BANK OF GREECE

75TH ANNIVERSARY

Commemorative ceremony

November 3, 2003

ATHENS 2006

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Nicholas C. Garganas
Governor of the Bank of Greece

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Governors of the Bank of Greece 1928-2003

	From:	*To:*
Alexandros Diomidis	21.4.1928	29.9.1931
Emmanuel Tsouderos (1st period)	31.10.1931	13.8.1935
Emmanuel Tsouderos (2nd period)	20.3.1936	10.7.1939
Ioannis Drossopoulos	10.7.1939	28.7.1939
Kyriakos Varvaressos[1]	4.8.1939	11.2.1946
Xenophon Zolotas (1st period – Co-Governor)	12.10.1944	8.1.1945
Georgios Mantzavinos	11.2.1946	2.2.1955
Xenophon Zolotas (2nd period)	5.2.1955	7.8.1967
Demetrios Galanis	7.8.1967	4.5.1973
Konstantinos Papayiannis	7.5.1973	9.8.1974
Panayiotis Papaligouras	9.8.1974	24.10.1974
Xenophon Zolotas (3rd period)	26.11.1974	3.11.1981
Gerassimos Arsenis	3.11.1981	20.2.1984
Demetrios Chalikias	20.2.1984	20.2.1992
Efthymios Christodoulou	20.2.1992	1.12.1993
Ioannis Boutos	1.12.1993	26.10.1994
Lucas Papademos	26.10.1994	14.6.2002
Nicholas Garganas	14.6.2002	

1 During the period of enemy occupation (1941-1944), Governor Kyriakos Varvaressos and Deputy Governor Georgios Mantzavinos followed (according to the provisions of Law 3004/7.5.1941) the Greek Government which established itself in London. The occupation governments in Greece dismissed Governor Kyriakos Varvaressos and Deputy Governor Georgios Mantzavinos in 1941 and appointed first Miltiades Negropontis as Acting Governor (24.4-3.7.1941) and then Demetrios Santis (3.7.1941-20.1.1943) and Theodoros Tourkovassilis (19.4.1943-13.4.1944) as Governors. However, these acts of the occupation governments were annulled by Law 89/15.1.1945 after the liberation of the country.

Contents

Introduction

The year 2003 marked the 75th anniversary of the Bank of Greece. The establishment of the Bank as the country's central bank was decided in 1927, during a difficult period for Greece, as part of the efforts to ensure monetary stability and improve the organisation and operation of the country's credit system. For this purpose, the Greek Government had then asked assistance from the League of Nations; the committee of experts sent by the League of Nations to study the Greek economic problem suggested, among other things, that the National Bank of Greece —which until then, aside from its commercial banking operations also had the issuance privilege — be converted into a purely currency issuing institution. After months of discussions, it was finally decided to establish a new central bank, under the name of the "Bank of Greece", which would take up the currency issuance privilege exclusively. Thus, the issuance privilege was handed over from the National Bank to the Bank of Greece, which started to operate on 14 May 1928. In these seventy five years of operation, in the course of which global and Greek economic history have been marked by a number of remarkable achievements, as well as adversities, the Bank of Greece has demonstrated a high adaptability to changing conditions, has played a key role in shaping not only the country's monetary but also its general economic policy, particularly in the post-war; also, it has often played a leading role in providing solutions to crucial problems of the Greek economy. History proves that the Bank of Greece, despite the numerous difficulties it had to face (not unlike other central banks), has always carried out its demanding mission, and thus has gained the citizens' trust and today commands respect from the Greek population at large.

Following Greece's entry into the euro area on 1 January 2001, the Bank of Greece now belongs to a wider family, the Eurosystem, and continues to perform highly important operations. It constitutes an integral part of the Eurosystem, which comprises the European Central Bank and the national central banks of the EU Member States that have adopted the euro. The Governor of the Bank participates in the European Central Bank's Governing Council, which, among other things, is responsible for the formulation of the single monetary policy in the euro area. The Bank is entrusted with the implementation of this policy in Greece and responsible for ensuring the smooth operation of the payment system it manages. The Bank also remains responsible for supervising the banking system and safeguarding the financial sector's stability. With the continuing process of economic integration in the euro area, these tasks will acquire an increasing importance in the years to come.

The landmark of the Bank's 75th anniversary was celebrated in a formal event organised on Monday 3 November 2003 at the Athens Concert Hall. The then President of the Hellenic Republic, Mr Constantinos Stephanopoulos, honoured the occasion with his presence. Other eminent personalities attending included the country's political, military and intellectual leaders, Governors and officials of central banks from numerous countries, representatives of international economic organisations, members of the diplomatic corps, members of the boards of directors and top executives of Greek banks, as well as businessmen and representatives of professional associations and trade unions. Short greetings were addressed by the then Prime Minister, Mr Constantinos Simitis, the Governor of the Bank of Greece, Mr Nicholas C. Garganas, and the President of the European Central Bank, Mr Jean-Claude Trichet, while the Vice President of the European Central Bank, Mr Lucas Papademos, delivered a speech on "Growth and stability in Europe: the role of monetary policy". A short film about the history of the Bank of Greece was also projected during the event. Celebrations also included a concert by the Athens State Symphony Orchestra, performed at the Athens Concert Hall the day before, on Sunday 2 November.

The present commemorative publication includes the complete texts of the speeches delivered during the event.

The first to address a greeting was the then Prime Minister, Mr Constantinos Simitis, who initially talked about the role the Bank of Greece has played in the Greek economy ever since its establishment, stressing in particular its contribution to the gradual deregulation of the financial system in the 1980s and 1990s.

Mr Simitis also referred to the issue of central bank accountability. The independence of the Bank of Greece was established in 1997, and the Bank became an integral part of the Eurosystem once Greece joined the euro area in 2001. Its democratic accountability is ensured, under the new status, by the Bank's obligation to submit, twice a year, a report on monetary developments and monetary policy to the Greek

Parliament and Cabinet, and by the appearance of its Governor before the Parliament's standing committee on economic affairs in order to inform the National Assembly about the economic situation and monetary policy.

The next to take the floor was the Governor of the Bank of Greece, Mr Nicholas C. Garganas, who presented a brief retrospective of the Bank's history, as well as the evolution of views regarding the institutional role of central banks. When the Bank was established in 1928, the international monetary system was entering a troubled period, which —even with the increase of the Bank's room for manoeuvre after the abandonment of the gold-exchange standard— in Greece resulted in monetary instability, due to World War II and the events that followed. After the war, stabilisation efforts called for a major role to be played by the Bank of Greece, mainly through the activities of the Currency Committee and against the background of the then prevailing perceptions, which wanted monetary policy to be based on a selective distribution of credit, administratively set interest rates and an extensive jigsaw of operations for the control of capital flows. Since the 1980s, however, newer approaches regarding the need to orient monetary policy more towards the market and away from political influences have led to the deregulation of the financial system, which was gradually promoted by the Bank of Greece in the course of the 1980s and 1990s, as well as to the Bank's legally established independence in 1997. Finally, the notion of central bank reliability started to advance amid academic circles and many were those who believed that small open economies can benefit from using a mechanism for pegging exchange rates with a view to achieving disinflation without any considerable cost to growth. The speech examines the ways in which the establishment of the Bank of Greece's independence and the hard-drachma policy contributed to the achievement of nominal convergence and the entry of Greece into the euro area.

The role of national central banks within the context of the Eurosystem was one of the issues discussed in the speech delivered by the President of the European Central Bank, Mr Jean-Claude Trichet. The speaker referred to the success of the Greek convergence programme and stressed that the country's entry into the euro area came only after complete nominal convergence had been achieved – through lower inflation and interest rates, fiscal consolidation and prevalence of exchange rate stability. Moreover, Mr Trichet stressed as the Eurosystem's major advantage the fact that it is an independent institution, which makes best use of the vast experience that the members of the ECB's Executive Board and the national central bank Governors have in the field of monetary policy formulation and implementation.

The speech by Mr Lucas Papademos, Vice President of the European Central Bank and former Governor of the Bank of Greece, dealt with the role of monetary policy for economic growth and stability. On the basis of the prevailing theory and empirical evidence, the speaker concluded that long-term growth is determined by non-monetary factors. Monetary policy can contribute by maintaining price stability. Moreover, as regards the role of monetary policy in attenuating cyclical effects, the speaker argued that, although particular circumstances triggered by severe shocks to the economy may justify the conduct of a counter-cyclical monetary policy, this is to be avoided in general as it entails risks. Therefore, the main role of monetary policy is to work towards maintaining price stability over a medium- to longer-term horizon, thus providing a reference point for expectations. The attainment of other economic policy objectives, such as growth, should be striven for by other policy means, mainly through structural and fiscal policies.

Each of the speeches included in this publication sheds light on the Bank's history from a different angle. Still, they all converge to the view that, although the Bank of Greece no longer conducts an independent monetary policy —something that constitutes perhaps the major institutional change in these seventy-five years— its role remains as crucial as ever. As the Governor of the Bank, Mr. Nicholas Garganas, stressed in his speech, although the Bank's journey during the past 75 years has not been without bumps and turns along the way, "the Bank has always fulfilled its obligations and, in so doing, has earned the trust of the Greek citizens". Therefore, the Bank has the opportunity to add new pages to its history. As Mr Lucas Papademos concludes: "So, when, in another 25 years' time, the Bank of Greece celebrates its 100th anniversary, future speakers might wish to delve into the archives to see what was said back in 2003. My anniversary wish for this institution is that they will be able to repeat my opening remark: 'The Bank of Greece has, justifiably, many reasons to celebrate and feel proud of its achievements' ".

Speech by Constantinos Simitis,
Prime Minister at the time

Your Excellency the President of the Hellenic Republic,
Ladies and Gentlemen,

It gives me great pleasure to be here with you today to take part in the celebration of the 75th anniversary of the Bank of Greece. In the years that have elapsed since the Bank was established, Greece has undergone radical changes. The most important one in recent years is our entry into the euro area.

Greece and 11 other countries of the European Union chose to give up their national currencies in favour of a new single currency, the euro, and have entrusted monetary policy to a European institution, the European Central Bank. Following the Accession Treaty, which was signed in Athens last April and provides that 10 new members will join the European Union, it is expected that these countries will also adopt the euro. The euro area will thus become one of the largest multinational monetary areas in the history of mankind.

Many people take Greece's participation in EMU for granted. But all of us who have worked towards this goal know that the initial outlook was very different. In the early 1990s, Greece was sliding into economic instability and was diverging from the European Union. Very few could have assumed then that Greece would become a member of EMU by the end of the decade.

However we persevered. We carried out one of the most ambitious fiscal consolidation programmes and, indeed, we did this without jeopardising Greece's growth potential. We secured the consensus of all citizens and we combined our consolidation programme with policies aimed at structural reform as well as with the steady monetary policy of the Bank of Greece. We thus achieved the reduction of inflation and of interest rates, and Greece became a full member of EMU.

The celebration today of the Bank's 75th anniversary gives us an opportunity to take stock of what the Bank has accomplished since its establishment and to consider its role under the new conditions brought about by EMU participation and by the changes in the global financial environment.

The Bank of Greece was established in the late 1920s, at a time when Greece was in great need of fiscal consolidation, monetary stability and a solution to its refugee problem. Following exhortations by the Fiscal Committee of the League of Nations, and in order to secure a loan from the League, the right of money issue was transferred from the National Bank of Greece to a new bank, whose exclusive mandate was to be the conduct of monetary and exchange rate policies. This is how the Bank of Greece came into being in 1928; at the same time the drachma was pegged to gold.

During those first years, the Bank of Greece was forced to operate under adverse conditions with limited resources. Nonetheless, it was able to rise to the occasion. During the early 1930s and in the midst of a deep crisis in the world economy, the Bank helped bring about the smooth exit of the drachma from the gold standard. In the same decade, the Bank became a key institution in the Greek economy, helping to attract savings to the banking system.

During World War II, the legitimate Administration of the Bank rescued the Bank's foreign exchange and gold reserves and worked together with the Greek government in exile. After the hyperinflation which made the country suffer during the Occupation, the Bank contributed greatly to the restoration of monetary and economic stability. By the early 1950s, inflation declined dramatically and the drachma was successfully pegged to the dollar, something which would last for about 20 years.

Despite the successful stabilisation of the currency, the Greek credit system had to face insurmountable difficulties. In fact, in the post-war period the credit system was operating subject to a strict regulatory framework established by the Currency Committee. Given the shortage of capital, the Committee aimed at allocating finance to selected sectors of the economy. This policy was initially successful, but the restrictions eventually turned the credit system into a mere instrument of the Currency Committee.

During the 1980s and the 1990s, the Bank proceeded to the gradual deregulation of the financial system. The modernisation of the financial system was rendered necessary by Greece's membership of the EEC and by the prospect of the creation of the single market. Modernisation was a prerequisite, so that domestic banks could stand up to cross-border competition and face the consequences of the liberalisation of capital movements. Thus, for the first time in the post-war period, banks began exercising their traditional function, i.e. to raise funds and to allocate them to the most productive sectors of the economy according to criteria of private economy.

The deregulation of the banking system coincided with the implementation of a fiscal consolidation programme and with the "hard drachma" policy. These policies were crucial for ensuring a smooth entry into the Exchange Rate Mechanism of the European Monetary System in 1998 and into EMU on January 1, 2001.

At the same time, Greece fulfilled its obligation under the Maastricht Treaty to grant political and financial independence to the Bank of Greece. In our country, the law granting independence to the Bank of Greece was passed in December 1997. In a democracy, of course, independence does not mean absence of accountability. The democratic control of the Bank of Greece is ensured, inter alia, through the submission to Parliament of two reports each year on monetary developments and policy, and through the testimony by the Bank's Governor before the relevant parliamentary committee on matters within the Bank's mandate.

The past 75 years have taught us a good deal about what a central bank can and should do. Foremost, experience has taught us that monetary policy and fiscal policy are interconnected factors, as far as ensuring price stability and a country's welfare is concerned. In an economy, citizens need to have confidence in the value of the currency. In the European economy, the citizens need to have confidence in the ability of the monetary authorities to ensure price stability and promote prosperity in the Union.

Today, the Bank of Greece is an integral part of the Eurosystem and contributes to the exercise of its functions. As a member of the Governing Council of the European Central Bank, the Governor of the Bank of Greece takes part in the formulation of the single monetary policy.

In Greece, the Bank continues to be responsible for the smooth operation of payment systems and for the implementation of monetary policy. Most importantly, it is responsible for banking supervision and for safeguarding the stability of the Greek financial system.

The experience we have acquired over the last few years from the operation of the financial sector leads us to conclude that this sector is strongly inter-linked with the real economy. This means that, whenever one branch of the financial sector faces difficulties, it can easily "bring down" the entire sector with it, with serious negative repercussions on the economy and on growth. This is why, in addition to banking supervision carried out by the Bank of Greece, the Government has strengthened the supervisory powers of the Capital Market Committee and plans to set up an independent authority for the supervision of insurance companies. It is important that these authorities work together harmoniously so as to better safeguard the stability of the financial system.

Ladies and Gentlemen,

After Greece joined the euro area, a stable macroeconomic environment has been established in our country, which is guaranteed by the Government's sound fiscal policy, by the Bank of Greece's prudent supervision of the banking system and by the European Central Bank's steady monetary policy.

Greece's next target is to achieve real and social convergence. To achieve real convergence, we must accelerate economic growth. This is why we are carrying out one of the largest infrastructural investment programmes that our economy has seen in the post-war period. At the same time, we are deregulating all sectors of the economy, we are privatising public enterprises and we are modernising the institutional framework that governs the operation of individual markets. "Competition" and "competitiveness" have become key words in our everyday policy vocabulary.

Greece has recorded significant economic and social achievements in recent years. The standard of living of Greeks has increased remarkably, while the Greek economy's growth rate is currently the highest or second highest in Europe. But this is not sufficient to us. We want our economy to continue to grow strongly in the future. And we concentrate all our efforts on our next major challenge: the achievement of real and social convergence.

Speech by Nicholas C. Garganas,
Governor of the Bank of Greece

Your Excellency the President of the Hellenic Republic,
Mr. Prime Minister,
Your Reverence the Representative of the Archbishop of Athens and All Greece,
Ladies and Gentlemen,

Allow me to thank you for having accepted our invitation to join us in today's event. Let me also extend a warm welcome to Jean-Claude Trichet, who became President of the European Central Bank on November 1. This occasion marks Jean-Claude's first official function outside Frankfurt in his new position. Thank you for being with us today, Jean-Claude. We wish you every success in your new position.

I also would like to extend a very warm welcome and a special thanks to my central bank colleagues from the European System of Central Banks as well as those from other parts of the world who have honoured us with their presence on this celebration.

This year we celebrate an important anniversary – the 75th year since the establishment of the Bank of Greece. During this period, the conventional wisdom about a central bank's institutional role and about what a central bank can and should do has undergone enormous change. There has, however, been one constant underlying the responsibilities of a central bank – the importance of discharging these responsibilities to the health of the national economy.

Why is the role of the central bank important? Because an economy's central bank is entrusted with safeguarding the value of the economy's currency and with ensuring the soundness of its financial system. Safeguarding the value of the currency is not always an easy task. The correct answer to this challenge forms the basis of an efficiently running economy and of social cohesion. As John Maynard Keynes observed, "there is no subtler, no surer means of overturning the existing basis of society than to debauch the currency".

It would be comforting to find in the history of central banking a record of steady progress and orderly development from earliest antecedents to present knowledge. The facts, however, are different. The past 75 years have included remarkable achievements and some setbacks both globally and in the Greek economy. The role of the central bank in an economy's fortunes — and misfortunes — is aptly demonstrated by the history of the Bank of Greece. During this sometimes turbulent period, the Bank of Greece demonstrated an ability to adapt to changing circumstances, often playing a leading role in providing solutions to the main economic problems of the day. Let me use the occasion of the Bank's 75th anniversary to elaborate briefly.

Following a period of monetary instability, in March 1927 the Greek government sought the assistance of the League of Nations to improve the health of the economy, to secure monetary stability and to help the Greek banking system function better. Negotiations with the League followed and a stabilisation plan was hammered out. Among the terms of the "Geneva Protocol", signed in September 1927, was the establishment of a central bank, exclusively responsible for issuing banknotes. Until that time, the National Bank of Greece, a private institution, had the privilege of issuing banknotes, which it waived in favour of the newly established central bank. The Bank of Greece commenced its operations in May 1928. The two main tasks assigned to the Bank, as specified in its Statute, were to ensure a stable currency and to regulate currency circulation. To this end, the Statute provided for the Bank to have reserve assets; it also set a strict limit on the financing of budgetary deficits by the central bank.

The Bank of Greece could not have begun operating at a more difficult time. This was a time when the international monetary system was operating primarily under the gold-exchange standard. Effectively, the gold standard aimed at securing the stability of a currency by tying money supply to the gold reserves of the central bank, thus leaving little room for conducting an independent monetary policy. The gold standard has been described as nailing the domestic economy to a "cross of gold".

Today, many historians blame the gold standard for helping precipitate the Great Depression that began in 1929. Regardless, the global stock market crash of 1929 and the ensuing global financial crisis of September 1931 saw many countries driven off the gold standard.

The new international environment was hardly a favourable one for a fledgling central bank. Concerned about the instability that might follow in the absence of the gold standard —and with the recent period of monetary instability entrenched in their memories— the Greek authorities attempted to maintain the link to gold. The drachma, however, came under heavy selling pressures and, in April 1932, Greece had to leave the gold standard.

Leaving the gold standard made monetary policy a matter of the discretionary judgement of the authorities at the Bank of Greece. The new monetary regime opened up the possibility of the Bank playing a more active role in domestic economic affairs. The Bank was no longer bound by the discipline imposed by the gold standard. However, in common with most other central banks at the time, it pursued monetary and credit policies geared towards safeguarding price stability and ensuring a sustainable balance of payments; after all, this was in accordance with its Statute. In addition, the Bank sought to remedy the inefficiencies of under-developed money and capital markets by instituting measures to attract savings to the banking system and to improve credit allocation.

In April 1941, the Axis Powers occupied Greece. For several years, London became the seat of both the exiled Greek government and the Bank of Greece, with the Bank's gold secretly transferred to South Africa. Within occupied Greece, the economic situation became increasingly grim and hundreds of thousands of Greeks died of hunger. The Axis Powers forced the country to pay not only for the upkeep of the occupying troops, but also for their military operations in South-eastern Europe. The puppet regime established by the occupiers forced the Bank of Greece to resort to the printing press. As a result, the country was beset with hyperinflation; between April 1941 and October 1944, the cost of living rose 2.3 billion times. In these difficult circumstances, the country's economic system collapsed. To give another example of the magnitude of inflation during the occupation, let me mention that in November 1944, immediately after liberation, a so-called "new" drachma was introduced; it was set equal to 50 billion "old" drachmas!

In March 1946, a stabilisation plan, which was part of the London Agreements, set up the Currency Committee, which was to be responsible for monetary, credit and exchange rate policies for several decades. This Committee consisted of five members, including the Minister of Coordination, the Minister of Finance and the Governor of the Bank of Greece. The Committee was given control over the issuance of money, and the authority to allocate credit among sectors and activities as well as to determine lending terms.

After suffering through World War II and the Civil War, the economy was in ruins. The hyperinflation produced long-lasting effects on attitudes, and savers were unwilling to deposit their funds in the banking system. To help attract funds back to the banking system, the central bank sought to re-establish price stability. At the same time, the Bank of Greece was also called upon to support economic reconstruction and to help lay the foundations for growth. However, circumstances were difficult, since certain factors, including substantial expenditures on defence, social policy and support of the agricultural sector, caused strong growth of the money supply. The Bank's task was made even more difficult in view of the country's underdeveloped financial markets. Yet, the Bank was successful in conducting a tight monetary policy. This, together with the decline in fiscal deficits, resulted in inflation falling dramatically, from over 40 per cent in 1948 to 5 per cent in 1952. This created suitable conditions for a reform in exchange rate policy.

In April 1953 the drachma was devalued by 50 per cent against the US dollar and then joined the Bretton Woods system of pegged exchange rates. In the following year, another "new" drachma was introduced and set equal to 1,000 "old" drachmas. Coupled with the nominal anchor provided by the Bretton Woods system and tightened fiscal policy, the "new drachma" played a key role in reducing inflationary expectations.

During the next fifteen years real GDP growth averaged 7 per cent, one of the highest in the world. At the same time, average inflation in Greece was less than 2.5 per cent, confirming that strong long-term growth is not feasible without price stability. The Bank of Greece not only helped restore and maintain monetary stability, but its interest-rate policy was decisive in channelling private saving to the banking system.

The nominal anchor of the Bretton Woods system proved unsustainable in the long term. Pressures to finance the Vietnam War led to an expansionary monetary policy in the United States and inflationary pressures spilled over to the rest of the world. This, along with the inherent weaknesses of the arrangement, proved the undoing of the Bretton Woods system, which broke down in March 1973. Once again, the lesson that there is a need to separate monetary policy from political influences had to be relearned. The drachma's link to the US dollar was maintained up to the spring of 1975.

The decades of the 1970s and the 1980s were difficult ones for policy-makers world-wide. Among other things, they had to deal with two oil price shocks in 1973-74 and in 1978-79, an international debt crisis in the early 1980s in Latin America and a global stock market crash in 1987. Particularly during the 1970s, Keynesian ideas, which, to some extent, downplayed the connection between monetary policy and inflation, were at their peak. In Greece, during the second half of the 1970s and the 1980s, the central bank conducted monetary policy under difficult circumstances, as the policy mix was often inappropriate. Compounding the difficulty of the Bank's task was the fact that the financial system operated under a complex framework of rules and provisions, which not only proved ineffective, but also distorted credit allocation and limited the scope for conducting an effective monetary policy. The abolition of the Currency Committee in 1982 and the transfer to the Bank of Greece of its functions in the fields of monetary, credit and exchange-rate policies as well as banking supervision marked the beginning of a new era in the Bank's history.

With broader responsibilities, beginning in the mid-1980s and until the mid-1990s, the Bank of Greece undertook the leading role in the deregulation of the financial system. Financial liberalisation was a gradual process, however, so that the lifting of controls could take place in tandem with the restructuring of the economy and thus avoid the potentially destabilising effects of abrupt and sharp reversals of international capital flows. This strategy proved wise; in the 1990s many Asian economies, which had not given sufficient consideration to sequencing, were exposed to severe financial crises.

After financial liberalisation in Greece had been completed in the mid-1990s and up to entry into EMU and the adoption of the single monetary policy in January 2001, the Bank of Greece had at its disposal more effective and flexible market-oriented means of monetary control and was able to react quickly and effectively to changes in economic conditions.

The supervisory functions of the Bank have also changed considerably, shifting from the task of ensuring commercial banks' compliance with credit and exchange controls and regulations to the monitoring and evaluation of bank asset quality and the solvency and capital adequacy of these financial institutions.

During the late 1980s and the 1990s, a substantial shift occurred in thinking about the role of the central bank in the economy. Experience of past episodes of hyperinflation in various countries, as well as of moderate inflation (exemplified in the breakdown of the Bretton Woods system), led to the finding that monetary policy is not necessarily independent of the government of the day. Sometimes central banks have to finance government spending and this results in higher inflation and, ultimately, lower growth. Thus, the views that the goal of monetary policy should be to provide price stability and that the central bank should be made an independent institution in the pursuit of this goal gained ground.

These ideas underpinned the monetary policy of the Bank of Greece in the 1990s as it sought to support the effort to satisfy the Maastricht Treaty criteria and to join the euro area on 1st January 2001. The Bank's ability to attain its goals was considerably improved by the abolition, in 1994, of the monetary financing of the fiscal deficit, mandated under the Maastricht Treaty and the law, enacted in 1997, granting independence to the Bank of Greece with a mandate to achieve price stability.

In an effort to bring down inflation, in the mid-1990s the Bank adopted a "hard drachma policy", under which the exchange rate was used as a nominal anchor. Real interest rates were kept at high levels to help ensure the success of this policy. The hard drachma policy operated, at times, under difficult conditions, yet it proved highly credible and immensely successful. Ironically, the source of the difficulty was related partly to the success of the policy. The policy's credibility led to enormous inflows of foreign capital, complicating the conduct of monetary policy. The Bank was able to neutralise these inflows, absorbing excess liquidity and thus buying time for other policies to adjust. Within three years of the policy, inflation was more than halved, falling below 5 per cent, while economic growth accelerated sharply. The fiscal consolidation that took place beginning in the mid-1990s and moderation in wage increases contributed importantly to an increasingly sustainable policy mix, enhancing the credibility of monetary policy.

With the outbreak of the Asian financial crisis in late 1997 and its spread to other parts of the world, there were pressures on the drachma. The Bank of Greece initially raised interest rates to stem these pressures. Then, in March 1998, the drachma entered the Exchange Rate Mechanism of the European Monetary System, so that it could satisfy a Maastricht criterion, and was devalued to help maintain international competitiveness. Unlike the currency devaluations in many other countries around this time, the drachma's devaluation was not followed by the aftershock of a banking and financial crisis. A well-supervised Greek banking sector, with adequate prudential regulations in place, limited the exposure of commercial banks to foreign currency risk and therefore safeguarded the financial system.

In the years following the drachma's entry into the ERM, the Bank of Greece maintained a tight monetary policy so that the inflation criterion of the Maastricht Treaty could be satisfied. Fiscal policy continued to be tightened and wage restraint was maintained. With an ever-more-balanced policy mix, real economic growth accelerated. The rest is history. On 1 January 2001, Greece became the 12th member of the euro area, where price stability is entrusted to the independent European Central Bank and the Eurosystem.

The Bank of Greece is now part of a larger family, the Eurosystem, and continues to exercise extremely important functions. It is an integral part of the Eurosystem, which comprises the European Central Bank and the national central banks of the euro area. The Governor of the Bank participates in the ECB's Governing Council, which, among other things, sets monetary policy for the euro area. The Bank is responsible for implementing monetary policy in Greece and ensuring the smooth operation of the payments system which it runs and which is part of the EU's TARGET System. The Bank also is in charge of supervising the banking system and maintaining financial stability. With the opening of financial borders in the euro area, these functions will take on added importance in the coming years.

In carrying out its responsibilities successfully, the Bank has benefited enormously, in the present and in the past, from an extremely well trained and highly dedicated staff. In my view, this has been the key to its success.

Such has been the journey of the Bank of Greece during the past 75 years. As you can see, in common with the experiences of other central banks, the journey has not been without bumps and turns along the way. Yet, the history of the Bank demonstrates that the Bank has always fulfilled its obligations and, in so doing, it has earned the trust of the Greek citizens.

In the early part of the last century, the famous Swedish economist Knut Wicksell said that "Monetary history reveals the fact that folly has frequently been paramount; for it describes many fateful mistakes. On the other hand, it would be too much to say that mankind has learned nothing from these mistakes". I might add that in recent years we have learned a great deal from the mistakes of the past. As confirmed by the history of the Bank of Greece, the role of central banks, both institutionally and in actual practice, has been upgraded in such a way that it contributes to the improvement of living standards.

Ladies and Gentlemen, thank you for your attention.

Speech by Jean-Claude Trichet,
President of the European Central Bank

Mr. President of the Republic,
Mr. Prime Minister,
Messrs Ministers,
Dear Nicholas,
Dear Lucas,
Fellow Governors,
Ladies and gentlemen,

It is a great honour for me and an immense pleasure to be here on the occasion of the 75th anniversary of the Bank of Greece.

The Bank of Greece has been extraordinarily successful with all its long-standing responsibilities here. We heard the Prime Minister, we heard the Governor of the Bank of Greece. I would particularly praise the most recent period of time when, very wisely, with great success and, I would say, great steadiness, a policy of convergence that permitted the entry of Greece into the euro area was put into place.

I am also very impressed, I have to say, by the wisdom of Greece and of the Bank of Greece, when they decided to be sure that full convergence would be established before entry into the euro area. This idea of waiting until 1 January 2001, in order to be sure to have fully converged but also to be in time for the changeover to notes and coins, has really proved to be a very wise decision. A great success.

When I was a child, my professors —and I studied Ancient Greek, I'm the son and grandson of professors of Greek, Mr. President, Mr. Prime Minister— used to tell me when I was in my grammar school: "Σπεύδε βραδέως", which was considered a very important saying, capturing the wisdom of the Ancient Greeks and, also, I understand, of Greece today.

Let me make three short remarks. Because we are here in Athens, at the very roots of our civilisation, I cannot hide the fact that I am particularly moved – because of my education and tradition. This is certainly a time not only for celebration, but also for memory. Not only for the 75 years of memory that the Bank of Greece is celebrating today so wonderfully, but perhaps more – perhaps several thousand years. What we are doing today, peacefully, all over Europe, is the accomplishment of the Greek ideal of universality that is so visibly and beautifully captured in the concept of the Olympic Games. It is immensely satisfying to celebrate today the Bank of Greece which is a member of the European monetary team with the entire global constituency of central banks, with so many fellow Governors coming from all over the world, illustrating this universality that we are sharing.

Secondly, I would also say that it is a great time for rejoicing within the Eurosystem and the European System of Central Banks. We are a profoundly united monetary team, with a very good team spirit —as again Nicholas said— which is the legacy of Wim Duisenberg, our first President, my predecessor. And I have to say that with Lucas Papademos, the Vice-President, with all Members of the Governing Council, Members of the Board and fellow national central banks' Governors, we will maintain this legacy with great determination, because it is one of our major assets.

This celebration is also for me an occasion to praise the priceless contribution of the Bank of Greece —and I already mentioned the very great success of convergence of the Bank of Greece— pursuing sound monetary policy over time. But I have also to mention the changeover towards the new notes and coins which has been a success here, as it has been a success all over Europe, because we had a united team and that united team did a very good job.

We will continue to do so and, as was said a moment ago by the Prime Minister and by the Governor of the Bank of Greece, what we have to deliver to the full body of the euro area is a credible currency. A credible currency that will inspire the confidence of our own people, of the people of Greece, as well as of the people of Europe, of the Eurozone —the 305 million inhabitants that are our fellow citizens— and also, which will inspire the confidence of all economic agents in order to bring about a major contribution to growth and job creation.

And, lastly, I would also mention the formidable energy of the Bank of Greece and of Greece itself. Being here in Athens, this energy is visible everywhere: in the activity of economic agents, in the public works to prepare for the Olympics, in the very active preparation of these events, in the growth figures that we mentioned a moment ago and which are envied by other economies. We had a magnificent illustration yesterday of this energy and what it means, when we shared with "Zorbas" and Mikis Theodorakis this formidable display of vibrancy and of energetic beauty.

That is what I wanted to tell you, my dear Nicholas, and, in front of all your friends, in front of the President, the Prime Minister and Ministers, I would like to send my best wishes for many many years of success within this independent European monetary team, made of the independent European Central Bank and the independent national central banks. Independence means accountability, Mr Prime Minister, as you said, namely, in the case of a central bank, accountability vis-à-vis public opinion. Indeed, accountability vis-à-vis public opinion is the ultimate rule for those independent institutions that are central banks in modern democracies.

Thank you for your attention.

Speech by Lucas Papademos,
Vice-President of the European Central Bank

Growth and stability in Europe:
The role of monetary policy

Your Excellency the President of the Republic,
Mr. Prime Minister,
Dear Colleagues,
Ladies and Gentlemen,

It is both an honour and a pleasure for me to participate in the celebration of the 75th anniversary of the founding of the Bank of Greece. This ceremony, which is being graced by the presence of the President of the Republic and the Prime Minister, commemorates the birth of a great institution in Greece and an important member of the Eurosystem. It is also an institution close to my heart, as I spent a large part of my professional life at the Bank. I am, therefore, delighted to be, once again, among the former colleagues and old friends who have joined us here today. And we are all very pleased that this event is being attended by so many governors and other senior officials from central banks around the world.

Anniversaries are occasions for celebration and reflection. They are occasions for celebrating the accomplishments of the past and for reflecting on objectives and perspectives for the future. Indeed, anniversaries provide an opportunity to establish links between the past and the future: to set or reconfirm goals and strategies in order to meet future challenges in the light of past experience.

The Bank of Greece has, justifiably, many reasons to celebrate and feel proud of its achievements. The Bank is relatively young compared with some of the other European central banks – unless we count the time that has elapsed since the establishment of one of its forerunners: the Treasury of the City of Athens on the island of Delos, which was founded in the 5th century BC. In those days, however, they made no distinction between fiscal and monetary authorities. Classical Athens, therefore, did not respect a cardinal principle of central banking: the necessary division of responsibilities between those "who spend and tax" and those with the task of safeguarding the real value and stability of money. This was not considered essential at the time of commodity money. In modern times, the Bank of Greece, since its establishment 75 years ago, has contributed greatly to economic and social welfare in our country. The Prime Minister and the Governor both referred extensively to the Bank's contribution and there is no need for me to elaborate further. At present, the Bank can look forward to continuing this tradition of excellence in performing its tasks and attaining its goals. It will have to do so, however, within the new economic environment and the institutional framework which have been established as a result of the process of European integration and the introduction of our new, common currency, the euro.

In keeping with the character of today's event, I would like to take a long-term view and discuss some fundamental issues regarding the main objectives and tasks of central banks. I will concentrate on issues relating to monetary policy, the primary task of a central bank. These issues are also closely linked to the more general economic goals and policy challenges we are facing in Europe.

I. Growth and stability: some key policy issues

It is generally agreed that macroeconomic policy has two main objectives: high growth and low inflation. Indeed, policymakers have often argued that "the higher the rate of growth the better", without paying sufficient attention to the need to ensure the sustainability of growth. They have also argued that "the lower the rate of inflation the better", provided of course that the negative territory of deflation is avoided. In pursuing these objectives, policymakers must provide answers to a number of crucial questions:

- Are these two objectives related and interdependent?
- Can they be achieved simultaneously and sustainably using the available policy instruments or are they "competing" goals, necessitating difficult choices and welfare assessments regarding their comparative importance?
- Are the available policy instruments sufficient and effective as regards the attainment of both of these goals in the short term as well as in the long term?
- Is there an optimal assignment of policy instruments to the objectives, in the sense that one type of policy, such as monetary or fiscal, is more effective in controlling aggregate output and prices over time?

These questions have been debated both extensively and intensely in the past by policymakers, academics and commentators. A significant convergence of views regarding the appropriate answers has been achieved over the past twenty years. In fact, I believe that a consensus, which was particularly strong in the early 1990s, has been reached among economists and policymakers on some of these issues. This has led the political authorities to legislate mandates for central banks, which define their policy priorities, and to impose constraints on the conduct and stance of fiscal policies. The aim of these mandates and constraints is to help achieve the macroeconomic goals in an effective and sustained manner.

The Treaty on European Union and related EU Council decisions provide the most relevant example. The Treaty clearly defines the objectives and relative priorities of the European Central Bank and the European System of Central Banks. It unambiguously states that the "primary objective" of the single monetary policy is "to maintain price stability". It also states that, provided the attainment of this overriding objective is not jeopardised, monetary policy "shall support the general economic policies in the Community" so as to "contribute to the achievement of the Community's objectives". These include "sustainable, non-inflationary growth". Moreover, the Treaty and secondary legislation set constraints on budgetary positions over the medium term and define procedures which aim to prevent and correct deviations of such positions from the desired norms. The provisions of the Stability and Growth Pact were adopted precisely because it was accepted and agreed that budgetary discipline is necessary both for the support of the stability-oriented monetary policy and for the establishment of financial conditions conducive to sustained growth.

Nevertheless, changing economic conditions, especially the disappointing growth performance of the European economy in an environment of relatively subdued inflationary pressures, have rekindled the debate on the role of monetary policy in supporting economic growth. This debate has been partly triggered by the perceived greater attention to the growth objective paid by other central banks, notably the Federal Reserve System in the United States. It seems, therefore, an opportune time to reassess the general issues concerning instruments and policy goals referred to earlier, in particular the role of monetary policy in fostering sustainable growth while maintaining price stability. This assessment involves addressing several pertinent questions:

- Can monetary policy contribute to the attainment of higher long-term growth and, if so, how?

- Can monetary policy help stabilise the economic cycle, that is, can it help minimise short-term fluctuations in aggregate output around the economy's long-term potential growth path?
- What are the necessary conditions that must be established for a central bank to deliver price stability effectively and contribute to the attainment of faster growth?
- What is the role of economic policies —both fiscal and structural— in promoting growth? How can they support or constrain the conduct of monetary policy and its effectiveness in maintaining price stability and fostering growth?

I will answer these questions in general terms, but I will also focus on issues that are particularly relevant for the euro area.

II. Growth and stability: some facts and comparisons

The answers to the questions concerning the role of monetary policy in fostering faster growth combined with price stability are not only of general or theoretical interest; they are especially important and relevant to Europe at present, in the light of the unsatisfactory average growth performance of the European economy over the past twenty years, including the five years since the introduction of the euro. A few figures are sufficient to highlight this disappointing fact. Since the beginning of the 1980s, the average annual growth rate in the twelve countries that today comprise the euro area has been 2.1%. Dividing this period (1981-2003) into two sub-periods —the eighteen years before the launch of the euro and the five years (1999-2003) after its introduction— does not lead to a different conclusion. Indeed, it is noteworthy that average annual growth in the twelve euro area countries during these two sub-periods was almost the same. This figure compares unfavourably with the average annual growth of 3.1% in the United States over the 1981-2003 period.

Although trend growth has remained moderate in the euro area for more than twenty years, the progress made during the same period in attaining and maintaining price stability has been impressive. In the early 1980s, inflation had reached a level of almost 12% in the twelve euro area countries following the oil shocks of the 1970s and also as a result of the accommodative monetary policy pursued at that time. During the 1980s and 1990s inflation steadily declined, reaching a low of 1.1% in 1998 and 1999. In the five years (1999-2003) since the introduction of the single European currency, annual inflation in the euro area has averaged precisely 2%, in line with the ECB's definition of price stability. It is interesting to note that inflation developments in the United States have been broadly similar to those in Europe. Indeed, average inflation in the twelve euro area countries during the period 1981-2003 has been 3.9%, one third of a percentage point higher than the corresponding average in the United States, while in the five-year period following the establishment of the European monetary union the average annual inflation of 2% in the euro area has been one half a percentage point lower than the average annual inflation in the United States.

In Europe, the decline in inflation since the early 1980s and the maintenance of price stability since the late 1980s has to be attributed to the consistent anti-inflationary stance of monetary policy. The reduction of inflationary pressures both in Europe and worldwide has also been facilitated by globalisation, deregulation and technical progress, which have increased competition and enhanced productivity growth. Over the last five years, however, the euro area economy has been subjected to several sizeable adverse price shocks that have fuelled inflationary pressures. Overall, monetary policy has played a decisive role and proved effective in attaining and maintaining price stability in Europe as well as in the United States.

The facts and comparisons I have just presented point to a few additional conclusions. During this period of almost 25 years of disinflation and subsequently of price stability, the growth performance of the euro area economy has remained modest and unchanged on average. At the same time, aggregate output volatility has declined, an outcome that can largely be attributed to the effects of price stability. An environment of low inflation has supported economic growth, helped reduce output volatility and enhanced social welfare in many other ways as well. Nevertheless, it appears that conditions of price stability have not proved sufficient to achieve a higher rate of long-term growth in the euro area. Such conclusions, however, can only be tentative. In order to reach firm conclusions, we must examine thoroughly what economic theory and available empirical evidence can tell us about the role monetary policy can play in fostering growth while maintaining price stability.

III. Monetary policy and long-term growth

When assessing the role of central banks in fostering economic growth, it is important for conceptual and for policy reasons to distinguish between the potential effect of monetary policy on long-term growth and its influence on economic activity and the rate of growth in the short and medium term. One reason why this distinction is useful is that both theory and evidence suggest that long-term growth is determined primarily by non-monetary factors, at least under conditions of low inflation. Consequently, any permanent effects of monetary policy on trend growth are likely to be relatively modest, although monetary policy may have a significant impact on economic activity over the medium term.

According to neoclassical theory, long-term economic growth is fundamentally determined by exogenous factors: the rates of population increase and technological progress.[1] More recent endogenous growth models (for example, Romer, 1990 and 1994) relate technological progress to human capital, which can be enhanced by knowledge accumulation and investment in research and development. These, in turn, can be influenced by policy instruments, such as public investment and tax incentives. Reforms that improve the flexibility and adaptability of labour and product markets, as well as professional training and education, can also increase potential growth endogenously by raising labour utilisation and productivity growth. The prediction of theory that monetary policy may have only a modest effect on long-term growth does not imply that such an effect is insignificant. Even a small permanent impact on the annual growth rate, compounded over a long period, can lead to a significant change in living standards.

The contribution of monetary policy to long-term growth has long been the subject of theoretical and policy debates among economists. As in any theoretical discussion, the conclusions drawn depend on the assumptions built into the theory. In this case the assumptions regarding the role of money in the economy are crucial: whether it is assumed to be an asset that can facilitate the transfer of wealth across generations, a factor of production and a means of financing, or a factor constraining

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1 See Solow (1956 and 2000).

investment and consumption. The theoretical analyses concerning the effects on long-term growth of a permanent easing of monetary policy —i.e. the effect of a permanent increase in monetary growth and thus inflation— have not led to unambiguous and robust conclusions.

Some theoretical models, originating in a seminal contribution by Tobin (1965), imply that a permanent increase in monetary expansion can have a lasting, positive effect on growth. The reason for this is that higher inflation and the resulting lower own rate of return on money balances induce economic agents to shift a larger part of their wealth into real capital assets. This, in turn, generates an increase in the capital stock and a higher level of output per person in the long term. Even though this strand of theory has become more sophisticated and complete over the past few decades, serious questions still remain regarding the robustness of the findings and —most importantly— the plausibility of the underlying assumptions. Moreover, the positive relationship between inflation and long-term growth predicted by these models, if it exists in reality, must be valid for relatively low rates of inflation, otherwise we would reach the absurd conclusion that hyperinflation would drastically improve the real economy's performance.

Other theoretical paradigms support the view that "money is superneutral", namely that a permanent change in money growth has no lasting effects on real variables – such as real interest rates, capital accumulation and long-term growth. There are also theoretical models —based on alternative, more general assumptions about the role of money in the economy, incorporating features of endogenous growth theories and allowing for the presence of nominal rigidities in the economy (in the tax system, for example)— which lead to the conclusion that a permanently faster monetary expansion, causing higher inflation, results in lower capital accumulation and aggregate output growth. The wide spectrum of models and associated results has led economists to express the view that theory does not enable us to reach definite and robust conclusions about the likely effect of monetary expansion on long-term growth, since "equally plausible models yield fundamentally different results".[2]

2 Stein (1970) and Orphanides and Solow (1990) present comprehensive surveys of theoretical models of money and economic growth and both reach such a conclusion.

It may not come as a surprise to you that I, together with my central bank colleagues, have drawn a less agnostic conclusion.[3] There are several reasons for this. First, the theoretical growth models that employ more general and realistic assumptions regarding (i) the role of money in the economy, (ii) the factors and processes determining long-term growth, and (iii) the existence of institutional structures resulting in several kinds of nominal rigidities imply that a more expansionary monetary policy leading to permanently higher inflation will have, or is likely to have, a negative effect, or at best no effect, on long-term growth. Second, models of economic growth that incorporate the role of money and of monetary policy typically do not capture at all, or fail to capture adequately, the negative effects on economic activity and growth of the increased uncertainty caused by high, variable and unanticipated inflation. This uncertainty impairs the efficiency of market mechanisms and adversely affects real investment, capital formation and growth. Moreover, the distributional wealth and income effects of unanticipated inflation across generations and among social groups have arbitrary and undesirable consequences for social welfare and adversely influence saving and growth. In the real world, an economy experiencing higher average inflation is likely to be more prone to unanticipated fluctuations in inflation and thus to suffer their distributional consequences. Furthermore, inflation, even a low rate of inflation, can induce distortions resulting from its interaction with tax systems that are specified in nominal terms.[4] For all these reasons, it should be expected that a higher rate of inflation due to an expansionary monetary policy would reduce economic growth.

Theoretical arguments, however, as well as their underlying assumptions, can be challenged. Their validity must be tested on the basis of the available empirical evidence. Moreover, the quantitative significance of theoretical predictions regarding the impact of inflation on growth must be assessed. For we can all agree that "the proof of the pudding is in the eating". Most of the many empirical studies produced over the past two decades find that inflation and long-term growth are negatively related sys-

3 See Papademos (2003) for a more extensive review and assessment of the contribution of monetary policy to economic growth.

4 Fischer and Modigliani (1978) and Fischer (1994) present comprehensive accounts and analyses of the real effects and social welfare costs of inflation.

tematically.[5] As could be expected, the negative effects of monetary expansion and inflation on long-term growth are stronger when inflation is higher. It is worth noting, however, that recent studies have established the existence of a negative association between long-term inflation and growth, even when inflation is relatively low.[6] These findings, which are obviously of relevance to the European economies, demonstrate, to paraphrase the well-known warning to smokers, that "inflation is hazardous to the health of the economy" even in relatively small doses. Very few empirical analyses have estimated a positive long-term relationship between inflation and growth, which holds for very low rates of inflation. The robustness of these results, however, has been questioned.

The general policy conclusions that can be drawn from this review of economic theory and available evidence are twofold. First, monetary policy should not be expected to increase economic growth sustainably by tolerating higher inflation. On the contrary, an expansionary monetary policy resulting in higher average inflation can be expected to adversely affect long-term economic growth. Second, monetary policy can promote sustainable growth by maintaining an environment of price stability. The conclusion that monetary policy cannot raise long-term growth does not, of course, imply that it cannot influence economic activity over the medium term and that it cannot play a role in stabilising aggregate output fluctuations.

IV. Monetary policy, economic cycles and inflation dynamics

Can monetary policy help stabilise the economic cycle? And if a counter-cyclical monetary policy were feasible, would it also be desirable, in the sense that it could be implemented effectively without jeopardising the attainment of price stability? These questions have been widely debated since Keynes (1936) made the case for stabilisation policies in general and for assigning a stabilising role to monetary pol-

5 Barro (1997) and Fischer (1994) discuss the empirical evidence on the long-term relationship between inflation and growth.

6 Andrés and Hernando (1999) have shown that there is evidence of a robust negative relationship between inflation and long-term output growth in countries with low inflation.

icy in particular, at least under certain circumstances. This debate is still alive and occasionally intense among academic economists, as indicated by a recent important paper by Robert Lucas (2003), as well as among policymakers and commentators. In Europe, this debate has also been fuelled by the weak performance of its economy in recent years.

Before addressing the feasibility and desirability of a counter-cyclical role for monetary policy, it is useful to assess briefly the need for and the scope of such a role. Raising this issue may seem surprising, given the cyclical behaviour of economic activity over the last three years in Europe and globally. A longer-term assessment is warranted, however, since the potential for stabilisation policies depends on the size, nature and causes of cyclical output fluctuations. Several recent studies offer evidence that aggregate output volatility has steadily declined and recessions have become milder in most industrial countries over the past twenty years, with the notable exception of Japan. The apparent moderation of the economic cycle is attributed to several factors: the increasing relative importance of services in aggregate output, continuous advances in information technology fostering higher productivity growth, improvements in inventory management, and the stabilising effects of globalisation, financial liberalisation and macroeconomic policies. In particular, the successful disinflation of the US and European economies achieved in the 1980s and 1990s and the focus of monetary policy on securing price stability have significantly contributed to reducing aggregate output volatility.

The trend decline in aggregate output volatility in industrial countries would seem to limit the scope for a counter-cyclical monetary policy. Nevertheless, the magnitude, frequency and effects of several types of shocks, for instance oil shocks, cannot be predicted on the basis of past experience. Furthermore, recent developments suggest that some other sources of instability may become more relevant. For example, large swings in asset prices to levels which deviate substantially from estimated equilibrium values consistent with fundamentals and the rapid growth of debt in a number of large economies may trigger or accentuate real output fluctuations. In fact, pronounced output fluctuations in industrial countries have often been associated with asset price cycles. Hence, there is renewed interest in the potential stabilising role of monetary policy, especially in an environment of low inflation.

The feasibility and effectiveness of a counter-cyclical monetary policy hinges, of course, on whether it can influence aggregate real output significantly and in a reasonably predictable way over the short and medium term. The theoretical analyses and empirical investigations concerning this issue are extensive. Given the time constraint, I neither intend nor dare to provide even a brief review of the alternative theoretical approaches which have been employed, the sometimes conflicting results which have been presented, and the opposing views which have been expressed concerning their policy implications.[7] I will limit myself to some key, and by now generally accepted, conclusions drawn from modern theory and the available empirical evidence, particularly for the euro area economy.

These conclusions are based on a consensus theoretical macroeconomic framework, which combines both neoclassical and New Keynesian elements. It captures the behaviour of forward-looking economic agents who attempt to take optimal decisions over time and have "rational" expectations that are based on all available information, including the anticipated behaviour of policymakers. At the same time, it allows for market imperfections and nominal rigidities, which play an important role in shaping the dynamics of aggregate output and inflation and hence the transmission of the effects of monetary policy on the economy. This framework has provided the basis for many econometric models used by central banks, including the European Central Bank, in analysing and simulating the dynamic behaviour of output and prices and their links with the instruments of monetary policy.

The consensus macroeconomic theory and the empirical evidence support the view that, in general, monetary policy can significantly influence economic activity in the short and medium term. The magnitude of the effects of monetary policy on the economy and the time lags in their transmission depend on a host of factors: behavioural parameters, structural and institutional features of the economy that can affect the nature and speed of market response to shocks and policy changes, as well as the expectations of the public regarding future developments and policies. Needless to say, the values of these parameters are not known with certainty and they may also

7 Papademos (2004) examines and assesses the theoretical analyses and the empirical evidence concerning the feasibility and effectiveness of a counter-cyclical monetary policy.

vary over time partly as a consequence of the cyclical position of the economy. Furthermore, the nature and formation of the public's expectations are of crucial importance in shaping the dynamics of the monetary policy transmission mechanism. Thus, both the magnitude of and the time lags in the effects of policy on the economy are uncertain and variable, partly as a result of the influence of various factors, including the effects of policy-induced changes in expectations.

What does the available empirical evidence tell us about the features and dynamics of the monetary policy transmission mechanism? Many empirical studies have been carried out concerning this mechanism for the United States and other industrial countries. The available evidence for the euro area economy is new and relatively limited. Yet, the results obtained by researchers at the European Central Bank and other central banks of the Eurosystem are significant and relevant, including the finding that there are remarkable similarities in the cyclical behaviour of the economies of the euro area and the United States and in the response of each to monetary policy.[8] I would like to briefly mention a few additional general findings. First, a change in the monetary policy stance, i.e. a change in the central bank's policy rate, leads to an adjustment in aggregate output that reaches a peak after a period of between one and two years and then gradually diminishes to zero. The effect on the price level of a change in the policy stance is typically estimated to be much more gradual, but permanent. Second, these patterns of aggregate output and price level responses emerge consistently across a variety of empirical models. But the time profile of the effects of monetary policy on aggregate output and the price level cannot be estimated with precision. Third, the magnitude of these effects depends on the cyclical position of the economy, on the initial interest rate level and on whether the change in the policy stance is expansionary or restrictive.

The implications of the consensus theoretical framework and the bulk of the empirical evidence for the scope and effectiveness of a counter-cyclical monetary policy can be summarised as follows. Although monetary policy can in principle play a stabilising role, in practice the conduct of such a policy is difficult and requires considerable caution. It may also prove not to be very effective in dealing with aggregate

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8 See Angeloni, Kashyap and Mojon (2003) and Papademos (2004).

output fluctuations. It may even be counterproductive, in the sense that it could lead to an increase rather than a moderation of aggregate output volatility. The effectiveness of a counter-cyclical monetary policy is limited by the uncertainty surrounding the magnitude of and the time lags in its effects on aggregate output. Other limiting factors are the uncertainties in assessing the precise cyclical position of the economy (the size of the "output gap"), in identifying the type and persistence of shocks and in evaluating their impact on the economy. One reason why it may not be desirable for monetary policy to play an active stabilisation role is that there is evidence that a large part of output volatility can be attributed not to nominal or demand shocks, but to "real" shocks, for example those related to technological change, which cannot be effectively offset by monetary policy.[9]

These considerations have led me to the conclusion that the conduct of an activist counter-cyclical monetary policy aimed at fine-tuning the economy involves risks which are likely to outweigh potential benefits. A policy of this type should therefore be avoided under "normal circumstances", namely when the central bank is confronted with cyclical fluctuations of average magnitude. Nevertheless, it is possible to envisage "particular circumstances", triggered by severe shocks, when monetary policy can play a role in stabilising output around its potential growth path. Such a policy would have to be implemented with great caution and in a manner that is consistent with the central bank's commitment to its primary objective of maintaining price stability. It would also have to be explained in a clear and convincing way, so that the monetary authority's credibility and the public perception of its commitment to price stability would not be adversely affected.[10] Past experience shows that there have been occasions when monetary policy has successfully played a stabilising role. There have also been many occasions, however, when ambitious attempts to fine-tune the economy have failed and resulted in increased inflationary pressure and output volatility.

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9 See Lucas (2003).

10 Blinder (1998) discusses the notion of central bank credibility and its importance for the effective conduct of monetary policy. Lohmann (1992), Persson and Tabellini (1993) and Rogoff (1985) analyse the effects of institutional arrangements on the credibility of a central bank's commitment to its objectives.

V. The role of monetary policy

The foregoing review and assessment of theory and available evidence leads to a number of general conclusions regarding the impact of monetary policy on the economy and its role in securing price stability and fostering economic growth. The empirical evidence overwhelmingly confirms that monetary policy can effectively control the price level over the medium and longer term. Inflation may not be everywhere and always a monetary phenomenon, as Milton Friedman once claimed. Nevertheless, inflation is fundamentally a monetary phenomenon, in the sense that monetary factors and central bank policies dominate and determine the evolution of the price level over time. Consequently, it stands to reason that monetary policy is assigned the attainment and maintenance of price stability as its primary objective.

The performance of this task is not straightforward, however, because the dynamics of inflation are complex, especially in the shorter term, being influenced by a variety of non-monetary factors and policies. Moreover, the relationship between inflation and monetary policy instruments is also complex and surrounded by uncertainty. As I explained earlier, it partly depends on developments in the real economy and is crucially influenced by the private sector's inflation expectations, which affect price and wage-setting, as well as financial market developments. These expectations are largely shaped by the actions —current and anticipated— of the central bank. Hence, the formulation and conduct of monetary policy is inevitably based on imperfect knowledge of a complex monetary transmission mechanism. Monetary policy must guide and anchor the private sector's inflation expectations to the objective of price stability. To this end, it must have a forward-looking and medium- to longer-term orientation. Policy decisions cannot be based solely or primarily on current developments and short-term considerations. They must be consistent with and conducive to ensuring price stability over the longer term. This is a challenge for central banks. Hence, the effective conduct of monetary policy requires their continuous and credible commitment to the stability objective and the support of other policies.

With regard to the effects of monetary policy on economic activity, on the whole theory and evidence support the view that it cannot have a direct positive effect on the long-term rate of growth, although it can promote growth indirectly by establishing an environment of price stability. In contrast, an over-ambitious, expansionary monetary policy aimed at supporting growth above the economy's productive potential is bound to fail. In fact, if it persists, it will adversely affect trend growth, on account of the rising inflation it will generate. Over the medium term, a change in the monetary policy stance can have a powerful effect on the level of economic activity, but this effect diminishes and dissipates over time. The available empirical evidence in general, and for the euro area in particular, implies that monetary policy cannot affect either the rate of growth or the level of aggregate output in a systematic and permanent manner. Price level and aggregate output developments are therefore not interdependent and cannot be controlled simultaneously by monetary policy alone in the long term.

The preceding arguments lead to two additional conclusions regarding the role of economic and monetary policies, which are particularly relevant for Europe. First, they confirm the appropriateness of the ECB's mandate, which assigns price stability as the primary objective of monetary policy. Second, they also confirm the relevance and validity of an important principle of economic policy, advanced by Jan Tinbergen (1956), who was awarded the first Nobel Prize for economics. According to this principle, in order to simultaneously achieve the two policy objectives of price stability and sustainable high growth, which ultimately are not interdependent, it is necessary to employ at least two policy instruments that can have an independent impact on these variables. The optimal assignment of policies to objectives should depend on their relative effectiveness in influencing aggregate output and the price level systematically and permanently.

VI. The effectiveness of monetary policy and the role of economic policies

The main policy for increasing long-term growth in Europe is structural reform geared towards improving productivity growth and labour utilisation in order to raise potential growth and enhance the international competitiveness of the European economy. Reforms should aim to remove the remaining obstacles to the completion of the single European market, strengthen competition and facilitate the efficient functioning of market mechanisms. Moreover, the implementation of policies and reforms that can help boost investment in human and physical capital and support innovation and entrepreneurship will contribute decisively to raising trend economic growth.

The Lisbon reform strategy, which aims to make the European Union the "most competitive and dynamic knowledge-based economy in the world by 2010" remains broadly appropriate. It could be more effective if it were more focused on a number of key priorities. The crucial issue, however, is to implement the envisaged reforms in a timely and effective manner. The pace of implementation and the scope of reforms have been rather disappointing until this year, when some progress was made towards addressing the structural weaknesses of the European economy, notably in labour markets and in pension and health care systems. More comprehensive and determined reform efforts will be needed, however, if the objectives of the Lisbon strategy are to be achieved.

The structural reforms envisaged in Europe will not only increase its long-term growth and improve its international competitiveness. They will also enhance the effectiveness with which monetary policy can achieve its objective of price stability. By raising productivity growth and increasing the efficiency and flexibility with which labour and product markets respond to shocks and policies, structural reforms will favourably influence the monetary transmission mechanism. This will enable monetary policy to offset or mitigate the effects of shocks and preserve or restore price stability faster and with reduced aggregate output volatility.

The twin objective of price stability and faster durable growth in Europe cannot be secured, however, by assigning primary responsibility for price stability to monetary policy and for sustainable growth to structural reforms. It is also essential that prudent national budgetary policies complement and support the ECB's monetary policy and the structural adjustment efforts. Fiscal policy has an important role to play in the implementation of the structural reform agenda via growth-enhancing spending measures, a reduction in government expenditure that can cause inefficiencies and market distortions, the introduction of pension and health care system reform, and the establishment of a tax system and incentives that can promote investment. Sound public finances are necessary not only in order to support the stability-oriented single monetary policy over the medium and longer term, but also because they are conducive to faster sustainable growth. There is ample evidence to support this statement. Furthermore, the experience of a number of countries demonstrates that credible medium-term fiscal consolidation policies have often been followed by an acceleration of growth as a result of increased investor and consumer confidence and the implementation of budgetary measures that promote economic efficiency and restructuring and reduce the fiscal burden on the economy.[11] At the current juncture, when public finances in a number of Member States have seriously deteriorated, in some cases breaching the 3% of GDP deficit limit of the Stability and Growth Pact for a number of years, there is an urgent need for substantial and timely corrective measures in line with the requirements of the Pact. It is especially important for the strengthening of the long-term growth performance of the European economy not to undermine the effectiveness and credibility of the Pact as a framework that can ensure sound public finances over the medium and longer term.

VII. Concluding remarks

As I noted at the beginning of my speech, anniversaries such as this one are occasions for celebrating past achievements and reflecting on what lies ahead. The latter part is especially challenging, however. Two and a half millennia ago, Thales of Miletus proclaimed that "the past is certain, the future obscure". It need not be that daunting, despite the uncertainty with which a forward-looking monetary policy is inevitably confronted. This is because we have learnt from the past, from mistakes and successes. Central bankers and the economics profession have investigated causes and effects, tested hypotheses and analysed dynamics and processes. As I have illustrated extensively, we have reached sound and firm conclusions about the role of monetary policy in attaining the objectives of price stability and durable economic growth. Moreover, these insights are enshrined in the "monetary constitution" of Europe, which provides a solid foundation for this Bank, and the Eurosystem as a whole, to successfully master the challenges of the future. So when, in another 25 years' time, the Bank of Greece celebrates its 100th anniversary, future speakers

11 See Alesina and Perotti (1996) and Briotti (2005).

might wish to delve into the archives to see what was said back in 2003. My anniversary wish for this institution is that they will be able to repeat my opening remark: "The Bank of Greece has, justifiably, many reasons to celebrate and feel proud of its achievements."

Thank you very much for your attention.

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