6.3 THE INSTITUTIONAL APPROACH TO CLIMATE ADAPTATION IN THE EU

For years, the EU had centred its climate policy around greenhouse gas emission (GHG) mitigation, advocating openly for the signing and implementation of the Kyoto Protocol. EU climate diplomacy did not, however, have the anticipated results. The reluctance of the biggest "players", in particular the U.S., China, Canada and India, to ratify the Kyoto Protocol led to the failure of the Copenhagen Conference in October 2009 to adopt a legally binding agreement on the reduction of CO_2 emissions. (For more details on what followed, see Section 1.2 above.)

Driven by concerns that global economic growth is likely to remain highly carbon-intensive and that the adverse effects of climate change will continue to multiply, the European Union in June 2007 released a Green Paper entitled "Adapting to climate change in Europe – options for EU action", COM (2007) 354, as a first official contribution to the global debate on climate adaptation. Published in the wake of extreme weather events that had recently devastated several European nations (with e.g. flash floods and wildfires), the Green Paper marks the start of public consultation on the policy measures needed to reduce the impact and costs of global warming. The Paper examines the impacts of climate change at the regional and sectoral level, and outlines possible adaptation measures of European scope. It also stresses that, according to preliminary estimates of the Stern Review (The Economics of Climate Change, November 2006), with a 3-4°C global average temperature rise, the additional costs of adapting infrastructure and buildings could amount to 1-10% of the total costs invested in construction in OECD countries or USD 15-150 billion each year (0.05-0.5% of GDP). If temperatures are allowed to rise by 5-6°C, the costs of adaptation measures would likely rise exponentially, and their relative effectiveness would diminish.

Some two years later in April 2009, the EU Commission released a White Paper (Adapting to climate change: Towards a European framework for action) that builds on the public consultation launched by the Green Paper in 2007 and adopts the following phased approach: Phase 1 (2009-2012) was to lay the ground work for preparing a comprehensive EU adaptation strategy, and Phase 2 (commencing in 2013) would see the actual strategy implementation. The White Paper also identifies some of the problems with adaptation policies, such as:

- assessing the cost and benefits of adaptation options;

- the problem of maladaptation;

- the need to mainstream adaptation measures into broader economic policy;

- the connection between emission mitigation and adaptation policies;

- the cross-sectoral impacts of adaptation;

- the problem with the financing of adaptation investments.

6.4 EU ADAPTATION STRATEGIES

With the climate change impacts becoming increasingly visible, most European nations have already started to design and implement National Adaptation Plans (NAP), giving priority to the sectors of health, agriculture and water resources and to the impact on sea level rise.[22] The national adaptation strategies do not form a uniform set of proposals and targets, but differ considerably in terms of scope of intervention, target accuracy and extent to which institutional and social factors have been taken into consideration. Such disparities are to be expected given that, as explained previously, adaptation to climate change is a private and —in most cases— a local good. Relevant research is still in its early stages, given that calls for research proposals in thematic areas related to climate change under the EU's 7th Framework Programme for Research were only announced in late 2012, while the first European Climate Change Adaptation Conference will be held in March 2013.

6.5 THE NATIONAL SUPPORT REFERENCE FRAMEWORK (NSRF) 2014-2020 FOR ADAPTATION TO CLIMATE CHANGE

A very encouraging development is that the new National Support Reference Framework (NSRF) 2014-2020, in course of elaboration since 2012,[23] will be centrally aligned on the EU strategy "Europe 2020" and will include such flagship initiatives as "supporting the shift towards a low-carbon economy", "promoting climate adaptation" and "environmental protection and resource efficiency". It also provides for the establishment of Groups of Experts (with academics and specialists) in each respective field for the elaboration of the Development Plan and the Operational Programmes.

6.6 THE "LEGACY" OF PHASE I OF THE STUDY BY THE CLIMATE CHANGE IMPACTS STUDY COMMITTEE (CCISC)

During Phase 1, the Climate Change Impacts Study Committee (CCISC) produced a first assessment of the environmental, economic and social impacts of climate change in Greece. Its research of the physical impacts of climate change is nearly complete (for the assessment needs of the Study Committee, not for general academic purposes). However, there is still room for fine-tuning research into sectoral economic impacts and for developing research into the social impacts of climate change, still at a very initial stage. Two findings of Phase 1, crucially important to Phase 2, concern the confirmation of Greece's climatic diversity and the anticipated cost of Greek inaction on climate change. The complexity of Greece's geomorphology is responsible for a mosaic of climatic conditions, which —combined with local cultural and socio-economic specificities— will make future research on adaptation all the more interesting, but also all the more challenging. Generally speaking, it was estimated that non-action on climate change would result in annual declines in Greek GDP of 2% by 2050 and 6% by 2100. The total cumulative cost for the Greek economy of a *non-action* scenario over the period extending to 2100, expressed as a decline in

22 For more information, visit the EU climate adaptation portal at http://climate-adapt.eea.europa.eu/).
23 See Ministry for Development and Competitiveness, Special Secretariat for NSRF "1st Circular for the Planning and Elaboration of the Development Programme 2014-2020", April 2012 (in Greek).

GDP relative to the base year and using a zero discount rate, would amount to €701 billion (at constant 2008 prices).

The Technical Report produced by the Climate Change Impacts Study Committee, in its Section on "Policies and cost of adaptation to climate change",[24] contains an analysis of the policies and costs of adaptation using the general equilibrium model GEM-E3 and based on adaptation policy data as well as cost data from the sectoral analyses (excluding the sectors of biodiversity, ecosystems and human health). Cost data were also drawn from the international literature. This first cost assessment exercise was able to quantify the macroeconomic costs of adaptation under the extreme climatic conditions of Scenario A2. As shown by the analysis, adaptation action would amount to 1.5% of GDP in 2025-2050, 0.9% of GDP in 2051-2070, and 0.1% of GDP after 2070. Cumulatively till 2100, adaptation to climate change would cost the Greek economy €123 billion (at 2008 prices). The opportunity under Phase 2 to fine-tune the different parameters of adaptation will allow for a more accurate macroeconomic reapplication of the GEM-E3 model.

6.7 ORGANISATION OF PHASE 2 OF RESEARCH BY THE CLIMATE CHANGE IMPACTS STUDY COMMITTEE (CCISC)

Phase 2 of research will focus on policies and in particular on planned adaptation policies. Such policies typically need an appropriate administrative or legislative framework to be, at least to some extent, in place and encompass both "hard" and "soft" adaptation options. Hard adaptation options usually consist of engineering options for the improvement of transport infrastructure, communications and urban structures, and have the advantage of being fairly easy to assess in terms of cost and benefits. Soft or mild adaptation options, on the other hand, which basically consist of information and incentive policies geared towards changing consumption and production patterns, may have the advantage of costing less; however, their exact costs and benefits are usually less "tangible" and therefore more difficult to estimate.

The public debate, today, on climate change adaptation policies can obviously not be isolated from the conjuncture of fiscal deficits and recession, both in Greece and worldwide. The fact that Greece's National Strategy for Adaptation to Climate Change (NSACC) is linked to the country's current economic situation has two sides:

– On the one hand, the current economic downturn will ultimately prove to have been *shorter-lived* than the impacts of climate change. The recession should therefore not be a deciding factor in any long-term strategy, such as a National Strategy for Adaptation to Climate Change (NSACC).

– On the other hand, the failure of past policies, as highlighted by the current crisis, should heighten our awareness of the public management and policy implications of "governance". Governance, as a concept, encompasses both formal and informal forms of social management and power. In order to ensure that Greece's National Strategy for Adaptation to Climate Change (NSACC) is feasible and realistic, the objectives, capacity and limitations of current (and future) governance components in Greece (e.g. public administration, local government, NGOs, professional associations, citizen movements) will need to be taken into due consideration during Phase 2 of research.

For the National Strategy for Adaptation to Climate Change to be realistic, the proposals to be produced by Phase 2 of the research will need to be based on alternative scenarios of future socio-economic development in Greece and worldwide. Other requirements will include: consultation with the social partners, the use of

24 See "The environmental, economic and social impacts of climate change in Greece", Athens, 2011, pp. 367-383. The full report can be downloaded from http://www.bankofgreece.gr/BogEkdoseis/ClimateChange_FullReport_bm.pdf.

geo-spatial information (GIS maps, databases with GPS coordinates, etc.), as well as synergies and partnerships with other research projects.

Taking all of the above into consideration, the CCISC has set itself the tasks of:

(a) Assessing in depth and formulating specific adaptation policies in the priority sectors already studied in part during Phase 1 (i.e. agriculture, sea level rise, tourism, water supply, urban environment, public health, transport networks, etc.). These bottom-up analyses may also contain mitigation policy analyses, to the extent that certain adaptation policies are directly tied to emission reduction. In any event, due to the uncertainty surrounding the impacts of climate change as well as the cost, timing and effectiveness of adaptation action, the proposed adaptation policies will need to be "adaptive" (*adaptive* adaptation).

(b) Mainstreaming the sectoral adaptation policies into broader public policies in the sectors concerned, especially under the present circumstances of economic recession and major cut-backs in funding. To this end, the analyses mentioned in the previous paragraph (a) will need to be combined with a review of the institutional role of the banking and insurance sectors in the support of sectoral adaptation (and mitigation) policies. The recording and critical analysis of initiatives combining climate change and entrepreneurship would also be particularly warranted.

(c) Holding consultations with all the stakeholders, i.e. decision makers, central and local government officials, professional groups and social partners in general, in an aim to explore specific matters and stimulate research. Consultation has been shown to be an indispensable tool for:

– linking research with the practical needs of users;

– monitoring the social acceptance of research findings;

– completing research data and informing on new options.

(d) Implementing a small-scale 'pilot programme' of adaptation action in a selected geographic area of Greece, based on the findings of Phase 1 and in part of the studies of Phase 2, with a view to fostering an integrated approach to adaptation adoption and to underscoring the difficulties in similar efforts.

6.8 STRUCTURE OF RESEARCH FOR THE NATIONAL STRATEGY FOR ADAPTATION TO CLIMATE CHANGE (NSACC)

In order to ensure that the research effort meets all of the objectives outlined above, the study will be structured into three main sections as follows:

I. General overview. Presentation and documentation of the need for climate adaptation. Objectives of the National Strategy for Adaptation to Climate Change. Review of climate data for Greece. Selection of the climate scenarios and presentation of methodology tools.

II. Key sector analysis (adaptation). The key sector analysis under Phase 1 covered: aquatic ecosystems, sea level rise, fisheries and aquaculture, agriculture, forestry, biodiversity and ecosystems, tourism, the built environment, transport, health and the mining industry. The same key sectors will be studied under Phase 2, taking into account that some of them are typically ecosystemic (aquatic ecosystems, forestry, biodiversity, coastal areas), while others are market-related (fisheries and aquaculture, agriculture, tourism, mining) or network- and infrastructure-related (cities, transport, water supply, health). To avoid a reoccurrence of the inevitable overlapping between sectors that took place during Phase 1, a new typology will need to be designed for Phase 2, with the definite inclusion of two sectors, namely the energy sector and marine ecosystems.

Each sector analysis should be structured as follows:

(a) *Vulnerability analysis.* Analysis of the respective key sector's geophysical/ecosystemic as well as socioeconomic vulnerability, using appropriate indicators. Expected (direct and indirect) impacts of climate change in both the short and the long term. Analysis of the impacts in terms of cost, range, onset, reversibility and distributional effects.

(b) *Adaptive capacity.* Assessment of each key sector's adaptive capacity, in terms of technology, institutions, human capital, access to financing, etc.

The analyses (a) and (b) will enable us to prioritise the adaptation needs.

(c) *Adaptation measures.* Drawing-up of a short-list of potential adaptation technologies, measures and policies ("hard" and "soft"). Each of the technologies, measures or policies is to be short-listed on the basis of multiple criteria, including: intended objectives; direct and indirect outcome; timing and spatial considerations; positive or negative impacts on other sectors; contribution to greenhouse gas emissions mitigation; construction and operating costs; ease of financing; required expertise; and institutional coverage.

(d) *Priority analysis and target selection.* From the short-list of potential adaptation technologies, measures and policies established under (c), one or more (combined) measures will be selected and recommended, based on the adaptation targets in each sector and the selection criteria adopted. Consultation with all stakeholders will be vital at this stage on e.g. the suitability of the proposed measures, the accuracy of cost and effectiveness estimates, the relative importance of the criteria. Standard forms of priority analysis include cost/benefit analysis, cost/effectiveness analysis and multi-criteria approaches.

(e) *Target implementation/funding.* Once the targets have been set and the measures for their implementation selected, we will seek to determine whether appropriate institutional frameworks and financing tools are in place. At this stage the potential for mainstreaming the selected sectoral policies into broader development and fiscal strategies will be examined.

III. Supporting sectors (i.e. banking and insurance sectors). Section III of research for the elaboration of a National Strategy for Adaptation to Climate Change will examine the potential for public and private finance to strengthen and support climate adaptation projects in Greece through appropriate banking and insurance products.

ANNEX

ANNUAL ACCOUNTS FOR THE YEAR 2012

AUDITOR'S REPORT

REPORT OF THE GENERAL COUNCIL

CONTENTS

BALANCE SHEET AS AT 31 DECEMBER 2012

EIGHTY–FIFTH YEAR

(in euro)

ASSETS	31.12.2012	31.12.2011
1. Gold and gold receivables	**5,984,958,512**	**5,770,281,682**
2. Claims on non-euro area residents denominated in foreign currency	**992,872,970**	**982,306,649**
2.1 Receivables from the International Monetary Fund (IMF)	925,936,960	942,163,589
2.2 Balances with banks and security investments, external loans and other external assets	66,936,010	40,143,060
3. Claims on euro area residents denominated in foreign currency	**343,692,770**	**1,018,555,147**
3.1 General government	286,157,016	290,508,741
3.2 Other claims	57,535,754	728,046,406
4. Claims on non-euro area residents denominated in euro	**23,873**	**113,867**
4.1 Balances with banks, security investments and loans	23,873	113,867
4.2 Claims arising from the credit facility under ERM II	0	0
5. Lending to euro area credit institutions related to monetary policy operations denominated in euro	**19,346,500,000**	**76,159,500,000**
5.1 Main refinancing operations	17,401,500,000	15,177,500,000
5.2 Longer-term refinancing operations	1,945,000,000	60,942,000,000
5.3 Fine-tuning reverse operations	0	0
5.4 Structural reverse operations	0	0
5.5 Marginal lending facility	0	40,000,000
5.6 Credits related to margin calls	0	0
6. Other claims on euro area credit institutions denominated in euro	**101,850,944,365**	**52,009,194,702**
7. Securities of euro area residents denominated in euro	**20,782,519,037**	**21,149,321,189**
7.1 Securities held for monetary policy purposes	6,964,976,237	7,766,490,399
7.2 Other securities of euro area residents denominated in euro	13,817,542,800	13,382,830,790
8. General government long-term debt denominated in euro	**6,170,409,022**	**6,659,874,462**
9. Intra-Eurosystem claims	**1,813,849,138**	**1,632,798,971**
9.1 Participating interest in the ECB	533,636,713	500,888,380
9.2 Claims equivalent to the transfer of foreign reserves to the ECB	1,131,910,591	1,131,910,591
9.3 Net claims related to the allocation of euro banknotes within the Eurosystem	0	0
9.4 Net claims arising from balances of TARGET2 accounts	0	0
9.5 Other claims within the Eurosystem (net)	148,301,834	0
10. Items in course of settlement	**2,341,587**	**317,653**
11. Other assets	**2,490,128,554**	**3,054,155,454**
11.1 Coins	69,373,412	72,132,824
11.2 Tangible and intangible fixed assets	824,757,986	827,039,091
11.3 Other financial assets	29,122,874	29,104,193
11.4 Off-balance-sheet instruments revaluation differences	137,272	7,256,329
11.5 Accruals and prepaid expenses	675,776,423	1,203,167,522
11.6 Sundry	890,960,587	915,455,495
TOTAL ASSETS	**159,778,239,828**	**168,436,419,776**

OFF-BALANCE-SHEET ITEMS	31.12.2012	31.12.2011
1. Greek government securities relating to the management of the "Common capital of legal entities in public law and social security funds" according to Law 2469/97	19,791,242,415	23,415,359,594
2. Greek government securities and other debt securities relating to the management and custody of assets of public entities, social security funds and private agents and EFSF securities owned by the Hellenic Financial Stability Fund	15,702,881,516	6,745,993,739
3. Assets eligible as collateral for Eurosystem monetary policy operations and intraday credit	25,568,946,751	142,876,476,764
4. Assets accepted by the Bank of Greece as eligible collateral for emergency liquidity assistance to credit institutions	191,524,930,187	84,822,677,096
5. Other off-balance-sheet items	22,694,818,331	21,723,246,332
TOTAL OFF-BALANCE-SHEET ITEMS	**275,282,819,200**	**279,583,753,525**

Notes:

1 Under Article 54A of the Bank's Statute, the financial statements of the Bank of Greece are drawn up in accordance with the accounting principles and rules established by the European Central Bank (ECB) and applying to all members of the European System of Central Banks (ESCB).

(in euro)

LIABILITIES	31.12.2012	31.12.2011
1. Banknotes in circulation	**23,576,814,320**	**22,957,704,380**
2. Liabilities to euro area credit institutions related to monetary policy operations denominated in euro	**2,168,651,315**	**4,703,006,264**
2.1 Current accounts (covering the minimum reserve system)	1,369,351,315	2,506,356,264
2.2 Deposit facility	410,000,000	1,179,500,000
2.3 Fixed-term deposits	0	0
2.4 Fine-tuning reverse operations	0	0
2.5 Deposits related to margin calls	389,300,000	1,017,150,000
3. Other liabilities to euro area credit institutions denominated in euro	**0**	**0**
4. Liabilities to other euro area residents denominated in euro	**7,191,431,209**	**5,553,155,243**
4.1 General government	5,721,347,961	3,838,270,484
4.2 Other liabilities	1,470,083,248	1,714,884,759
5. Liabilities to non-euro area residents denominated in euro	**1,008,139,644**	**1,041,850,236**
6. Liabilities to euro area residents denominated in foreign currency	**32,019,524**	**16,178,298**
7. Liabilities to non-euro area residents denominated in foreign currency	**2,224**	**2,268**
7.1 Deposits and other liabilities	2,224	2,268
7.2 Liabilities arising from the credit facility under ERM II	0	0
8. Counterpart of special drawing rights allocated by the IMF	**911,998,065**	**928,426,952**
9. Intra-Eurosystem liabilities	**112,814,781,585**	**123,244,992,854**
9.1 Liabilities related to promissory notes backing the issuance of ECB debt certificates	0	0
9.2 Net liabilities related to the allocation of euro banknotes within the Eurosystem	14,459,590,040	18,437,110,570
9.3 Net liabilities arising from balances of TARGET2 accounts	98,355,191,545	104,750,000,738
9.4 Other liabilities within the Eurosystem (net)	0	57,881,546
10. Items in course of settlement	**3,232,633**	**15,074,984**
11. Other liabilities	**792,319,332**	**1,159,769,724**
11.1 Off-balance-sheet instruments revaluation differences	96,926	2,889
11.2 Accruals and income collected in advance	117,545,452	181,090,409
11.3 Sundry	674,676,954	978,676,426
12. Provisions	**6,213,496,005**	**3,951,100,114**
13. Revaluation accounts	**4,249,859,880**	**4,049,716,285**
14. Capital and reserves	**815,494,092**	**815,442,174**
14.1 Capital	111,243,362	111,243,362
14.2 Ordinary reserve	111,243,362	111,243,362
14.3 Extraordinary reserve	84,500,000	84,500,000
14.4 Special reserve from the revaluation of land and buildings	507,247,856	507,247,856
14.5 Other special reserves	1,259,512	1,207,594
TOTAL LIABILITIES	**159,778,239,828**	**168,436,419,776**

2 The Bank's key for subscription of the ECB's capital fully paid up by all 17 National Central Banks of the Eurosystem is 2.80818%.

3 Claims/liabilities denominated in euro or foreign currency are broken down into claims on/liabilities to euro area residents and non-euro area residents.

4 Account balances related to monetary policy operations are disclosed under distinct items.

5 Gold has been valued at the price provided by the ECB as at 31 December 2012: €1,261.179 per fine oz, compared with €1,216.864 as at 30 December 2011.

6 Claims/liabilities denominated in foreign currency have been converted to euro using the euro foreign exchange reference rates of the ECB as at 31 December 2012.

7 Marketable securities (other than held-to-maturity) are valued at the mid-market prices of 31 December 2012. Marketable securities classified as held-to-maturity and non-marketable securities are valued at amortised cost subject to impairment. In financial year 2012 no impairment losses were incurred.

8 "Other off-balance-sheet items" include the promissory note of €22.1 billion (SDR 18.9 billion) issued by the Greek government for the total amount of the loan received from the IMF until 31 December 2012.

9 Certain items of the balance sheet and the profit and loss account for the year 2011 have been reclassified to ensure comparability with the respective items of the year 2012.

PROFIT AND LOSS ACCOUNT FOR THE YEAR 2012

(in euro)

	2012	2011
1. Net interest income	**2,673,764,628**	**1,468,721,829**
1.1 Interest income	3,827,258,869	2,930,940,084
1.2 Interest expense	-1,153,494,241	-1,462,218,255
2. Net result of financial operations, write-downs and risk provisions	**66,279,995**	**33,468,983**
2.1 Realised gains arising from financial operations	66,279,995	33,468,983
2.2 Write-downs on financial assets and positions	-73,849	-299,303
2.3 Transfer from provisions for foreign exchange rate, interest rate, credit and gold price risks	73,849	299,303
3. Net income from fees and commissions	**71,834,689**	**98,293,953**
3.1 Fees and commissions income	75,723,080	100,360,667
3.2 Fees and commissions expense	-3,888,391	-2,066,714
4. Income from equity shares and participating interests	**20,133,200**	**23,770,587**
5. Net result of pooling of monetary income	**148,822,314**	**-43,398,113**
6. Other income	**14,636,772**	**13,938,443**
Total net income	**2,995,471,598**	**1,594,795,682**
7. Staff costs	**-157,870,006**	**-182,999,639**
8. Pension costs	**-112,234,922**	**-103,056,260**
8.1 Payment of pensions	-133,465,539	-132,101,191
8.2 Contributions and other income	21,230,617	29,044,931
9. Other administrative expenses	**-40,108,577**	**-47,018,524**
10. Depreciation of tangible and intangible fixed assets	**-13,583,648**	**-13,642,905**
11. Consultancy fees for the auditing of the Banking System	**-10,291,676**	**0**
12. Provisions	**-2,342,733,566**	**-1,151,441,512**
Total expenses	**-2,676,822,395**	**-1,498,158,840**
PROFIT FOR THE YEAR	**318,649,203**	**96,636,842**

DISTRIBUTION OF PROFIT

(Article 71 of the Statute)

(in euro)

	2012	2011
Dividend to be distributed €0.5376 per share for 19,864,886 shares (compared to €0.67 per share in 2011)*	10,679,362	13,309,473
Tax on dividends (tax rate 20%, Article 14, paragraphs 9 and 10, Law 3943/2011)	2,669,841	3,327,369
To the Government	305,300,000	80,000,000
	318,649,203	**96,636,842**

* *The gross dividend for financial year 2012 amounts to €0.6720 per share compared with €0.8375 for financial year 2011. Dividends are subject to withholding tax at a rate of 25% in accordance with Law 3943/2011, Article 14 paragraphs 1 and 2.*

Athens, 21 January 2013

THE GOVERNOR

GEORGE A. PROVOPOULOS

THE DIRECTOR OF THE ACCOUNTING DEPARTMENT

MARIA K. PAGONI

To the Shareholders of BANK OF GREECE S.A.

Report on the Financial Statements

We have audited the accompanying financial statements of the BANK OF GREECE S.A. (the "Bank") which comprise the balance sheet as of 31 December 2012 and the statement of income, the appropriation account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the accounting principles prescribed by the European Central Bank as adopted by the Bank in article 54A of its Statute and the accounting standards prescribed by Greek Law and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Basis for Qualified Opinion

The balance sheet caption "Provisions" includes an amount of EUR 2 095 million (31 December 2011: EUR 1 939 million) that concerns provision for pensions and other employees benefits. We were not provided any information relating to the calculation of the provision and consequently we are unable to evaluate its adequacy and the effect in the income statement.

Qualified Opinion

In our opinion, except for the possible effects of the matter discussed in the Basis for Qualified Opinion paragraph, the financial statements give a true and fair view of the financial position of the Bank of Greece as at 31 December 2012 and of its financial performance for the year then ended in accordance with the accounting principles prescribed by the European Central Bank as adopted by the Bank in Article 54A of its Statute and the accounting standards prescribed by Greek Law.

Report on Other Legal and Regulatory Requirements

We verified that the contents of the Report of the Governor relating to the statement of income for 2012 is consistent and corresponds with the accompanying financial statements within the scope set by Articles 37 and 43A of C.L. 2190/1920.

Athens, 21 January 2013

KPMG Certified Auditors A.E.
SOEL Reg. No 114

Marios T. Kyriacou Certified Auditor Accountant SOEL Reg. No 11121	Nikolaos Vouniseas Certified Auditor Accountant SOEL Reg. No 18701

NOTES ON THE ANNUAL ACCOUNTS

ACCOUNTING POLICIES

General principles regarding the preparation of the Bank's accounts

The annual accounts of the Bank of Greece, under Article 54A of its Statute, are prepared in accordance with the accounting rules and principles applicable to the European System of Central Banks, as set out by the European Central Bank (ECB) in its Guideline ECB/2010/20 of 11 November 2010, as amended by Guideline ECB/2011/27 of 21 December 2011.

These rules and practices, although based on internationally accepted accounting standards, have been adjusted to reflect the specific status of the national central banks (NCBs) of the Eurosystem.

Any issues that are not covered by the aforementioned rules or ECB guidelines or are governed by non-mandatory provisions are to be treated either in accordance with the ECB recommendations or in accordance with the Bank's Statute and Codified Law 2190/1920 on sociétés anonymes.

Main accounting principles

The main accounting principles that apply to the Eurosystem (i.e. the ECB and the euro area NCBs, including the Bank of Greece) are the following:

• ***Transparency:*** accounting and financial reporting must reflect the Bank's real financial situation.

• ***Prudence:*** Unrealised valuation gains on gold, financial instruments in foreign currency and securities are not recognised as income in the Profit and Loss Account, but are transferred directly to revaluation accounts. By contrast, unrealised valuation losses at the year-end in excess of previous unrealised valuation gains are recognised as expenses and are taken to the Profit and Loss Account.

• ***Post-balance-sheet events:*** Assets and liabilities are adjusted for events that occurred between the annual balance sheet date and the date on which the financial statements were approved, if such events affect the condition of assets or liabilities on the balance sheet date.

• ***Materiality and non-deviation from accounting rules.***

• ***Going concern basis:*** Accounts are prepared on a going concern basis.

• ***The accruals principle:*** Income and expenses are recognised in the accounting period in which they were earned or incurred and not in the period in which they were received or paid.

• ***Consistency and comparability:*** The criteria for balance sheet valuation and income recognition are applied consistently to ensure comparability of data in financial statements.

Accounting approaches

• Financial transactions denominated in euro are recorded on value date in accordance with the cash approach.

• Foreign exchange transactions, financial instruments denominated in foreign currency and related accruals are recorded using the economic approach, according to which:

– Transactions are recorded on off-balance sheet accounts on trade date.

– On settlement/value date, the off-balance sheet booking entries are reversed, and the transactions are booked on balance sheet accounts.

– Using the economic approach, the foreign currency positions, realised gains and losses arising from net sales and the calculation of average cost are affected on trade date.

– Interest, premium or discount accrued related to financial instruments denominated in foreign currency are calculated and booked on a daily basis and the foreign currency position is affected commensurately.

Balance sheet valuation rules

• Assets and liabilities in foreign currency and gold are converted into euro at the exchange rate prevailing on the balance sheet date, as derived from the ECB's daily quotation of reference exchange rates.

• Income and expenses are converted into euro at the exchange rate prevailing on the trade date.

• No distinction is made between the price and currency revaluation differences for gold. Instead, a single gold valuation is accounted for on the basis of the price in euro per fine ounce of gold, which is derived from the exchange rate of the euro against the US dollar on the balance sheet date.

• The revaluation of foreign exchange assets and liabilities, including on-balance-sheet and off-balance-sheet instruments, is performed on a currency-by-currency basis.

• Marketable debt securities, other than held to maturity, are valued at the average market prices prevailing at the Balance Sheet date on the basis of their ISIN code; for the financial year ending on 31 December 2012, the average market prices of 31 December 2012 were used.

• Marketable debt securities held to maturity and various holdings are valued at amortised cost and are subject to impairment tests.

• Debt securities held to maturity for monetary policy purposes are valued at amortised cost and are subject to impairment tests, which are harmonised across the Eurosystem.

Income recognition

• Realised gains and losses arising from the sale of foreign exchange, gold and securities are taken to the Profit and Loss Account. Such realised gains and losses are calculated using the average cost of the respective asset at the date when they are realised.

• Unrealised gains (revaluation gains) are not recognised as income, but are transferred directly to revaluation accounts.

• Unrealised losses (revaluation losses), when in excess of previous revaluation gains registered in the corresponding revaluation account, are taken at year-end to the Profit and Loss Account and are not netted against new revaluation gains in subsequent years. Unrealised losses in any one security, in any one currency or in gold holdings are not netted against unrealised gains in other securities, currencies or gold. The average cost of a financial asset giving rise to unrealised loss at year-end is valuated at the end-year foreign exchange rate or market price.

• Premiums or discounts arising on purchased securities are calculated and presented as part of interest income and are amortised over the remaining life of the assets.

• Impairment losses are taken to the Profit and Loss Account and are not netted in subsequent years, unless impairment is reduced and this change can be related to an observable event that occurred after the impairment was first registered.

Off-balance sheet instruments

Foreign exchange forward transactions, the forward legs of currency swaps and other currency transactions that involve exchanging a currency for another on a future date are included in the net foreign currency positions for the purpose of calculating average purchase cost and foreign exchange gains and losses.

Banknotes in circulation

The ECB and the 17 euro area NCBs, which together comprise the Eurosystem, issue euro banknotes.[1] The total value of euro banknotes in circulation is allocated to the Eurosystem central banks on the last working day of each month according to their banknote allocation keys.[2]

The ECB has been allocated a share of 8% in the total value of euro banknotes in circulation, while the remaining 92% is allocated to the NCBs. The share of banknotes in circulation that has been allocated to the Bank of Greece is disclosed under the Balance Sheet liability item 1 "Banknotes in circulation".

The difference between the value of euro banknotes allocated to each NCB according to its banknote allocation key and the value of euro banknotes that the NCB actually puts into circulation produces "Intra-Eurosystem claims/liabilities". These interest-bearing claims or liabilities[3] are disclosed under the sub-item "Net claims/liabilities related to the allocation of euro banknotes within the Eurosystem".

For financial years 2002 to 2007, "intra-Eurosystem claims" and "intra-Eurosystem liabilities" arising from the allocation of euro banknotes are adjusted in order to avoid sharp fluctuations in the monetary income of NCBs relative to previous years.

The amounts of these adjustments were calculated taking into account the differences between the average value of banknotes in circulation of each NCB during the reference period (refer-

1 ECB Decision of 13 December 2010 on the issue of euro banknotes (recast) (ECB/2010/29), OJ L35, 9.2.2011, p. 26.
2 "Banknote allocation key" means the percentages that result from taking into account ECB's share (8%) in the total euro banknote issue and applying the subsequent capital key to the NCB's share in this total.
3 ECB decision of 25 November 2010 on the allocation of monetary income of the national central banks of Member States whose currency is the euro (recast) (ECB/2010/23), OJ L35, 9.2.2011, p. 17.

ring to the 24-month period beginning 30 months before the adoption of the single currency by the relevant Member State) and the average value of banknotes that would have been allocated to them during the same period in accordance with the ECB's capital key.

The small further adjustments of balances made henceforth reflect changes in the balances of NCBs joining the Eurosystem, which affect those of the participating NCBs. This year, adjustments arise from the entry of the NCBs of Slovenia (1 January 2007), Cyprus and Malta (1 January 2008), Slovakia (1 January 2009) and Estonia (1 January 2011).

Interest income and interest expenses on these claims/liabilities are netted in the ECB accounts and are disclosed in the Profit and Loss Account of each NCB of the Eurosystem under "Net interest income".

Interim distribution of the income of the European Central Bank

The Governing Council of the ECB has decided that the income from its share (8%) of the total euro banknote issue and the net income from securities purchased under the Securities Markets Programme (SMP) is due to the NCBs and will be paid to them in full in the financial year it accrues. The ECB will distribute both amounts to the NCBs in January of the following year in the form of an interim distribution.[4] The income on euro banknotes in circulation will be paid in full, unless the Governing Council decides to reduce such income on account of expenses incurred by the ECB in connection with the issue and handling of euro banknotes. The Governing Council will decide before the end of the financial year whether all or part of the ECB's income arising from SMP securities and, if necessary, all or part of the ECB's income on euro banknotes in circulation should be retained to the extent necessary to ensure that the amount of the distributed income does not exceed the ECB's net profit for that year.

Furthermore, the Governing Council may decide before the end of the financial year to transfer part or all of the ECB's income arising from securities purchased under the SMP and, if necessary, part or all of the ECB's income on euro banknotes in circulation to the provision for foreign exchange rate, interest rate, credit and gold price risks.

In accordance with the Governing Council decision of 10 January 2013, part of the ECB's income in 2012 arising from securities purchased under the SMP and of its income on euro banknotes in circulation (€1,166 million) will be transferred to the above-mentioned provision.

Post-balance-sheet events

Assets and liabilities are, in principle, adjusted for events that occurred between the annual balance sheet date and the date on which the balance sheet was approved by the General Council of the Bank, if such events materially affect the condition of assets and liabilities on the balance sheet date, and, if necessary, provisions are formed out of the results of the financial year.

Post-balance-sheet events that do not affect the condition of assets and liabilities on the balance sheet date are only disclosed in the notes.

4 ECB Decision of 25 November 2010 on the interim distribution of the income on euro banknotes in circulation and arising from securities purchased under the Securities Markets Programme (recast) (ECB/2010/24), OJ L6, 11.1.2011, p. 35.

Intra-ESCB balances/intra-Eurosystem balances

Intra-ESCB balances result from cross-border payments between EU central banks (for the most part initiated by private entities). They are mostly effected through the TARGET2 system[5] and give rise to bilateral balances in the TARGET2 accounts of EU central banks. These bilateral balances are netted out and then assigned to the ECB on a daily basis, leaving each NCB with a single net bilateral position vis-à-vis the ECB only. This position in the books of the ECB represents the net claim or liability of each NCB against the rest of the ESCB. Intra-ESCB balances of non-euro area NCBs that result from payments not effected through the TARGET2 system are presented either as “Claims on non-euro area residents denominated in euro” or as “Liabilities to non-euro area residents denominated in euro”.

Intra-Eurosystem euro-denominated balances of euro area NCBs vis-à-vis the ECB (excluding the ECB capital and the positions arising from the transfer of foreign reserve assets to the ECB) are presented on the Balance Sheet of the ECB as a single net asset or liability position and disclosed under “Other claims within the Eurosystem (net)”or “Other liabilities within the Eurosystem (net)”.

Intra-Eurosystem claims arising from the participation of the Bank of Greece in the capital, reserves and provisions of the ECB are disclosed under “Participation in the capital, reserves and provisions of the ECB”.

Intra-Eurosystem balances arising from the allocation of euro banknotes within the Eurosystem are included as a single net asset (liability) under “Net claims related to the allocation of euro banknotes within the Eurosystem” (“Net liabilities related to the allocation of euro banknotes within the Eurosystem”).

Intra-Eurosystem balances arising from the transfer of foreign reserve assets to the ECB by the NCBs joining the Eurosystem are denominated in euro and reported under “Liabilities equivalent to the transfer of foreign reserve assets”.

Cash flow statement

Taking account of the special role of the central bank in the context of the single monetary policy of the Eurosystem, the Bank of Greece regards the publication of a cash flow statement unnecessary, on the grounds that it would not provide the readers of financial statements with additional information. This practice is also followed by the rest of the Eurosystem NCBs.

5 TARGET2: Trans-European Automated Real-time Gross Settlement Express Transfer System.

NOTES ON THE BALANCE SHEET

ASSETS

1. Gold and gold receivables

Holdings and receivables in standard gold	31.12.2012	31.12.2011	Change
Volume in fine troy ounces (thousands)	4,746.0	4,742.0	4.0
Volume in tonnes	147.6	147.5	0.1
Value (€ million)	5,985.0	5,770.3	214.7

The amounts reported above comprise the Bank's gold holdings (3,597 thousand ounces) and gold receivables from the Greek State (986 thousand ounces) corresponding to Greece's participation in the IMF (the gold component of Greece's quota has been paid by the Bank of Greece on behalf of the Greek State), as well as scrap gold and gold coins for melting (163 thousand ounces). A large part of gold holdings is kept with banks abroad.

Gold and gold receivables increased slightly (by 4 thousand ounces) against the previous financial year, solely owing to reserves, while the €214.7 million increase in the value of gold in euro is attributable to its increased price in 2012.

The total amount after the increase in the price of gold (value as at 31 December 2012, compared with the average acquisition cost) came to €4,219.6 million and is disclosed under liability item 13 "Revaluation accounts". This sum refers to unrealised profit and will serve as a buffer against any losses from gold price movements.

Gold has been valued at its euro price per fine troy ounce as at year-end. This price is in line with the ECB reference exchange rates and derived from the USD price of gold quoted on the London market at year end and the euro/USD exchange rate on the same date. On 31 December 2012, the price of gold was €1,261.179 per fine ounce, compared with €1,216.864 on 30 December 2011.

2. Claims on non-euro area residents denominated in foreign currency

This item consists of receivables from the IMF (in SDRs), balances on correspondent accounts, time deposits with banks abroad, securities holdings, and the value of non-euro banknotes held in the Bank's vaults.

2.1 Receivables from the IMF

These arise from Greece's participation in the IMF and include the following:

– The Bank's holdings of special drawing rights (SDRs);

– The SDR component of Greece's quota in the IMF.

Receivables from the IMF *(in millions)*	31.12.2012 *SDR*	31.12.2012 *Euro*	31.12.2011 *SDR*	31.12.2011 *Euro*	Change *SDR*	Change *Euro*
SDR holdings	553.5	645.2	553.2	656.5	0.3	-11.3
SDR component of Greece's quota in the IMF	240.8	280.7	240.7	285.7	0.1	-5.0
Total	**794.3**	**925.9**	**793.9**	**942.2**	**0.4**	**-16.3**

- **SDR holdings**

The largest part of Greece's SDR holdings with the IMF comes from SDR allocations to Greece in 2009 in the context of IMF's general SDR allocation, equivalent to USD 250 billion, to all its member countries, which was approved by the IMF Board of Governors on 7 August 2009 and entered into force on 28 August 2009.

This allocation aimed to provide liquidity to the global economic system by boosting the foreign reserve assets of the IMF member countries according to their quotas. The decline in SDR holdings is the result of the payment of commissions, interest, various expenses and other liabilities arising from IMF loan payments to Greece in the context of the IMF and EU financial support to the country. These expenses were paid out of the aforementioned holdings, in debit of the euro account of the Greek State with the IMF. Most of these holdings were replaced by SDR purchases made by the Bank of Greece.

- **Greece's SDR quota in the IMF**

The Bank of Greece has lent the Greek State in order to fulfil its quota in the IMF and manages the relevant claims. The euro component of Greece's quota in the IMF (€1,003.8 million) is reported under liabilities item 5 "Liabilities to non-euro area residents denominated in euro". Greece's total quota (in SDR and euro) came to 1,101.8 million SDR on 31 December 2012.

The decline in the euro equivalent of these claims was due to end-of-year adjustments because of the appreciation of the euro vis-à-vis the SDR. Valuation was based on the SDR/euro exchange rate as at 31 December 2012, based on ECB's reference exchange rates, i.e. 1 SDR =€1.1657, compared with €1.1867 as at 30 December 2011.

2.2 Balances with banks and security investments, external loans and other external assets

This item consists of claims on non-euro area residents denominated in foreign currency, e.g. time deposits, balances on correspondent accounts, Treasury bills and non-euro banknotes held in the Bank's vaults.

Categories of claims	31.12.2012 *(in € millions)*	31.12.2011	Change
Time deposits with foreign banks	23.2	10.4	12.8
Current account balances with foreign correspondents	8.6	9.2	-0.6
Marketable debt securities (bonds, Treasury bills)	11.6	10.4	1.2
Cash holdings of foreign currency	23.5	10.1	13.4
Total	**66.9**	**40.1**	**26.8**

The largest part of these assets as at 31 December 2012 was denominated in US dollar, Japanese yen and pound sterling.

3. Claims on euro area residents denominated in foreign currency

This item consists of claims on general government that stem from long-term loans and time deposits with correspondent banks.

3.1 General government

These claims include:

– loans in SDRs granted by the Bank of Greece to the Greek State to finance its quota in the IMF, relating to the SDR component of Greece's quota;

– loans in USD and gold-linked loans to the Greek State to finance its participation in international organisations.

These claims amounted to €286.2 million on 31 December 2012, against €290.5 million on 31 December 2011. The decrease is mainly attributable to end-of-year adjustments because of fluctuations in exchange rates and the price of gold in 2012 (the euro appreciated vis-à-vis the SDR and the US dollar and the price of gold increased).

3.2 Other claims

The balance as at 31 December 2012 includes foreign-currency-denominated time deposits with euro area correspondents.

Categories of claims	**31.12.2012**	**31.12.2011** *(in € millions)*	**Change**
Time deposits	57,5	71,1	-13,6
Reverse transactions with domestic credit institutions	0	656,9	-656,9
Total	**57,5**	**728,0**	**-670,5**

The significant €670.5 million decrease is due to the fact that liquidity-providing operations in US dollars to domestic credit institutions matured in 2012 and were not renewed.

The Bank of Greece has been able to supply liquidity in US dollars since May 2010 through reverse operations and against adequate eligible collateral. The operations are conducted in line with a temporary reciprocal currency arrangement (swap lines) between the European Central Bank (ECB) and the Federal Reserve System (FED). Under this agreement, the FED makes US dollars available to the ECB through a temporary reciprocal currency arrangement (swap line) in order to provide short-term liquidity in US dollars to Eurosystem counterparties.

In turn, the ECB conducts swap operations with the National Central Banks (NCBs) of the Eurosystem, which use these funds to conduct liquidity-providing operations in US dollars to euro area credit institutions through reverse operations and swap lines.

On 13 December 2012 the ECB decided to extend this programme until 1 February 2014.

4. Claims on non-euro area residents denominated in euro

4.1 Balances with banks, security investments and loans

This comprises interest-bearing current account balances with banks abroad (outstanding balance as at 31 December 2012: €24 thousand).

5. Lending to euro area credit institutions related to monetary policy operations denominated in euro

This item consists of outstanding balances of loans by the Bank of Greece to domestic credit institutions, in the context of the single monetary policy in the euro area countries.

Categories of operations	31.12.2012	31.12.2011	Change
	(in € millions)		
MROs	17,401.5	15,177.5	2,224.0
LTROs	1,945.0	60,942.0	-58,997.0
Marginal lending facility	0	40.0	-40.0
Total	**19,346.5**	**76,159.5**	**-56,813.0**

Liquidity is provided through main refinancing operations and longer-term refinancing operations, against adequate eligible collateral (marketable debt securities and other assets).

It should be noted that, according to Article 32.4 of the Statute of the ESCB and the ECB, the NCBs that conduct monetary policy operations on behalf of the Eurosystem participate in income and provisions, in accordance with their ECB capital key.

Losses from these operations can only occur if the counterparty defaults and the proceeds from the realisation of collateral are not sufficient. When specific assets are not eligible as collateral to the Eurosystem but are accepted as eligible collateral by an NCB, the risk is borne by such NCB and is not shared among all NCBs of the Eurosystem.

The following must also be noted as regards main and longer-term refinancing operations:

5.1 Main refinancing operations

Main refinancing operations are conducted through reverse liquidity-providing operations with a maturity of one week, usually through regular weekly tenders. Since October 2008, these operations have been conducted as fixed-rate tenders. They play a significant role in achieving the objectives of the interest rate policy pursued, controlling market liquidity and signalling the monetary police stance taken from time to time.

5.2 Longer-term refinancing operations

They aim at providing counterparties with additional longer-term refinancing. In 2012 their maturity was equal to that of the reserve period (35 days), as well as 3, 6, 12 and 36 months, and they were conducted as fixed-rate tenders with full allotment.

5.5 Marginal lending facility

Through these operations, NCBs provide overnight liquidity to the counterparties at a fixed interest rate against eligible collateral.

6. Other claims on euro area credit institutions denominated in euro

In addition to current account balances with correspondent banks, this item includes as from 18 April 2012 ELA (Emergency Liquidity Assistance) operations, following an agreement between the ECB and the Eurosystem NCBs that conduct ELA operations, in the context of harmonisation of their financial statements at Eurosystem level.

These operations provide emergency liquidity to domestic credit institutions to offset factors that reduce liquidity in the banking system. They are not part of the single monetary policy of the Eurosystem but are conducted by NCBs on the basis of the applicable institutional framework of the Eurosystem with the approval of the European Central Bank.

To provide such liquidity, which amounted to €101.8 billion on 31 December 2012, the Bank of Greece received sufficient collateral, part of which is guaranteed by the Greek State, which also provided additional guarantees directly to the Bank to conduct such operations.

7. Securities of euro area residents denominated in euro

7.1 Securities held for monetary policy purposes

Categories of securities	31.12.2012	31.12.2011	Change
	(in € millions)		
Covered Bond Purchase Programme – CBPP1	1,346.9	1,415.5	-68.6
Securities Markets Programme – SMP	5,618.1	6,351.0	-732.9
Total	**6,965.0**	**7,766.5**	**-801.5**

— Securities purchased under the Covered Bond Purchase Programme – CBPP1[6]

Comprising covered bonds in euro issued by euro area banks and credit institutions, with maturities of up to 12 years, purchased by the Bank of Greece under the above programme.

It should be noted that this programme was concluded on 30 June 2010 and the total value of covered bonds held by the Eurosystem on 31 December 2012 came to €52.1 billion.

On 3 November 2011 the ECB decided to launch a second Covered Bond Purchase Programme (CBPP2), in which the Bank of Greece did not take part.

— Securities purchased under the Securities Markets Programme (SMP)[7]

6 ECB decision of 2 July 2009 on the implementation of the covered bond purchase programme CBPP1 (ECB/2009/16), OJ L175, 4 July 2009, p. 18.
7 ECB decision of 14 May 2010 establishing a Securities Markets Programme (SMP) (ECB/2010/5), OJ L124, 20 May 2010, p. 8.

Eurosystem's Securities Markets Programme (SMP) came into effect in May 2010. Under this programme, the ECB and the NCBs may purchase euro area government and private bonds to handle the malfunction of certain sectors of the euro area securities market and restore the smooth operation of the monetary policy transmission mechanism in euro area countries.

Under this programme, Eurosystem NCBs and the ECB purchased bonds, amounting on 31 December 2012 to €208.3 billion. The purchases involved euro area government bonds.

According to Article 32.4 of the Statute of the ECB, any risks arising from holdings in the context of the SMP programme, if realised, will be allocated to the NCBs of the Eurosystem, in accordance with their ECB capital key.

The Governing Council of the ECB regularly assesses the financial risks associated with securities purchased under the Securities Markets Programme (SMP) and the two covered bond purchase programmes (CBPP1 and CBPP2).

Securities from both these programmes are held to maturity and valued at amortised cost subject to impairment tests.

The test carried out at end-2012 at Eurosystem level showed that there is no evidence of impairment and that all future flows from these bonds are expected to be realised regularly.

7.2 Other securities of euro area residents denominated in euro

This item includes euro-denominated bonds and Treasury bills issued by euro area governments, including the Greek State. They make up the Bank's investment book.

Categories of securities	31.12.2012	31.12.2011	Change
	(in € millions)		
A′ Marketable debt securities issued by euro area governments (other than held-to-maturity)			
Euro area securities, other than Greek government securities			
Bonds	640,9	1.400,7	-759,8
Treasury bills	3.746,9	1.437,0	2.309,9
Commercial paper	0	97,2	-97,2
Greek government securities			
Treasury bills	0	119,7	-119,7
Total A′	**4.387,8**	**3.054,6**	**1.333,2**
B′ Marketable debt instruments held to maturity			
Greek government bonds	3.807,1	4.542,7	-735,6
Bonds issued by other euro area governments	5.622,6	5.785,5	-162,9
Total B′	**9.429,7**	**10.328,2**	**-898,5**
Grand total	**13.817,5**	**13.382,8**	**434,7**

As shown in the table, a predominant part of the Bank's portfolios comprises securities held to maturity (total B).

These are valued at amortised cost and are subject to impairment tests. The test carried out at end-2012 showed that there is no evidence of impairment.

The remaining debt securities (total A) were valued at the average market prices prevailing on 31 December 2012. Gains were taken to revaluation accounts, and losses (€59 thousand) were covered by the provision that was formed for this purpose.

In February 2012, Greek government bonds held by the Eurosystem NCBs under the Securities Markets Programme (SMP) in their investment portfolios were exchanged with new ones, having the same face value, coupons, interest payment dates and maturities. These new bonds were excluded from the PSI.

8. General government long-term debt denominated in euro

This item consists of the long-term loans in euro extended by the Bank of Greece to the Greek State. Specifically, it consists of:

– interest-bearing loans extended to the Greek State up to 31 December 1993;

– interest-bearing loans extended by the Bank of Greece to the Greek State on 31 December 1993, in settlement of the balance of the account "Exchange rate valuation differences – Law 1083/80";

– interest-free loans in euro extended by the Bank to the Greek State for the purpose of financing the euro component of Greece's quota in the IMF. The amount of this quota, which is deposited by the IMF with the Bank, is disclosed under liability item 5 "Liabilities to non-euro area residents denominated in euro".

Outstanding balance as at 31.12.2012	€6,170.4 million
Outstanding balance as at 31.12.2011	€6,659.9 million
Decrease	€489.5 million

The decrease stems from the gradual repayment of interest-bearing loans.

9. Intra-Eurosystem claims

9.1 Participating interest in the ECB

The table below shows the items related to the Bank's participation in the ECB's capital, reserves and provisions.

As at 31.12.2012	(%)	(in € millions)
ECB's subscribed capital (applying to all 27 EU Member States)		**10,760.7**
Bank of Greece's key for subscription to the ECB's capital (capital key)	1.9649	

ECB capital paid up by the 17 Eurosystem NCBs		**7,529.3**
Eurosystem key	2.80818	
Bank of Greece's share in the subscribed capital of the ECB		211.4
Bank of Greece's contribution to the ECB's reserves and provisions		322.2
Bank of Greece's total share in the ECB's capital, reserves and provisions as at 31.12.12		**533.6**

According to Article 28 of the Statute of the European System of Central Banks (ESCB) and the ECB, the national central banks of the ESCB are the sole subscribers to and holders of the capital of the ECB.

Subscription to the ECB capital is based on a key assigned to each NCB and is equal to the sum of 50% of the share of its respective Member State in the gross domestic product of the European Union and 50% of the share of its respective Member State in the population of the European Union (Article 29.1 of the ESCB Statute).

According to Article 28.1 of the Statute of the ESCB, Council Regulation 1009/2000 of 8 May 2000, and following a relevant decision of the Governing Council on 13 December 2010, the ECB increased its subscribed capital by €5 billion, from €5,760.7 million to €10,760.7 million, effective from 29 December 2010. The NCBs of the euro area countries pay the amounts corresponding to the increase in their share in the ECB's capital (a total of €3.5 billion) in three equal annual instalments. The first instalment was paid on 29 December 2010, the second one on 28 December 2011, and the third and last one on 27 December 2012.

The increase in the ECB's capital was deemed appropriate in view of increased volatility in foreign exchange rates, interest rates and gold prices, as well as credit risk. As the maximum size of the ECB's provisions and reserves is equal to the level of its paid-up capital, this decision allows the Governing Council to augment the provision by an amount equivalent to the capital increase, starting with the allocation of part of year 2010 profits. From a longer-term perspective, the capital increase —the first one after 12 years— is also motivated by the need to provide an adequate capital base in a financial system that has grown considerably.

In this context, on 27 December 2012, the Bank of Greece paid an amount of €32.7 million, which corresponds to the third and last instalment of its share in the ECB's capital increase.

After the payment, the participation of the Bank of Greece in the capital, together with its share in the reserves and equivalent provisions of the ECB, amounted to €533.6 million, on 31 December 2012.

The share of the Bank of Greece in the ECB's capital is €211.4 million and has been paid up in full. It corresponds to 2.80818% (capital key weighting) of the ECB capital paid by the 17 NCBs of the Eurosystem, which, after the adjustments of 2012, amounts to €7,529.3 million.

The remaining amount (€322.2 million) relates to the Bank's contribution to the ECB's reserves and provisions. This amount has been paid in full to the ECB.

Pursuant to Article 29.3 of the Statute of the ESCB, the weighting of NCBs' keys for subscription to the ECB capital is adjusted every five years after the establishment of the ESCB (latest adjustment: 2009). Also, according to Article 49.3 of the ESCB Statute, the ECB subscribed capital is automatically adjusted whenever a new country joins the EU and its NCB joins the ESCB.

9.2 Claims equivalent to the transfer of foreign reserves to the ECB

As at 31.12.2012	(%)	(in € millions)
Total foreign reserve assets transferred to the ECB by the 17 NCBs of the Eurosystem		40,307.6
Weighting of the Bank of Greece's key for subscription to the ECB capital paid by the 17 NCBs of the Eurosystem	2.80818	
Claims of the Bank of Greece on 31.12.2012 arising from the transfer of foreign reserve assets to the ECB		**1,131.9**

These claims stem from the transfer of foreign reserve assets to the ECB, in accordance with the provision of the Treaty on European Union (Article 30 of the Statute of the ESCB).

Out of the said foreign reserve assets, determined on the basis of the Bank's share in the paid-up capital of the ECB, 85% were transferred in the form of assets denominated in USD and JPY and 15% in the form of gold.

These claims are expressed in euro, taking into account the exchange rates prevailing at the time of transfer, and are remunerated at 85% of the latest available marginal rate for the Eurosystem's MROs (the 15% difference corresponds to a zero return on the gold component).

9.3 Net claims related to the allocation of euro banknotes in circulation within the Eurosystem
On 31 December 2012 the net balance of the allocation of euro banknotes in circulation within the Eurosystem represented a liability of the Bank of Greece and is therefore disclosed under liability item 9.2 "Net liabilities related to the allocation of euro banknotes in circulation within the Eurosystem".

9.4 Net claims arising from balances of TARGET2 accounts
On 31 December 2012 the net balance related to the ESCB balance (TARGET2) was negative for the Bank of Greece and therefore disclosed under liability item 9.3 "Net liabilities arising from balances of TARGET2 accounts".

9.5 Other claims within the Eurosystem (net)
The other claims within the Eurosystem (€148.3 million) stemmed as follows:

– From the Bank of Greece's balance from the redistribution of the Eurosystem's monetary income for 2012 (€129.8). The actual monetary income of the Bank of Greece was lower than what corresponds to its allocation key, namely:

Monetary income collected by the Bank of Greece	€527.5 million
Corresponding monetary income in accordance with its ECB capital key	€657.3 million
Positive balance	€129.8 million

– From €2.4 million received by the Bank of Greece due to corrections made to the redistribution of monetary income for 2008, 2009, 2010 and 2011.

– From €16.1 million received by the Bank of Greece as revenue from the interim distribution of ECB income for 2012.

For 2012, the Governing Council of the ECB decided to retain €1,166 million from the income on euro banknotes in circulation and from the SMP portfolio to increase the provision for portfolio risk (see "Interim distribution of the income of ECB" in the Accounting Policies section).

10. Items in course of settlement

The outstanding balance of €2.3 million concerning items in course of settlement on 31 December 2012 relates to unsettled cheques.

11. Other assets

11.1 Coins

This item represents the value of coins issued by the 17 euro area countries and held by the Bank of Greece.

Coins put in circulation by the Bank of Greece are recorded in a special account of the Greek State, included in liability item 4.1 "General government".

Value of coins as at 31.12.2012	€69.4 million
Value of coins as at 31.12.2011	€72.1 million
Decrease	€2.7 million

11.2 Tangible and intangible fixed assets

Fixed assets comprise real estate (land, buildings and fixtures, buildings under construction), furniture, machinery, hardware and software. Fixed assets other than real estate, which is valued at market prices determined by independent assessors in 2008, are valued at acquisition cost. As from 2011, the fixed assets (land-buildings) of BoG's staff former main and supplementary pension funds are also included.

The value of fixed assets as at 31 December 2012, less accumulated depreciation, is reported.

Depreciation is calculated on a straight-line basis over the expected lifetime of the asset.

Undepreciated value of fixed assets				
Asset category:	**31.12.2012**	**31.12.2011**	**Change**	**Depreciation rate (%)**
	(in € millions)			
Land	542.3	542.3	0	0
Buildings and fixtures	235.2	240.2	-5.0	2.5
Buildings under construction and advance payments of asset acquisitions	17.4	10.4	7.0	0
Other equipment	29.2	33.0	-3.8	8-24
Capitalised expenses (software costs, etc.)	0.7	1.1	-0.4	20-24
Total	**824.8**	**827.0**	**-2.2**	

11.3 Other financial assets

This item includes the Bank's holdings in DIAS Interbanking Systems SA, the Hellenic Deposit and Investment Guarantee Fund (TEKE), the Hellenic Exchanges SA Holding, Clearing, Settlement and Registry SWIFT, as well as the Bank for International Settlements (BIS), denominated in SDRs.

The value of the above assets at amortised cost was €29.1 million on 31 December 2012.

11.4 Off-balance-sheet instruments revaluation differences

Outstanding balance as at 31.12.2012	€137 thousand

This item shows the result of the end-of-year revaluation of unsettled operations in foreign currency recorded in off-balance-sheet accounts.

It comprises unrealised gains amounting to €137 thousand, stemming from valuation of Greek State securities (warrants), and recorded on revaluation accounts. They are disclosed in off-balance-sheet accounts at par value.

11.5 Accruals and prepaid expenses

This item includes accrued interest on securities, written-off premia on securities and also interest and other income accrued but not collected up to 31 December 2012. The latter are to be collected in the current financial year and relate mainly to interest income on loans granted by the Bank in the context of the single monetary policy of the Eurosystem, securities holdings and deposits with banks, as well as to interest income on the claim corresponding to the transfer of foreign reserve assets to the ECB.

Outstanding balance as at 31.12.2012	€675.8 million
Outstanding balance as at 31.12.2011	€1,203.2 million
Decrease	€527.4 million

11.6 Sundry

This item consists of reserves of the Banknote Printing Works (IETA), balances on the Bank's suspense debit accounts, the outstanding balances of loans to the Bank's staff, and as from 2011 the assets from the former main and supplementary pension funds of its staff.

Outstanding balance as at 31.12.2012	€891.0 million
Outstanding balance as at 31.12.2011	€915.5 million
Decrease	€24.5 million

LIABILITIES

1. Banknotes in circulation

Outstanding balance as at 31.12.2012	€23,576.8 million
Outstanding balance as at 31.12.2011	€22,957.7 million
Increase	€619.1 million

This item consists of the Bank's share of total euro banknotes in circulation, calculated on the basis of the banknote allocation key (2.5835%). The change resulted from the rise in total euro banknotes in circulation, both inside and outside the euro area, to €912.6 billion as at 31 December 2012, compared with €888.6 billion as at 31 December 2011 (see "Banknotes in circulation" under "Accounting policies").

The average value of euro banknotes in circulation that corresponds to the Bank of Greece, on the basis of the banknote allocation key, rose to €22.8 billion over 2012, from €22.2 billion in 2011.

	31.12.2012	31.12.2011	Change
	(in € millions)		
Value of euro banknotes put into circulation by the Bank	38,036.4	41,394.8	-3,358.4
Less:			
Liability resulting from the ECB's share in the total euro banknote issue (8% of the total value of euro banknotes in circulation)	-2,050.2*	-1,996.3	-53.9
Less:			
Liability resulting from the allocation of euro banknotes within the Eurosystem	-12,409.4*	-16,440.8	4,031.4
Value of euro banknotes in circulation based on the banknote allocation key of the Bank of Greece	**23,576.8**	**22,957.7**	**619.1**

* Recorded under liability item 9.2 "Net liabilities related to the allocation of euro banknotes within the Eurosystem".

As shown in the table, the value of euro banknotes put into circulation by the Bank of Greece decreased by €3,358.4 million due to the continuing trend of return of banknotes withdrawn from the banking system mainly in 2011 and the first half of 2012.

2. Liabilities to euro area credit institutions related to monetary policy operations denominated in euro

2.1 Current accounts (covering the minimum reserve system)

These accounts include credit institutions' reserve holdings with the Bank of Greece, which can also be used for maintaining minimum reserves with the Eurosystem and as settlement accounts for transactions between them.

Outstanding balance as at 31.12.2012	€1.369.4 million
Outstanding balance as at 31.12.2011	€2.506.4 million
Decrease	€1.137.0 million

The average balance of these accounts in 2012 was €1.8 billion, compared with €4.4 billion in 2011.

2.2 Deposit facility

This relates to the deposit facility offered by the Eurosystem to credit institutions, in the context of the implementation of the single monetary policy in the euro area.

In more detail, it consists of overnight deposits placed by credit institutions with the Bank of Greece at a pre-specified interest rate.

Outstanding balance as at 31.12.2012	€410.0 million
Outstanding balance as at 31.12.2011	€1.179.5 million
Decrease	€769.5 million

2.5 Deposits related to margin calls

Outstanding balance as at 31.12.2012	€389.3 million
Outstanding balance as at 31.12.2011	€1.017.2 million
Decrease	€627.9 million

These are deposits aiming to cover value decreases in underlying assets posted as collateral against credit in the context of the single monetary policy of the Eurosystem (asset item A5).

4. Liabilities to other euro area residents denominated in euro

4.1 General government

This item comprises deposits of the Greek State (central government), public entities and the Deposits and Loans Fund.

Outstanding balance as at 31.12.2012	€5.721.3 million
Outstanding balance as at 31.12.2011	€3.838.3 million
Increase	€1.883.0 million

The average balance of these deposits increased in the course of 2012 to €4.4 billion, from €3.1 billion in 2011.

4.2 Other liabilities

Outstanding balance as at 31.12.2012	€1.470.1 million
Outstanding balance as at 31.12.2011	€1.714.9 million
Decrease	€244.8 million

This item records the balances of deposits held by various entities.

These liabilities include a €827.8 million deposit by the Hellenic Financial Stability Fund (HFSF), funds from the European Investment Fund and the European Investment Bank totalling €486.5

million, outstanding balances of mostly interest-free deposit accounts of various entities and the outstanding balance of the settlement accounts of the Athens Exchange.

The HFSF deposit is financed by the EU/IMF Support Mechanism for Greece. The objective of the HFSF is to maintain the stability of the Greek banking system by supporting, where necessary, the capital adequacy of credit institutions.

The European Investment Fund and the European Investment Bank deposits are interest-bearing and are intended to support Greece in the fields of rural economy and enterprises.

5. Liabilities to non-euro area residents denominated in euro

Outstanding balance as at 31.12.2012	€1,008.1 million
Outstanding balance as at 31.12.2011	€1,041.9 million
Decrease	€33.8 million

This item includes deposits of various entities.

The bulk of these liabilities (€1,003.8 million) consists of a deposit account in euro held by the IMF with the Bank and corresponding to the euro component of Greece's quota in the IMF. Through this account, the Bank effects financial transactions with third countries, according to IMF instructions.

The decrease reflects adjustments for exchange rate variations due to the appreciation of the euro against the SDR.

6. Liabilities to euro area residents denominated in foreign currency

These liabilities mainly stem from interest-bearing deposits of public entities denominated in foreign currency.

Outstanding balance as at 31.12.2012	€32.0 million
Outstanding balance as at 31.12.2011	€16.2 million
Increase	€15.8 million

7. Liabilities to non-euro area residents denominated in foreign currency

7.1 Deposits and other liabilities

This item contains €2,000 of interest and non-interest bearing deposits of various entities.

8. Counterpart of special drawing rights allocated by the IMF

This item comprises the Bank's liabilities to the IMF stemming from the cumulative allocation of special drawing rights (SDR 782.3 million) to Greece. This amount was allocated by the IMF to Greece gradually. An amount of SDR 103.5 million was allocated between 1970 and 1981 and the remaining SDR 678.8 million in 2009. The latter allocation was effected in the context of IMF's general SDR allocation, equivalent to USD 250 billion, to all its member countries, which was approved by the IMF Board of Governors on 7 August 2009 and entered into force on 28 August 2009.

This allocation was aimed to provide liquidity to the world economy by boosting the foreign reserve assets of the IMF member countries according to their quotas.

Outstanding balance as at 31.12.2012	€912.0 million
Outstanding balance as at 31.12.2011	€928.4 million
Decrease	€16.4 million

The decrease reflects adjustments for exchange rate variations due to the appreciation of the euro against the SDR in 2012.

9. Intra-Eurosystem liabilities

9.2 Net liabilities related to the allocation of euro banknotes within the Eurosystem

This item shows liabilities that stem from the allocation of euro banknotes within the Eurosystem (see "Banknotes in circulation" under "Accounting policies").

Outstanding balance as at 31.12.2012	€14,459.6 million
Outstanding balance as at 31.12.2011	€18,437.1 million
Decrease	€3,977.5 million

The balance as at 31.12.2012 is made up of the following:

– €2,050.2 million; these refer to the value of euro banknotes issued by the Bank of Greece on behalf of the ECB (8% of the total value of banknotes in circulation are issued on behalf of the ECB). The Bank's share in this amount is calculated according to its share in the subscribed capital of the ECB. This amount was €53.9 million higher on 31 December 2012 than on 31 December 2011 (€1,996.3 million), due to the general increase in euro banknotes in circulation.

– €12,409.4 million; these represent an adjustment (reduction) in the amount of euro banknotes that the Bank has actually put into circulation, after deducting 8% in favour of the ECB. The purpose of this adjustment is to equalise the Bank's share in total euro banknotes in circulation (liability item 1) with its banknote allocation key. In 2012 this amount decreased by €4,031.4 million due to the decline in the value of euro banknotes that the Bank has actually put into circulation over 2012 (see table on p. A27).

9.3 Net liabilities arising from balances of TARGET2 accounts

These are net liabilities to the ESCB stemming from the Bank's cross-border transactions with other national central banks of the Eurosystem, the ECB and non-Eurosystem EU central banks that participate in the TARGET2 system.

This balance is remunerated on a daily basis at the applicable Eurosystem MRO rate.

TARGET2 account, year-end balances
(in € millions)

31.12.2006	31.12.2007	31.12.2008	31.12.2009	31.12.2010	31.12.2011	31.12.2012
8,183.5	10,796.6	35,348.3	49,036.1	87,088.1	104,750.0	98,355.2

TARGET2 account, average annual balances *(in € millions)*						
2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
11,762	9,298	14,650	37,647	77,022	93,090	105,084

These liabilities were originally created on 1 January 2001, the date on which the Bank of Greece joined the Eurosystem.

From the onset of the financial crisis in 2008, and especially during 2010-2012, there was a significant gradual increase in the balance of this account, as a result of the weak financial conditions that prevailed and their impact on cross-border payments.

This did not affect the Bank's financial results, as the increased amount of interest payments to the Eurosystem was offset by an equal amount of interest income from the Bank's provision of liquidity to credit institutions.

9.4 Other liabilities within the Eurosystem (net)

On 31 December 2012 the net balance of other transactions of the Bank of Greece with the Eurosystem represented a claim of the Bank of Greece and is therefore disclosed under asset item 9.5 "Other claims within the Eurosystem (net)".

10. Items in course of settlement

This item mainly consists of the float of cheques and payment orders whose settlement is pending, as well as balances, in course of settlement, of various intermediate accounts, totalling €3.2 million.

11. Other liabilities

11.1 Off-balance-sheet instruments revaluation differences

Balance as at 31.12.2012	€96,926

This item represents the outcome of the end-year revaluation of outstanding currency instruments recorded in off-balance-sheet (memorandum) accounts.

It relates to differences of €96,926 stemming from the valuation of forward operations and included in the revaluation accounts (liabilities item 13).

11.2 Accruals and income collected in advance

This item represents interest expenses accrued up to 31 December 2012 and other expenses. Such expenses will be paid within the new financial year and mainly involve various categories of interest payable (on the outstanding balance of the TARGET2 account, on credit institutions' reserve holdings and on other liabilities).

Balance as at 31.12.2012	€117.5 million
Balance as at 31.12.2011	€181.1 million
Decrease	€63.6 million

11.3 Sundry

Sundry liabilities	31.12.2012	31.12.2011	Change
	(in € millions)		
Dividends to be distributed	10.7	13.3	-2.6
Tax on dividends	2.7	3.3	-0.6
Profit to be transferred to the Greek State	305.3	80.0	225.3
Value of drachma banknotes in circulation	0	237.9	-237.9
Liability to the Greek State (Greece's SDR quota in the IMF)	280.7	285.7	-5.0
Other liabilities	75.3	358.5	-283.2
Total	**674.7**	**978.7**	**-304.0**

This item comprises the distributable profit for the year, tax on dividends, profit to be transferred to the Greek State, the Bank's liability towards the Greek State regarding the SDR component of Greece's SDR quota in the IMF (the corresponding claim of the Bank on the IMF is recorded under asset item 2.1 "Receivables from the IMF"), other taxes to be paid, the balances of credit suspense accounts and other accounts on behalf of third parties (suppliers, etc.), as well as other liabilities.

12. Provisions

Category of provisions	31.12.2012	31.12.2011	Change
	(in € millions)		
a. Special provisions against operational risk, unexpected losses and doubtful claims	139.5	128.8	10.7
b. Provision covering the Bank's obligation to provide social insurance to its staff	2,095.5	1,938.7	156.8
c. Provision against financial risks (including risks from the Bank of Greece's investment activity and risks in the context of Eurosystem single monetary policy)	3,208.1	1,783.6	1,424.5
d. Provision against general risks under Article 71 of the Statute	770.4	100.0	670.4
Total	**6,213.5**	**3,951.1**	**2,262.4**

Total provisions amounted to €6,213.5 million.

High provisioning aims to strengthen the financial position of the Bank of Greece and enable it to best fulfil its tasks and is in line with the principle of prudence followed by the ECB and the other NCBs of the Eurosystem.

The Bank reviews these provisions annually and adjusts them accordingly, following a risk assessment. Such risk assessment takes into account a series of factors, including:

– the amount of risky assets;

– risk exposure;

– risk assessment and estimation studies;

– developments in money markets and the general economic conditions in the euro area and Greece;

– current reserve assets and provisions; and

– the outstanding balances of revaluation accounts.

In greater detail:

a. Special provisions against operational risk, unexpected losses and doubtful claims
These are special provisions directly associated with the Bank's operation, that include:

– cash deficits;

– compensation to employees paid upon retirement; and

– doubtful claims.

These provisions were established in response to real needs and liabilities and their level was determined using estimates of the amounts likely to be required for covering risks and losses and of the amounts of doubtful claims that will not be collected.

b. Provision covering the Bank's obligation to provide social insurance to its staff
As of 1 January 2011, the Bank has undertaken and provides social insurance for its staff in the main and supplementary pension sectors, in accordance with Article 64 of Law 3863/2010. This provision has been established to cover this liability and to meet the staff's social insurance needs in general.

c. Provision against foreign exchange, interest rate, credit and gold price risks
In keeping with its standard practice, which is in line with the practice of the ECB and the other central banks of the euro area, and taking account of the results of risk assessment by the Risk Management Unit for these risks and the outcome of the Eurosystem harmonised impairment tests for SMP and CBPP1 securities, the Bank substantially increased this provision in 2012 as well.

Specifically, this provision is intended to cover:

- Risks at Eurosystem level, potentially arising from the Eurosystem's key task to formulate and implement the single monetary policy of the euro area, including in particular:

– risks associated with the provision of liquidity to the credit system; and

– risks arising from portfolios acquired under the Securities Markets Programme (SMP) and the first Covered Bond Purchase Programme (CBPP1).

- Credit and market risks (interest rate risks, foreign exchange risks) associated with securities and foreign currency portfolios managed by the Bank, as well as securities purchased under the Covered Bond Purchase Programme (CBPP1).

This provision also includes the remaining amount of €8.1 million from the special provision against counterparty risks arising from Eurosystem monetary policy operations, which was first established in financial year 2008, following a decision by the Governing Council of the ECB and in accordance with Article 32.4 of the ESCB/ECB Statute.

The initial amount of this provision was €149.5 million for the Bank, against €5,736 million at Eurosystem level.

In financial years 2009, 2010, 2011 and 2012, after an upward revaluation of the collateral that the Eurosystem accepted in order to conduct monetary policy operations and a downward reassessment of risk exposures, an amount of €5,426 million was released from the provision. The respective amounts released for the Bank were €45 million in 2009, €47 million in 2010, €32.8 million in 2011 and €16.6 in 2012 and were transferred to income from unused provisions.

The remaining balance in this provision on 31 December 2012 came to €8.1 million for the Bank and €310 million at Eurosystem level.

It should be noted that the NCBs, including the Bank of Greece, that conduct monetary policy operations on behalf of the Eurosystem participate in monetary income and, hence, in risk provisions according to their shares in the ECB's capital.

The current collateral and risk control framework is adequate.

However, the large-scale Eurosystem intervention in the money markets, mainly in the 2008-2012 period, with a view to maintaining financial stability, resulted in higher risk exposure, as well as, of course, in the generation of satisfactory income.

Against this background and in order to cover possible risks, the necessary provisions are established on the basis of the principle of prudence.

The extent to which these provisions will be used depends on future developments in money markets.

d. Provision against general risks under Article 71 of the Statute

This provision is intended to cover:

- any other risks and liabilities potentially arising from the Bank's business as the country's central bank and in the context of international agreements; and

- any additional liabilities of the Bank arising from the provision of social insurance to its staff.

13. Revaluation accounts

In accordance with the accounting principles set out by the European Central Bank for the NCBs that are part of the ESCB, especially the principle of prudence, unrealised valuation gains on gold, financial instruments in foreign currency and securities are not recognised as income in the Profit and Loss Account, but are transferred directly to revaluation accounts (functioning as reserves for these particular assets only). By contrast, unrealised valuation losses at year-end are recognised as expenditure and are taken to the Profit and Loss Account (see "Income recognition" under "Accounting policies").

Valuation at end-2012 produced unrealised gains of €4,249.9 million (largely stemming from gold), which were transferred to the corresponding revaluation accounts (see breakdown in the table below).

Unrealised valuation gains	**31.12.2012**	**31.12.2011**	**Change**
	(in € millions)		
– on foreign currency instruments	0	0.1	-0.1
– on securities	30.3	31.2	-0.9
– on gold	4,219.6	4,018.4	201.2
Total	**4,249.9**	**4,049.7**	**200.2**

Unrealised losses of €74 thousand, as a result of the valuation of foreign exchange and securities made on 31 December 2012, were taken to the Profit and Loss Account and were covered by the provision established for this purpose.

14. Capital and reserves

The Bank's capital amounts to €815.5 million.

The capital is equal to the ordinary reserve, each amounting to €111.2 million.

In more detail, capital and reserves are:

14.1 Capital

The Bank's capital, following the increases effected by virtue of Legislative Decrees 413/1970 and 889/1971, Laws 542/1977 and 1249/1982, Ministerial Decision E.2665/1988, Law 2065/1992, Ministerial Decision 1281/30.10.1996 and Cabinet Acts No. 8/4.2.2000, 32/23.5.2002, 17/4.7.2005 and 8/10.6.2008, **has reached €111,243,362, divided into 19,864,886 shares of a par value of €5.60 each.**

14.2 Ordinary reserve

The Bank's ordinary reserve amounts to €111,243,362 and is equal to the capital.

14.3 Extraordinary reserve

The extraordinary reserve amounts to €84.5 million.

14.4 Special reserve from the revaluation of land and buildings

This special reserve was established during financial years 2004 and 2007 with the capital gains from the restatement of land and buildings of the Bank at fair (market) value (as determined by an independent assessor).

In 2005 and 2008, part of these gains were capitalised through the allotment of bonus shares to shareholders, while a small part, stemming from land and buildings of the Bank that were sold, was transferred to profit in 2008, 2009 and 2010.

14.5 Other special reserves

These amount to €1.3 million and represent the value of artworks and fixed assets (mostly buildings) transferred gratis to the Bank.

OFF-BALANCE SHEET (MEMORANDUM) ITEMS

	31.12.2012	31.12.2011	Change
	(in € millions)		
1. Greek government securities (management of the "Common fund" – surpluses of public entities and social insurance organisations – under Law 2469/97)	19,791.3	23,415.4	-3,624.1
2. Greek government securities and other debt securities (management and safe custody on behalf of public entities, social security organisations, private-sector agents and EFSF securities held by the Hellenic Financial Stability Fund)	15,702.9	6,746.0	8,956.9
3. Assets eligible as collateral for participation in the Eurosystem monetary policy operations and in the provision of intraday liquidity	25,568.9	142,876.5	-117,307.6
4. Assets accepted by the Bank of Greece as eligible collateral for provision of emergency liquidity assistance to credit institutions	191,524.9	84,822.7	106,702.2
5. Other off-balance-sheet accounts[1]	22,694.8	21,723.2	971.6
Total	**275,282.8**	**279,583.8**	**-4,301.0**

1. These include:
– a non-interest bearing, non-negotiable promissory note of €22.1 billion (SDR 18.9 billion) issued by the Greek government in respect of IMF loans received up until 31.12.2012 in the context of EU/IMF Support Mechanism for Greece. The note is kept at the Bank of Greece, which acts as fiscal agent for Greece vis-à-vis the IMF;
– forward and spot operations related to the Bank's portfolios; and
– documentary credits to be executed, third-party guarantees for good performance, coins in storage at the Bank, etc.

GENERAL NOTES ON THE PROFIT AND LOSS ACCOUNT FOR 2012

The Bank's profit in 2012 amounted to €318.6 million, from €96.6 million in 2011.

ANALYSIS OF THE PROFIT AND LOSS ACCOUNT FOR 2012

INCOME

The Bank's net income from the conduct of the single monetary policy of the Eurosystem and its net income from interest, commission fees and other revenue from domestic and foreign activities totalled €2,995.5 million, compared with €1,594.8 million in 2011, up by 87.8%.

In greater detail:

- ***Net income from interest, financial operations and the reallocation of the Eurosystem's monetary income*** reached €2,888.9 million, against €1,458.8 million in the previous financial year (+98%).

- ***Net income from fees and commissions*** fell by 27% to €71.8 million, from €98.3 million in 2011.

- ***Income from equity shares and participating interests*** fell by €3.7 million to €20.1 million, from €23.8 million in 2011.

- ***Finally, other income*** amounted to €14.6 million, from €13.9 million in the previous financial year, up by 5%.

EXPENSES

Total expenses rose by €1,178.6 million to €2,676.8 million in 2012, from €1,498.2 million in 2011, solely because of the establishment of high provisions, while general operating expenses excluding provisions declined.

In greater detail:

- ***The Bank's general operating expenses excluding provisions*** (staff costs, pensions, depreciation and other expenses) dropped by €12.6 million (or -3.6%) to €334.1 million, from €346.7 million in 2011, despite the substantial burden represented by €10.3 million expenses required for the audit of the financial system.

- ***Provisions*** grew considerably in 2012 as well, by €2,342.7 million to €6,213.5 million (see notes on liability item 12).

NOTES ON NET OPERATING INCOME ACCOUNTS

The Bank's net operating income in 2012 from the conduct of the single monetary policy of the Eurosystem and its net operating income from interest, commission fees and other revenue from domestic and foreign activities totalled €2,995.5 million, compared with €1,594.8 million in 2011, up by 87.8%.

In greater detail:

1. Net interest income

Net interest income (interest income less interest expense) increased by 82% to €2,673.8 million, from €1,468.7 million in the previous financial year.

The individual categories of interest are as follows:

1.1 Interest income

Interest income increased by €0.9 billion to stand at €3.8 billion, compared with €2.9 billion in 2011.

Interest income	2012	2011	Change
	(in € millions)		
a. Interest on loans to credit institutions related to monetary policy operations	418.2	1,125.0	-706.8
b. Interest on securities held for monetary policy purposes	408.2	329.2	79.0
c. Interest on special funding to credit institutions against collateral of debt securities, guaranteed by the Greek government	2,272.1	574.0	1,698.1
d. Interest on investment portfolios (excluding Greek government debt securities)	289.0	431.2	-142.2
e. Interest on the investment portfolio of Greek government debt securities	320.5	336.6	-16.1
f. Remuneration of long-term euro-denominated claims arising from the transfer of foreign reserve assets to the ECB	8.6	12.2	-3.6
g. Interest on long-term claims against the Greek State	105.4	115.4	-10
h. Interest on the IMF reserve tranche position and SDR holdings	0.9	3.6	-2.7
i. Interest on loans to the personnel of the Bank of Greece	4.1	3.5	0.6
j. Other interest income	0.2	0.2	0
Total	**3,827.2**	**2,930.9**	**896.3**

In particular:

a) Interest on lending to credit institutions related to monetary policy operations

This refers to the funding of domestic credit institutions through the liquidity-providing open market operations conducted by the Eurosystem in the context of the single monetary policy of the euro area.

In 2012, this income fell to €418.2 million, from €1.125 million in 2011, mainly due to decreased lending to credit institutions (the average amount of loans during 2012 stood at €43.6 billion, against €89 billion in 2011) and the drop in the MRO rate from 1.25% in 2011 to 0.88% on average in 2012.

Interest on lending to credit institutions	2012	2011	Change
	(in € millions)		
– main refinancing operations (MROs)	224.6	203.4	21.2
– longer-term refinancing operations (LTROs)	184.6	920.2	-735.6
– fine-tuning reverse operations	0	0.1	-0.1
– marginal lending facility	9.0	1.3	7.7
Total	**418.2**	**1,125.0**	**-706.8**

b) Interest on securities held for monetary policy purposes

This amounted to €408.2 million (2011: €329.2 million) and refers to interest from securities purchased by the Bank under the Eurosystem's first covered bond purchase programme (CBPP1) and Securities Markets Programme (SMP). These programmes were launched in the context of Eurosystem interventions conducted in euro area debt securities markets with a view to ensuring liquidity, addressing the malfunctioning of certain market segments and restoring the smooth functioning of the monetary policy transmission mechanism. The value of the Bank's holdings of CBPP1 and SMP securities as at 31 December 2012 was €7.0 billion, against €7.8 billion as at 31 December 2011, valued at amortised cost.

c) Interest on special funding to credit institutions against collateral of debt securities, guaranteed by the Greek government

This amounted to €2,272.1 million, against €574 million in 2011, and represents interest on emergency liquidity made available to credit institutions mostly through emergency liquidity assistance (ELA) operations and reverse repurchase transactions (reverse repos) (see notes on p. A19 "Other claims on euro area credit institutions denominated in euro").

d) Interest on investment portfolios (excluding Greek government debt securities)

This amount mostly refers to interest on euro-denominated debt securities issued by governments in the euro area.

Interest by type of asset	2012	2011	Change
	(in € millions)		
– on securities	288.9	430.7	-141.8
– on time deposits and current accounts	0.1	0.5	- 0.4
Total	**289.0**	**431.2**	**-142.2**

The €142.2 million decrease is mainly due to a decline in bond holdings, which were replaced with Treasury bills, and, to a lesser extent, to the historical low levels of yields on bonds issued by euro area core countries.

e) Interest on the investment portfolio of Greek government debt securities

Interest on the Bank's holdings of Greek government securities decreased by €16.1 million relative to the previous financial year (2012: €320.5 million, 2011: €336.6 million), mainly due to a decline in the portfolio amount.

f) Remuneration of long-term euro-denominated claims arising from the transfer of foreign reserve assets to the ECB

This refers to interest on the Bank's euro-denominated claims against the ECB with respect to the foreign reserve assets transferred to the latter, in accordance with Article 30 of the Statute of the ESCB. This claim is remunerated at 85% of the latest marginal MRO rate. This item fell by €3.6 million to €8.6 million in 2012 (2011: €12.2 million), exclusively on account of the decrease in the MRO rate (the average level of this rate was 0.88% in 2012, compared to 1.25% in 2011).

g) Interest on long-term claims against the Greek State

This represents interest on loans granted by the Bank of Greece to the Greek State up to 31 December 1993.

This interest income came to €105.4 million in total in 2012, down by €10 million compared with 2011 (€115.4 million), owing to a decrease in the 12-month euro LIBOR and LIBID rates applicable to all loans granted to the Greek State and resulting from the conversion of the debit balances of the account "Foreign exchange valuation differences under Law 1083/80" and to the gradual repayment of loans.

h) Interest on the IMF reserve tranche position and SDR holdings

In 2012, this item stood at a considerably lower level than in 2011 (2012: €0.9 million, 2011: €3.6 million). It chiefly comprises interest on Greece's quota in the IMF and on SDR holdings with the Fund, which derive from the IMF's SDR allocation that took place in 2009 in the context of the general SDR allocation to all IMF member countries. The increase is mostly attributable to a rise in the SDR interest rate. It should be noted that interest expense on the Bank's SDR liabilities to the IMF also increased commensurately.

i) Interest on loans to the personnel of the Bank of Greece

Interest on loans (for house purchase or personal loans) granted by the Bank of Greece to members of its staff amounted to €4.1 million (2011: €3.5 million).

j) Other interest income

This item stood at €215 thousand, compared with €223 thousand in 2011.

1.2 Interest expense

Interest expense decreased by 21.1% to €1,153.5 million in 2012, from €1,462.2 million in 2011.

Interest expense	2012	2011	Change
	(in € millions)		
a. Interest on intra-ESCB balances (TARGET2)	937.8	1,186.8	-249.0
b. Interest on net liabilities related to the allocation of euro banknotes within the Eurosystem	162.4	162.2	0.2
c. Interest on banks' current accounts in the context of monetary policy operations (including minimum reserves)	19.6	65.1	-45.5
d. Interest on deposits of the Greek State	28.2	32.2	-4.0
e. Interest on euro- and foreign-currency denominated deposits of various entities	2.6	0.3	2.3
f. Interest on SDR allocations	1.0	3.6	-2.6
g. Interest on deposits of the Hellenic Financial Stability Fund	1.9	12.0	-10.1
Total	**1,153.5**	**1,462.2**	**-308.7**

In greater detail:

a) Interest on intra-ESCB balances (TARGET2)

Interest expense on the TARGET2 account *(in € millions)*						
2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
333.5	369.7	545.2	477.1	779.8	1.186.8	937.8

The above interest and expenses are calculated on the basis of the daily balances of the account dedicated to the transactions of the Bank of Greece with the ECB and other ESCB NCBs within the TARGET2 system.

The decrease in 2012 is the result of a decline (from an average of 1.25% in 2011 to 0.88% in 2012) in the key ECB interest rate on TARGET2 balances.

b) Interest on net liabilities related to the allocation of euro banknotes within the Eurosystem

This item rose to €162.4 million from €162.2 million in 2011, owing to the fact that the value of euro banknotes actually put into circulation by the Bank in 2012 was higher than the value of euro banknotes that would have been allocated to it in accordance with the banknote allocation key. Interest calculated on the basis of the key ECB interest rate and amounting to €162.4 million was paid on the resulting difference, which represents a liability of the Bank to the Eurosystem.

This interest expense is calculated on the basis of:

– the intra-Eurosystem claim/liability corresponding to the value of euro banknotes put into circulation by the Bank of Greece, adjusted to ensure that the Bank's share in total euro banknotes in circulation (after the deduction of the 8% share allocated to the ECB) is equal to its banknote allocation key;

– the Bank's liability from the issue of euro banknotes on behalf of the ECB (a share of 8% of the total value of euro banknotes in circulation has been allocated to the ECB);

– the amount of adjustment. Since 2002, intra-Eurosystem balances related to the allocation of euro banknotes have been adjusted in order to avoid sharp fluctuations in the monetary income of Eurosystem NCBs (see section "Banknotes in circulation" under "Accounting Policies", as well as the note on liability item 9.2).

c) Interest on banks' current accounts in the context of monetary policy operations (including minimum reserves)

This mainly involves interest paid on banks' minimum reserves and, to a lesser extent, interest paid on deposits related to margin calls and on overnight deposits of domestic credit institutions with the Bank of Greece, in the context of the single monetary policy of the euro area.

This item decreased significantly by €45.5 million in 2012 (2012: €19.6 million, 2011: 65.1 million), due to the substantial decline in the applicable key ECB interest rate (from an annual average of 1.25% in 2011 to 0.88% in 2012) and the fact that the average amount of deposits dropped to €3.7 billion in 2012, from €6.1 billion in 2011.

d) Interest on deposits of the Greek State

Interest on deposits fell to €28.2 million, from €32.2 million in 2011, due to a decrease in interest rates (the average interest rate was 0.78%, against 1.16% in 2011).

By contrast, the average daily level of the Greek State's total deposits with the Bank was €3.6 billion in 2012, compared with €2.7 billion in 2011.

This item comprises interest paid on cash and time deposits of the Greek State with the Bank of Greece, following the revision of the relevant agreement between the Bank and the Greek State, whereby, as from 29 January 2008, daily balances of more than €2 billion in government deposit accounts with the Bank of Greece are converted to time deposits.

e) Interest on euro- and foreign-currency-denominated deposits of various entities

This item increased substantially, from €298 thousand in 2011 to €2.6 million in 2012, due to a significant rise in the deposits of the European Investment Fund and the European Investment Bank.

f) Interest on SDR allocations

Interest on the Bank's liabilities from the allocation of IMF special drawing rights (SDRs) decreased by €2.6 million (2012: €1 million, 2011: €3.6 million), due to the significant drop in the SDR interest rate.

g) Interest on deposits of the Hellenic Financial Stability Fund

This interest expense recorded a substantial decline to €1.9 million, from €12 million in 2011, due to lower deposits (2012 average: €0.7 billion; 2011 average: €1.5 billion) and lower interest rates (2012 average: 0.18%; 2011 average: 0.76%).

2. Net result of financial operations, write-downs and risk provisions

The net result from financial operations in 2012 increased by €32.8 million to €66.3 million, from €33.5 million in 2011.

A detailed breakdown is provided below.

2.1 Realised gains from financial operations	2012	2011	Change
	(in € millions)		
– foreign exchange operations	3.3	6.7	-3.4
– transactions in securities	47.9	10.3	37.6
– foreign exchange valuation differences due to changes in the €/SDR parity	0.5	-0.6	1.1
– purchases and sales of gold coins	14.6	17.1	-2.5
Total	**66.3**	**33.5**	**32.8**
2.2 Write-downs on financial assets and positions (unrealised losses)			
– from the valuation of securities and foreign exchange	-0.1	-0.3	0.2
Total	**- 0.1**	**-0.3**	**0.2**
2.3 Transfer from the provision for foreign exchange, interest rate, credit and gold price risks	**0.1**	**0.3**	**- 0.2**
Grand total	**66.3**	**33.5**	**32.8**

As shown in the table, the €32.8 million increase in the net result from financial transactions was due to gains from transactions in securities.

Moreover, the results for 2012 include unrealised losses of €74 thousand (2011: €299 thousand) from the year-end valuation of securities and foreign exchange (item 2.2). These losses were fully covered by the provision established for this purpose.

3. Net income from fees and commissions

Net income from fees and commissions fell by 27% to €71.8 million in 2012, from €98.3 million in 2011.

A breakdown is provided below.

Net income from fees and commissions	2012	2011	Change
	(in € millions)		
3.1 Fees and commissions income			
– management of Greek government securities	11.6	16.8	-5.2

– payments and receipts on behalf of the Greek State	35.3	32.8	2.5
– management of the "Common Fund" (surpluses of public entities and social insurance organisations) under Law 2469/97	17.2	35.7	-18.5
– private insurance supervision	4.9	5.2	-0.3
– other	6.7	9.9	-3.2
Total	**75.7**	**100.4**	**-24.7**
3.2 Fees and commissions expense	**-3.9**	**-2.1**	**-1.8**
Total net income from fees and commissions	**71.8**	**98.3**	**-26.5**

4. Income from equity shares and participating interests

Income from equity shares and participating interests fell to €20.1 million in 2012, from €23.8 million in 2011.

Income from equity shares and participating interests	**2012** *(in € millions)*	**2011**	**Change**
• income from the ECB			
– from the distribution of part of the ECB's income from euro banknotes in circulation and the SMP portfolio	16.1	18.3	-2.2
– from the distribution of the ECB's net profits	0	2.2	-2.2
• other income from equity shares and participating interests	4.0	3.3	0.7
Total	**20.1**	**23.8**	**- 3.7**

• Income from the ECB

In 2012, the Bank received from the ECB an amount of €16.1 million corresponding to its allocated share in the distribution of the ECB's income from euro banknotes in circulation and the SMP portfolio. The Bank's share in the balance of 2012 ECB profits to be distributed will benefit financial year 2013.

• Other income from equity shares and participating interests

This income, amounting to €4 million, largely consists of deferred payments of dividends for financial year 2012 in respect of the Bank's participating interests in the Bank of International Settlements (BIS), DIAS Interbanking Systems SA and the Hellenic Exchanges S.A. Part of this income (€140 thousand) stemmed from the decrease in the Bank's share in SWIFT and part (€26 thousand) represents a return of capital from the Hellenic Exchanges S.A.

5. Net result of pooling of monetary income

	2012	2011	Change
	(in € millions)		
Actual monetary income pooled by the Bank of Greece	527.5	517.8	9.7
Corresponding monetary income on the basis of the Bank's share in ECB capital	657.3	440.5	216.8
– Income from the reallocation of the Eurosystem monetary income	129.8	-77.3	207.1
– Adjustments of monetary income of previous years	2.4	1.1	1.3
– Transfer to income from the provision against counterparty risks arising from Eurosystem monetary policy operations	16.6	32.8	-16.2
Total	**148.8**	**-43.4**	**192.2**

As shown in the table, the net result from the pooling and reallocation of Eurosystem monetary income was positive by €148.8 million in 2012, compared with a negative result of €43.4 million in 2011.

In greater detail:

Net result of pooling and reallocation of Eurosystem monetary income

Monetary income is the income accruing to the euro area NCBs in the performance of the Eurosystem's monetary policy function.

The amount of each NCB's monetary income is equal to its annual income (actual and imputed) derived from its assets held against the "liability base".

The liability base consists of the following liability items:

– banknotes in circulation;

– deposit liabilities to euro area credit institutions in euro, related to monetary policy operations;

– net intra-Eurosystem liabilities arising from balances of TARGET2 accounts;

– net liabilities related to the allocation of euro banknotes within the Eurosystem.

Any interest paid by an NCB on items included in the liability base is deducted from the monetary income of that NCB.

The assets that are held against the liability base ("earmarkable assets") are the following:

– loans to euro area credit institutions related to monetary policy operations denominated in euro;

– securities held for monetary policy purposes. These include covered bonds issued by euro area credit institutions and securities under the Securities Markets Programme (SMP).The yields on the former are calculated daily on the basis of the latest available marginal rate for the Eurosystem's main refinancing operations, while those on the latter are calculated in real terms;

– intra-Eurosystem claims equivalent to the transfer of foreign reserve assets to the ECB;

– net intra-Eurosystem claims arising from balances of TARGET2 accounts;

– net claims related to the allocation of euro banknotes within the Eurosystem;

– gold, including claims in respect of gold transferred to the ECB, in an amount permitting each NCB to earmark a proportion of its gold that corresponds to the application of its share in the subscribed capital key to the total amount of gold earmarked by all NCBs. Gold is deemed to generate no income.

Where the value of an NCB's earmarkable asset exceeds or falls short of the value of its liability base, the return on the difference (gap) is calculated daily on the basis of the latest available marginal rate for the Eurosystem's main refinancing operations.

At the end of each financial year, the monetary income pooled by the Eurosystem is reallocated to the NCBs according to their paid-up shares in the capital of the ECB.

The positive result (€129.8 million) recorded in 2012 was due to the fact that the monetary income that actually accrued to the Bank in 2012 (€527.5 million) was lower than the €657.3 million estimated according to the Bank's share in the capital of the ECB. It also reflected revenue of €2.4 million arising from adjustments of monetary income for 2008, 2009, 2010, 2011 (see note on liability item 9.5).

This method of allocation of the Eurosystem's monetary income was established by decision 2010/23 of the Governing Council of the ECB.

Transfer to income from the provision against counterparty risks arising from the Eurosystem's monetary policy operations

The Bank's income in 2012 includes a transfer of a further €16.6 million (in addition to the €45 million transferred in 2009, the €47 million transferred in 2010 and the €32.8 million transferred in 2011) from the €149.5 million provision against counterparty risks from monetary policy operations. The balance of this provision amounts to €8.1 million on 31 December 2012.

This provision was initially established in 2008, following a decision by the Governing Council of the ECB on 18 December 2008, in view of the exceptionally adverse conditions that prevailed in the money market in 2008 and affected the liquidity-providing monetary policy operations conducted in that year.

In this context, the Governing Council of the ECB decided, in line with the principle of prudence, that the NCBs should form respective provisions totalling €5.7 billion in their annual accounts for 2008 as a buffer against counterparty risks arising from the monetary policy operations.

In accordance with the Statute of the European System of Central Banks (ESCB) and of the ECB, this provision was funded by all the national central banks of participating countries according to their subscribed shares in the capital of the ECB.

Under the above-mentioned decision of the Governing Council of the ECB, the amount of the provision will be adjusted annually after the revaluation of collateral received from defaulted counterparties.

The favourable outcome of the revaluation of collateral in 2009, 2010, 2011 and 2012, which is attributable to improved conditions in financial markets, combined with the reduced balance of collateral due to the sale of part of the portfolio and the proceeds of coupons, resulted in a reduction in the relevant risk and, therefore, a decrease in the relevant provision from €5.7 billion to €310 million; also, in the transfer to income of a total amount of €5.4 billion from the unused provisions of Eurosystem NCBs for 2009, 2010, 2011 and 2012.

6. Other income

Other income increased by €0.7 million to €14.6 million, compared with €13.9 million in 2011.

Other income includes revenue of €12.8 million from the activities of the Banknote Printing Works (IETA) of the Bank of Greece, derived from the production of items on behalf of the Greek State (coins, lottery tickets, passports, forms), as well as other revenue, amounting to €1.8 million, from accreditation fees, tax discounts, etc.

OPERATING COSTS, DEPRECIATION AND PROVISIONS

	2012	2011	Change
	(in € millions)		
• **STAFF COSTS**	**157.9**	**183.0**	**-25.1**
• **PENSION EXPENSES**	**112.2**	**103.1**	**9.1**
– Pension payments	133.5	132.1	1.4
– Pension income	-21.3	-29.0	7.7
• **ADMINISTRATIVE AND OTHER EXPENSES**	**40.1**	**47.0**	**-6.9**
• **DEPRECIATION OF TANGIBLE AND INTANGIBLE FIXED ASSETS**	**13.6**	**13.6**	**0**
TOTAL EXPENSES EXCLUDING EXPENSES FOR THE AUDIT OF THE FINANCIAL SYSTEM AND PROVISIONS	**323.8**	**346.7**	**-22.9**
• **EXPENSES FOR THE AUDIT OF THE FINANCIAL SYSTEM**	**10.3**	**0**	**10.3**
TOTAL EXPENSES EXCLUDING PROVISIONS	**334.1**	**346.7**	**-12.6**
• **PROVISIONS**	**2,342.7**	**1,151.4**	**1,191.3**
TOTAL EXPENSES	**2,676.8**	**1,498.1**	**1,178.7**

NOTES ON THE EXPENDITURE ACCOUNTS

Expenditure in 2012 grew by €1,178.7 million to €2,676.8 million, from €1,498.1 million in 2011, exclusively on account of high provisioning, while operating costs excluding provisions declined.

In particular:

• **Operating costs excluding provisions (staff costs, pensions, depreciation and other costs)** dropped by €12.6 million (or -3.6%) to €334.1 million, from €346.7 million in 2011, despite the significant burden of €10.3 million extraordinary expenses for the audit of the financial system.

In greater detail:

— ***Outlays for staff costs (wages, social insurance contributions, etc.)*** fell by €25.1 million (or -13.7%) to €157.9 million, from €183 million in 2011.

— ***Pension expenses*** rose by €9.1 million to €112.2 million, from €103.1 million in 2011, due to an equal decline in pension income (lower contributions due to the decrease in the number of employees and lower income from pension assets).

— ***Administrative and other expenses*** decreased by €6.9 million (or -14.7%) to €40.1 million, from €47 million in 2011. These include the expenditure of the Banknote Printing Works (IETA) for raw materials for the production of banknotes and other items on behalf of the Greek State (coins, lottery tickets, passports, forms), the repair and maintenance cost of premises, the procurement of computer hardware and other equipment, insurance premiums, overhead costs, etc.

— ***Depreciation*** remained roughly unchanged at €13.6 million.

— ***Extraordinary expenses in 2012 for the audit of the financial system came to €10.3 million.***

• **Provisions** increased considerably **in 2012 as well** (+€2,342.7 million), in order to cover operational risks and other liabilities of the Bank (see notes on liability item 12 “Provisions”).

DISTRIBUTION OF NET PROFIT

(Article 71 of the Statute)

Bank of Greece's profit amounted to €318.6 million in 2012, compared with €96.6 million in 2011.

The General Council proposes to the General Meeting of Shareholders that the profit be distributed as follows:

	2012	2011
	(in euro)	
Dividend of €0.5376 per share on 19,864,886 shares (compared with €0.67 per share in 2011)	10,679,362	13,309,473
Tax on dividends (applicable rate: 20%; Article 14 para. 9 and 10 of Law 3943/2011)	2,669,841	3,327,369
To the government	305,300,000	80,000,000
	318,649,203	**96,636,842**

Total gross dividend in 2012 is €0.6720 per share, compared with €0.8375 in 2011. Payable dividends (€0.5376 per share) are subject to a tax withholding of 25%, in accordance with Law 3943/2011, Article 14, paras. 1 and 2.

Athens, 21 January 2013

For the General Council
THE CHAIRMAN

GEORGE A. PROVOPOULOS
GOVERNOR OF THE BANK OF GREECE

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