I EXECUTIVE SUMMARY

The global economy is still going through the worst financial and economic crisis since World War II. Economic conditions deteriorated rapidly in 2008, especially in the last quarter of the year, affecting the global outlook for output, employment and trade. At the current phase, the financial and the economic crises are feeding into each other in a vicious circle, whereby financial instability squeezes activity in the real economy and, in turn, the fall in economic activity further impedes the already disrupted functioning of the financial sector. This delays the improvement of financing conditions for businesses and households and makes the exit from macroeconomic distress more difficult.

The breadth and depth of the problems faced by the financial sector, as well as the close linkages and interdependence of national economies, have prompted governments, central banks, supervisory authorities and international financial organisations to take concerted and bold action which was unprecedented. This response has helped mitigate to some extent the adverse impact of the financial crisis on the real sector of the economy, but has not been able to prevent the sharp economic downturn; meanwhile, the forecasts of international organisations regarding global economic activity continue to be revised downwards.

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In developed economies as a whole, both domestic and external demand followed a steep downward path in 2008 and in the first quarter of 2009, with negative growth expected on average for the entire 2009. In emerging and developing economies, growth rates have slowed down markedly and in several cases they may turn out negative in 2009. Serious challenges are also faced by the economies of Emerging Europe, some of which have high current account deficits that make them particularly vulnerable to shocks from the global financial environment. Economic recovery in the region is expected to benefit from the economic support initiatives promoted by the international community and implemented through the appropriate international institutions.

More recently, there have been signs of a milder slowdown and even a gradual stabilisation of economic activity in both the United States and Europe, giving rise to a feeling of moderate optimism that recovery could begin sooner than expected. These signs, however, do not necessarily indicate a fast return to growth. The degree of uncertainty as regards the future path of the global and the European economies remains high.

The adverse global financial and economic developments in 2008 have inevitably affected the Greek economy too, although less strongly than most euro area economies, given its lower degree of openness. In 2008, for the first time since Greece joined the euro area, domestic final demand fell, leading to a slowdown in the GDP growth rate. The tightening of banks' credit standards for lending to firms and households has restricted the supply of loans, while the significant weakening of consumer and business confidence and the resulting lower propensity to consume and invest in housing and the higher risk aversion have caused credit demand to decline as well. In addition, the structural weaknesses and macroeconomic imbalances of the Greek economy became more evident; over the past years these weaknesses and imbalances had been partly obscured by buoyant domestic demand.

Economic activity in Greece is projected to stagnate in 2009, and a negative growth rate cannot be ruled out. Greek exports of goods and services are expected to decline substantially, heavily affected by the downturn of global trade. Among the individual components of aggregate domestic demand, private consumption, despite an expected slowdown, should maintain a positive growth rate, supported by the considerable (under the circumstances) increase in average real wages partly as a result of lower inflation; government consumption is also expected to grow.

Developments in the Greek economy have weighed on the financial situation of non-financial corporations and households. Non-financial corporations experienced, on aggregate, a significant decline in their profitability, while their indebtedness and debt servicing costs increased. However, in 2008 most non-financial corporations continued to service their debt obligations to banks in a timely manner. Regarding the outlook for 2009, the financial situation of non-financial corporations will benefit from the cuts in key ECB rates, reflected in the decline of lending rates that started in the last two months of 2008. By contrast, the slowdown in economic activity will have an adverse impact on profits.

Turning to households, their indebtedness increased in 2008, but significantly less than in previous years, because of households' increased unwillingness to assume additional debt obligations, on the one hand, and the tightening of banks' credit standards, on the other. The decline in key ECB rates to historically low levels in the past few months has alleviated households' debt servicing costs, insofar as a considerable part of this debt is contracted at floating rates. Moreover, the bulk of loans in this category have been granted to relatively higher-income households, for which debt servicing costs represent a smaller proportion of disposable income, a fact that reduces the likelihood of default. However, given the unfavourable outlook for households' income and value of wealth in 2009, vigilance is warranted as regards monitoring the factors that could affect households' ability to meet their debt obligations.

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Adverse developments in world money and capital markets were a source of pressure on the stability of the global financial system in 2008. Credit institutions were clearly reluctant to lend in the interbank market, because of a lack of trust; thus this source of funding virtually dried out. Against this background, the interbank market faced a severe liquidity shortage and even highly solvent credit institutions faced difficulties in tapping that market. At the same time, activity plummeted in other funding markets for banks, such as the securitisation and the covered bond markets. The unprecedented liquidity-providing operations of the Eurosystem and the further cuts in key ECB rates from October 2008 onwards have helped mitigate these problems in the interbank market and, to a lesser extent, in capital markets.

Tight liquidity conditions in world money markets had an impact on the Greek interbank market, as reflected in declining transaction volumes from the second half of 2007 to the end of 2008, with participants clearly unwilling to enter into operations and maturities being confined to a band between one and seven days. Since early 2009 the volume of transactions has been rising again and maturities have increased to up to 30 days. However, tensions in the money market have not been eliminated yet. Regarding other relevant markets, the bond, equity, foreign exchange and commodity markets have exhibited high volatility in the period under review.

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These developments could not but take their toll on the aggregates of the domestic banking sector. Given the dominant role of banks in financial intermediation, the stability of the domestic financial system depends crucially on the stability of the banking system.

Data as at the end of December 2008 suggest an increase in Greek banks' credit risk exposure. The ratio of non-performing loans to total loans (NPL ratio) rose to 5% (2007: 4.5%), mainly because of increases in non-performing housing and consumer loans. This contributed to a decline in the coverage ratio (i.e. the ratio of accumulated provisions for credit risk to non-performing loans) to 48.9% (2007: 53.4%). However, the exposure to individual borrowers and the concentration of loans to particular sectors of activity remained low, while banks have substantially increased, in absolute terms, their contingency provisions for any losses from their lending portfolios both in Greece and in Southeastern European countries. The tensions in money markets also increased liquidity risk. The increase in the risk exposure of Greek banks is partly attributable to their activity in foreign markets, most notably in countries of Emerging Europe, which were more strongly affected —compared with the Greek economy— by the global financial and economic crisis. Greek banks' activity in these countries corresponds to one fifth of Greek GDP. By contrast, a decline was observed in market risk and operational risk, which constitute only a small part of total risk.

Pre-tax profits of Greek banks and banking groups fell sharply (banks: -72.4%, banking groups: -39.2%), to 978 million and 3,377 million euro respectively. The more than doubling of provisions for credit risk, the losses from financial operations and a slowdown in the growth of net interest income were the main factors behind this fall in profitability. The comparatively better performance of banking groups largely stemmed from their activities abroad, which contributed to an only moderate decline in interest and fee income growth, as well as to the posting of small profits, albeit lower than in 2007, from financial operations and investment portfolio valuation. The share of foreign activities in banks' profits increased to about one third at the end of 2008, from about one fifth at the end of 2007.

At the same time, the profitability and capital adequacy indicators of banks and banking groups fell considerably below the pre-crisis levels. Regarding profitability at bank level, the net interest rate margin and (after tax) return on assets (RoA) and equity (RoE) stood at 2.2%, 0.2% and 3%, respectively (2007: 2.5%, 1% and 14.7%); at banking group level, these ratios dropped to 2.9%, 0.7% and 10.1% (2007: 3%, 1.4% and 17.9%). Regarding capital adequacy, a decrease in regulatory own funds and an increase in risk-weighted assets resulted in lower capital adequacy ratios. At bank level, the capital adequacy and the Tier I ratios stood at 10.7% and 8.7% at the end of 2008 (2007: 12.7% and 9.3%) and, at group level, at 9.4% and 7.9% (2007: 11.2% and 9.2%). Even after these declines, the level of the above ratios continues to provide a satisfactory safety margin for addressing risks and ensuring financial stability. However, constant vigilance is warranted, especially in view of the continued downward trend of these ratios in the first quarter of 2009 (see Box I.1).

Box I.1

DEVELOPMENTS IN THE GREEK BANKING SECTOR DURING THE FIRST QUARTER OF 2009

The intensification of the global economic crisis, coupled with heightened uncertainty in the financial sector from the fourth quarter of 2008 to early spring of this year, affected banks' results and key figures worldwide. By the first quarter of 2009 the key figures of Greek banks had been affected too, due to: (i) the high deposit rates, applying to large amounts and short maturities, which banks offered until mid-January 2009, fearing a potential liquidity shortage; (ii) the downward trends in stock exchanges internationally, including the Athens Exchange (Athex), with the Athex composite index reaching a 9-year low; and (iii) a significant decline in the prices of medium- and long-term Greek government bonds. The trends in banks' funding costs and in the prices of Athex shares and Greek government bonds were reversed in the second quarter of 2009 and are expected to have a beneficial effect on banks' results for the second and third quarters of 2009. As regards banking risks in particular, there was an increase in credit risk and, to a lesser extent, market risk, while operational risk and liquidity risk remained virtually unchanged. As far as the resilience of the Greek banking system is concerned, profitability fell markedly, and the capital adequacy ratios declined but remained above the regulatory minimum levels.

The non-performing loans (NPL) ratio, at bank level, rose significantly to 6% by the end of the first quarter of 2009. It should be noted that this increase was broadly based across all categories of loans and caused the coverage ratio to fall to 43.7%. Although this ratio does not take into account the sizeable guarantees and collateral held by Greek banks, its continued decline points to a need for vigilance. Banks' exposure to market risk also increased; however, capital requirements for market risk represent a small proportion of total capital requirements.

Between the first quarter of 2008 and the first quarter of 2009, pre-tax profits dropped substantially (banks: -85.3%, banking groups: -51.3%). Apart from the more than doubling of provisions for credit risk (banks: 118.4%, banking groups: 133.4%), an important factor behind this development was also a decrease in net interest income (banks: -10.4%, banking groups: -2.7%) and fee income (banks: -7.6%, banking groups: -21.5%). A positive contribution was made by profits from financial operations and from the investment portfolio, while operating costs rose moderately. However, it should be noted that, if the valuation adjustments recognised directly in own funds were taken into account, banks would have recorded losses for the first quarter of 2009 (banks: losses of 200 million euro versus profits of 50 million euro, banking groups: losses of 120 million euro versus profits of 431 million euro).

The above developments inevitably affected the key profitability indicators. The net interest rate margin narrowed by about 50 basis points (mainly because of the increased cost of funding, especially from the early fourth quarter 2008 onwards, as well as because of weaker credit expansion) and return on equity fell by about 10 percentage points year-on-year.

Declines, of about 40 and 20 basis points respectively, were recorded in the Capital Adequacy and Tier I ratios. These outcomes stemmed exclusively from a drop in regulatory capital, as the risk-weighted assets remained broadly unchanged.

Table Financial results of Greek commercial banks and banking groups (2008Q1 – 2009Q1)

(amounts in million euro)

	Banks			Banking groups		
	2008 Q1	2009 Q1	Change (%)	2008 Q1	2009 Q1	Change (%)
Operating income	**2,340**	**2,218**	**-5.2**	**3,523**	**3,564**	**1.2**
Net interest income	1,920	1,720	-10.4	2,674	2,602	-2.7
– Interest income	5,209	4,785	-8.1	6,356	6,526	2.7
– Interest expenses	3,289	3,065	-6.8	3,682	3,924	6.6
Net non-interest income	420	498	18.7	851	962	13.1
– Net fee income	309	286	-7.6	641	503	-21.5
– Income from financial operations	-70	172	-	3	350	-
– Other income	181	40	-77.8	205	110	-46.4
Operating costs	**1,250**	**1,320**	**5.6**	**1,871**	**1,933**	**3.3**
Staff costs	765	802	4.8	1,076	1,117	3.8
Administrative costs	398	421	5.7	589	602	2.3
Depreciation	83	91	8.5	158	170	7.0
Other costs	3	6	85.6	48	45	-6.3
Net income (operating income less costs)	**1,090**	**898**	**-17.6**	**1,651**	**1,631**	**-1.2**
Provisions for credit risk	363	792	118.4	448	1,045	133.4
Pre-tax profits	**728**	**107**	**-85.3**	**1,203**	**586**	**-51.3**
Taxes	139	57	-58.9	224	155	-31.1
After tax profits	**589**	**50**	**91.5**	**979**	**431**	**-56.0**

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

It is expected that the full exploitation of the possibilities offered by Law 3723/2008 will also help enhance the liquidity of the economy. Several banks have already made use of these measures, thus strengthening their liquidity and capital base and preventing the appearance of credit crunch conditions.

The results of the stress tests conducted by the Bank of Greece in the context of the annual regular consultation with the IMF (see Box I.2) were encouraging. The results indicated that the banking sector is capable of withstanding even very strong shocks, the probability of occurrence of which is very low. Indeed, the concluding statement of the IMF mission points out that "the authorities' response to the financial crisis has been appropriately proactive..." and that "the banking system appears to have enough buffers to weather the expected slowdown". The Bank of Greece will continue to conduct stress tests in the future, as it believes that they provide information useful to its supervisory tasks, and stands ready to take corrective action wherever weaknesses are identified.

Box I.2

STRESS TESTING OF THE GREEK BANKING SYSTEM

The Bank of Greece conducted a stress testing exercise, using hypothetical scenarios commonly agreed with the International Monetary Fund. The purpose of the exercise was to assess the resilience of the Greek banking system to unexpectedly strong exogenous shocks and banks' ability to cope with such shocks.

The exercise involved assessing the impact of an extremely adverse macroeconomic scenario for Greece, assuming that, over a period of two years, GDP would decline by a cumulative 3%, the unemployment rate would rise by 4 percentage points and bank lending rates would increase by 400 basis points. These assumptions were integrated into an econometric model in order to estimate the implications of such a scenario for non-performing loans (NPLs) in Greece. The total impact generated from these three risk factors, in the event that all three assumptions were to prove valid simultaneously, was an estimated rise in the NPL ratio, at the banking system level, from 5% on 31 December 2008 to 12.7% by 31 December 2010.

In order to estimate the ratio of non-performing loans to overall loans to the emerging economies of Europe where Greek banks have an active presence, an even more adverse scenario was assumed. These countries were grouped into three risk categories, and the NPL ratio at the end of the two-year period was assumed to be 20% for high-risk countries, 15% for medium-risk countries and 12.7% for low-risk countries, the same as that assumed for Greece. On the basis of these assumptions, the average NPL ratio for loans to these countries would almost quadruple in comparison with end-2008; in certain cases it would even rise tenfold.

In addition to credit risk, the implications of an extremely adverse scenario for market risk were estimated. This scenario assumes, relative to the actual figures of 31 December 2008, a parallel upward shift in the yield curve by 300 basis-points, a 30% depreciation of the euro vis-à-vis the other major currencies, a 40% drop in the Athens Exchange composite index of stock prices and an increase of 450 basis points in the spread of the ten-year Greek government bond over the corresponding German bond.

Banks' ability to absorb any losses arising from those adverse scenarios within the two-year period depends largely on their pre-provision profits during the same period. For the purposes of the exercise, it was assumed that profits before taxes and provisions would fall by 15% in 2009 in comparison with 2008, before rising by 10% in 2010.

An examination of the results of the stress test for nine banks, which have a total market share of more than 80% (in terms of assets), indicates that the banking sector as a whole would be able to withstand such strong shocks as those envisaged in the scenarios. The assumed profits for the two-year period, the improved capitalisation through the use of the arrangements of Law 3273/2008, and banks' provisions accumulated by 31 December 2008 would absorb a sufficient part of any losses from all risks to ensure that the weighted average of the Tier I ratio for the nine banks in the sample would stand at the satisfactory level of 8.62%, i.e. it would still exceed the threshold of 8% even under an extremely adverse scenario. Furthermore, it should be noted that the above-mentioned scenarios were applied to actual outturns as at 31 December 2008, which already incorporated some of the impact of the crisis.

Clearly, the results are not homogeneous across banks. The median Tier I ratio is 9.1% and the majority of banks maintains a satisfactory capital base, even after the absorption of losses resulting from the hypothetical scenarios. However, for a very small number of banks, the absorption of losses of the magnitude estimated in these scenarios would imply a weakening of their capital base; this, however, would not cause any systemic risk, i.e. it would not threaten the stability of the financial system as a whole. Under the extremely adverse conditions assumed by the scenarios used, restoring the Tier I ratio to 6%, which is the internationally acceptable minimum level under the current circumstances and in line with the level used in similar stress tests in the United States, would require almost 2 billion euro (i.e. about 7% of the regulatory own funds of the banks in the sample). Moreover, achieving a Tier I ratio of 8%, which would provide a satisfactory capital adequacy margin, would require a capital injection of close to 3 billion euro or about 10% of the sample banks' regulatory own funds. The Bank of Greece has already asked banks, where necessary, to increase their capital to the appropriate level taking into account the current and future conditions.

The banks in the sample were also stress-tested for liquidity risk, assuming the withdrawal of 10% of customer deposits and the non-renewal of 50% of wholesale funding. The purpose of this exercise was to assess individual banks' ability to meet their financial obligations that mature over a horizon of one month. The results indicated that none of the banks in the sample would face liquidity difficulties; the few banks whose liquid asset ratio would fall to a relatively low level would still remain capable of fulfilling their obligations, albeit by a close margin.

The Bank of Greece will continue to conduct stress tests in the future, compare their results with actual outcomes and take corrective action whenever it deems it appropriate to do so.

In conclusion, the merely marginal exposure of Greek banks to assets directly or indirectly linked with the initial causes of the international crisis, the satisfactory level of their capital adequacy, their relatively strong deposit base, the tightening of credit standards and the continuous audits by the Bank of Greece have all helped alleviate the adverse impact of the crisis on banks' key aggregates. As a result, the Greek banking system remains fundamentally sound.

Nevertheless, the banking system is faced with the major challenge of effectively dealing with the stagnation or even downturn of economic activity. In this context, the Bank of Greece has repeatedly stressed that banks, while remaining committed to ensuring the smooth financing of the economy, should pursue appropriate policies for promoting financial stability. In so doing, they should take into consideration: (i) the increased risks associated with the weak economic environment; (ii) the high volatility of money and capital markets; (iii) the prevailing conditions of relatively low liquidity; and (iv) the pressures that these factors are exerting on their profitability and capital adequacy. Constant vigilance is of the utmost importance in this respect.

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In the context of an analysis of the main risks that the EU banks may face in 2009, it is worth mentioning the latest (2008) survey of the Banking Supervision Committee (BSC) of the European System of Central Banks,[1] which reflects market participants' assessment of potential sources of risks for the European banking sector. According to the results of this survey (see Chart I.1), risks originating from the "financial markets" and from the "macroeconomy" are perceived to have increased relative to earlier years. Risks originating from the "banking sector"[2] rank third, while "individual bank strategy"[3] and "regulatory developments" are cited as the least important sources of risk.

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Non-bank financial sectors (insurance companies, mutual funds, securities and investment firms, pension funds etc.) make up only a small part of the Greek financial system, and their bearing on financial stability would also be expected to be small. However, given the linkages of these sectors with the banking sector, as well as their implications for economic developments, their activity also needs to be monitored.

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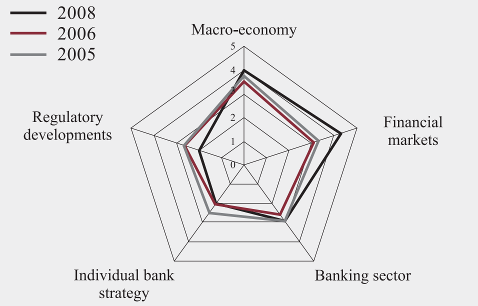
The stability of the domestic financial system in 2008 was supported by the smooth operation of payment, clearing and settlement systems, collectively known as market infrastructures,

Chart I.1 Risk sources for EU banks



Source: Banking Supervision Committee, EU Banks Major Risks Surveys.
Note: Numbers 0 to 5 correspond to the perceived importance of each risk source (the higher the number, the higher the importance).

which contributed to the effective processing of transactions.

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Finally, both at the European and at the national level, important regulatory interventions were undertaken; these aimed to further consolidate the confidence of depositors and other stakeholders in the adequacy of the system's overall institutional setup and safety mechanisms and in its ability to deliver transparent and sound interlinkings between the financial and the real sectors of the economy. With a view to harmonising the domestic regulatory framework with the European one, in particular as far as cross-border activities are concerned, a number of measures were introduced, which considerably strengthen macroprudential supervision and aim to prevent any developments that could threaten the stability of the domestic financial system.

1 The BSC systematically monitors and assesses developments in the financial and, in particular, banking systems in the European Union.
2 The risks associated with the "banking sector" include factors such as expected developments in competition, excess capacity, the likelihood of mergers and acquisitions, changes in banks' ownership and governance, banks' high-risk investment etc.
3 "Individual bank strategy risks" include factors associated with e.g. developments in bank efficiency, organisational complexity, operational risk, legal risk, business models such as the "originate and distribute" model, reputation risk, risks arising from the outsourcing of activities, staff costs etc.