Monetary policy in Greece 1990-2000 through the publications of the Bank of Greece[1]

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Introduction

For the purposes of democratic accountability, as well as in order to promote economic research, the Bank of Greece produces every year a series of texts which are published. According to its Statute (article 5B), the Bank of Greece has an obligation to submit to the Greek Parliament, as well as to the Greek Cabinet, a *Monetary Policy Report*, twice a year (usually in the first and in the last quarter of the year). Traditionally (and consistent with article 12 of its Statute), the Bank of Greece publishes an *Annual Report of the Governor*, in the context of the Annual General

1 Any views expressed in this article are ours and do not necessarily coincide with the position of the Bank of Greece. We are exclusively responsible for any remaining errors. We thank the Monetary Policy Council for remarks. We owe thanks to H. Gibson for numerous constructive comments. We owe gratitude to Deputy Governor N. Paleocrassas, to the Director of the Statistics Department G. Simigiannis, to Director-Adviser G. Tavlas, to P. Valadimas and (especially) to our colleague Professor S. Brissimis, for initiating us, over roughly the last ten years, in the "Mysteries" of monetary policy in Greece. Many of the aforementioned have read, commented upon and guarded against error, this article. We also wish to thank, for various comments and clarifications and for generous provision of statistical information, Director P. Kyriakopoulos, and many colleagues from the Monetary Policy Department including N. Kotinopoulos, S. Kekatos, E. Gatzonas, A. Filippides, J. Grigoratou, K. Nonika and those in the Secretariat of the Banking and Credit Committee for making their archives available to us. We also thank Director P. Pliatsikas and J. Bounas of the Foreign Exchange Department for their comments as well as I. Dedemadis, of the Printing Works of the Bank, for providing to us useful statistical data. The Director of the Economic Research Department I. Sabethai has given us valuable help with his comments. Colleagues from the Economic Research Department —too many to mention individually here– have aided us with statistical data, their archives and advice. Among these colleagues we should not fail to mention all those working in the Money and Banking Division and those working in the Publications and Translation Section, especially G. Nikolaidis and A. Procopaki who undertook the editing of our manuscript and improved substantially our draft as well as E. Antonoglou who helped us with the translation to English. Thanks are also due to the colleagues in the Monetary and Financial Statistics Division of the Statistics Department. Finally, we ought to thank A. Kalogridis for carrying out, with great care, numerous support tasks required by our research, and D. Papadopoulou for her corrections and her sympathy.

Meeting of Shareholders, once a year at the end of April. The Bank also[2] publishes an *Economic Bulletin* twice a year, in June or July and in December.

Up to and including the year 2000, the Reports of the Bank of Greece are devoted mainly to analysing monetary policy in Greece. The Reports describe, analyse and interpret current developments and enumerate policy measures. Every year, *Monetary and Credit Policy Measures*, as well as *Measures Concerning Capital Movements and Current Transactions* (of the balance of payments), are listed in annexes to corresponding chapters of the *Annual Report of the Governor*, based on relevant Acts of the Governor/of the Monetary Policy Council (or, less frequently, on Decisions of the Monetary/Banking and Credit Committee). The *Monetary Policy Report*, too, contains a similar annex.

The Acts of the Governor themselves could be viewed as "texts" of the Bank of Greece of a legislative nature —certainly they constitute secondary legislation in the Greek legal order— which are publicised and, for our purposes, determine with precision the changing institutional milieu within which monetary policy was being carried out in Greece during the period 1990-2000 and earlier. In addition, the Acts specify crucial parameters, such as the interest rates on the standing facilities of the Bank of Greece. Finally, the Governor and the Deputy Governors of the Bank of Greece often give public speeches to promote the transparency of monetary policy and to inform the public. A small number of these speeches finds its way in the *Economic Bulletin*. We consult these speeches, too, in order to illuminate characteristically certain aspects of monetary policy in Greece in the period under review.

Nevertheless, the *Economic Bulletin* mainly contains research papers. In deference to the freedom of scientific research, the papers appearing in the *Economic Bulletin* express personal views of their authors, which do not necessarily coincide with the policy views and positions of the Bank of Greece. In this regard, the content of the papers and the articles in the *Economic Bulletin* differs essentially from that of the *Annual Report of the Governor* and of the *Monetary Policy Report*. Even so, references to research papers in the *Economic Bulletin* are useful for our purposes to the extent that the papers revolve around issues and questions which are being confronted by the Bank of Greece and to the extent that their findings shed light on the standard positions of the Bank. Our limited references to papers included in the volume with the title *"Greece's Economic Performance and Prospects"*, which was published jointly by the Bank of Greece and the *Brookings Institution* in 2001, serve an identical purpose.

The production process for the Reports of the Bank of Greece is lengthy, involves high standards and takes up a substantial proportion of the time of the Governor and the Deputy Governors of the Bank, as well as of the members of the Monetary

2 This article does not attempt an exhaustive examination of *all* publications of the Bank of Greece, which include various statistical bulletins, while research essays and lectures of distinguished guests of the Bank, etc., have also been published on occasion. In Table 7, we cite brief quotations from the monograph by D. Halikias (who, at the time of writing the monograph, was the Economic Adviser of the Bank and was later to become its Governor) entitled *Possibilities and Problems of Credit Policy: The Greek Experience*, which was published in Greek in 1976 in the series "Bank of Greece Papers and Lectures" where *"opinions expressed do not necessarily reflect the views of the Bank"*. A revised version of this book was published *in English* by New York University Press in 1978 under the title *Money and Credit in a Developing Economy: The Greek Case*.

Policy Council. A large number of staff are involved in this process, ranging from the authors to the printers in the Printing Works Department of the Bank. The Department of the Bank of Greece which is most closely and directly competent for the compilation of the Reports, and of several other publications, is the Economic Research Department. Occasionally parts of the Reports are written by different Departments. In any case, the contributions and support of other Departments of the Bank, apart from Economic Research, is indispensable.

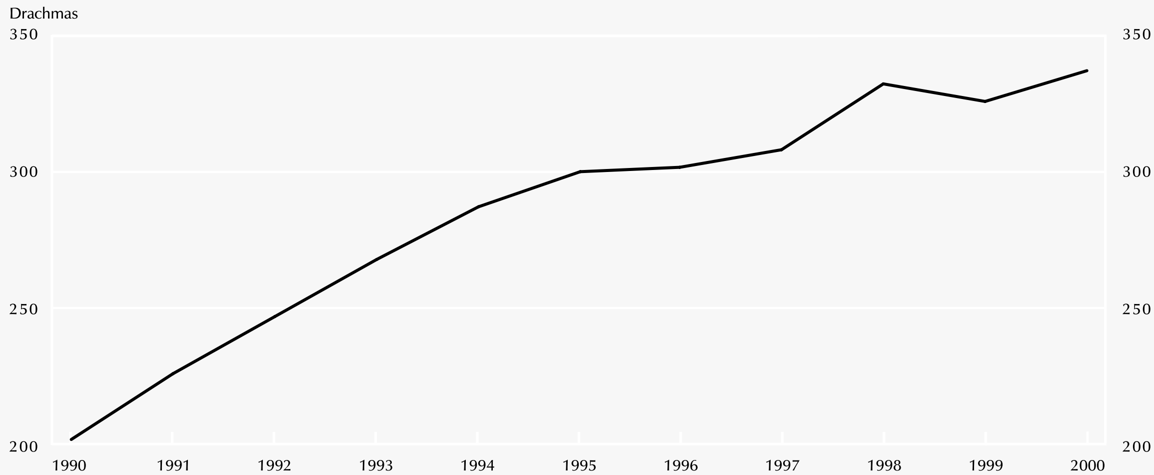
As noted already, the Reports of the Bank of Greece come out at regular intervals. During the period 1990-2000, the *Annual Report of the Governor* (before 1998 the *Economic Bulletin* too) and the *Monetary Policy Report* addressed to the Greek Parliament review *recent* economic developments and announce policy to be pursued in the immediate future. In other words, these publications of the Bank refer to a relatively short time-horizon. Here lies the *"raison d' être"* and the usefulness, we hope, of this article.

This article attempts to identify the common thread running through the publications of the Bank, the analytical framework and the generally acceptable principles, including value judgements, which inspire the argumentation of the Bank of Greece, *as far as monetary policy is concerned directly*. Which are the phenomena singled out repeatedly and which are the observations made by the Bank of Greece year after year? For example, every year the Bank of Greece set an intermediate target for monetary policy; over a long period, the Bank effected stepwise adaptations to its operational framework, in order to bring it into line with the operational framework of the Eurosystem; for many years, capital inflows created difficulties for monetary policy in Greece; it was attempted to temper these difficulties, among a number of measures, by widening the reserve base and by increases in the reserve ratio; every year, the Bank of Greece noted the instability of money demand in Greece and, often in the past, the Bank pointed out the side-effects generated by the fact that monetary policy bore the burden of stabilising the Greek economy almost exclusively on its own.

The identification of regularities and systematic patterns in the past, which we shall attempt here, is useful for the economic researcher. Before formulating a hypothesis about the behaviour of the monetary authorities for empirical testing, the researcher must form a view about which characteristics of the institutional framework of monetary policy persist over the years. For example, it makes a difference for the choice of analytical model to be applied by the researcher, whether the supply of money is taken as the intermediate target of the Bank of Greece rather than the exchange rate. It makes a difference for the choice of model whether administered interest rates came in the form of rate floors rather than rate ceilings. The researcher is also interested whether institutions changed at some point in time so much that there took place a shift in the structure of the economic environment. Finally, it is worth devoting some time and effort in order to record the historical continuity and institutional memory of the Bank of Greece. Making sense of the past must be an element in the "introspection" of any organisation such as the Bank.

Even a simply cumulative presentation of the past is informative in a world where reports have, in

Chart 1
Exchange rate of the drachma against the ECU (1990-1998)/euro (1999-2000)[1]
(Annual average)



1 Ascending curve=depreciating drachma.

their majority, a one-year horizon. Showing long and consistent series of economic data in a single diagram, which covers, e.g., an entire decade, instead of a sequence of individual annual diagrams, each with a different scale, often suffices to convey a complete picture and to provide insight into the "essence" of things.[3]

In the present article, we confine analysis to the decade 1990-1999, but make some reference to the year 2000 too, when developments initiated in Greece earlier came to completion. Any selection of time period to focus attention on is, to a certain extent, arbitrary. Time does not divide itself in the sub-periods which are distinguished by the historian.[4] We thought it would be reasonable to concentrate on the decade of the 1990s because, on the one hand, a *decade* is, of course, a conventional subdivision of time and, on the other hand, we had at our disposal an abundance of material for this particular period (including personal "testimonies").

At any rate the decade of the 1990s proved of especial significance for the Greek economy, it was the decade of convergence. The 1990s was a period during which the Greek economy improved its performance with respect to most economic indicators impressively so as to manage, in the face of judgement by strict criteria, to join the European Monetary Union. During the 1990s, Greece was endowed with a modern financial system and the Bank of Greece acquired state-of-the-art monetary policy instruments and procedures.

3 Here lies the usefulness of, e.g., the collection of 27 charts and brief comment published by the Bank of Greece under the title: *Greece on the Threshold of EMU: A Graphical Representation of the Greek Convergence Progress* (Athens: Bank of Greece, 2000).
4 However, we should not forget the findings of Garganas and Tavlas (2001), which corroborate and augment earlier statistical results to the effect that the year 1994 constitutes a *natural boundary* dividing time into two periods, each characterised by dissimilar structure of the policy regime in Greece, the period before the "hard drachma policy" and the period of the "hard drachma policy".

International organisations have often praised the achievement of Greece: Comparing with the beginning of the nineties, by 1999 the rate of inflation had been reduced by 18 percentage points (see Chart 4); starting from an annual rate of depreciation of the exchange rate against the ECU over 11%, by 1999 we had reached the eve of the irrevocable "locking" of the drachma against the euro (see Chart 1); at the same time, the general government deficit as a proportion of GDP had been reduced by 14 percentage points.

This article relies more than usual on prior and primary work, indeed on the work of colleagues who, year after year, documented and analysed through the pages of the publications of the Bank of Greece the great effort made by Greece to converge. It is, therefore, fitting to dedicate this article to the colleagues who compiled the texts of the Bank of Greece expertly.

1. Ultimate objectives and intermediate targets of monetary policy in Greece

Inflation reduction naturally took a prominent position among the ultimate objectives of the monetary policy of the Bank of Greece announced in the course of the period 1990-2000, see Table 1. The Bank aimed at containing inflation[5] to a value which was set progressively lower year after year in the nineties. Since 1998, the Bank of Greece began to set the inflation ultimate objective for a horizon two years ahead so as to better take into account lags intrinsic in the operation of monetary policy.

At the beginning of the nineties (pre-1993), monetary policy in Greece is assigned objectives additional to the reduction of inflation. GDP growth, balance on international payments and banking liberalisation were referred to as such additional aims.[6] Later (in 1998), European Central Bank (ECB) terminology is espoused by the Bank of Greece according to which the central bank may support the "general economic policies" of the government without, however, prejudice to price stability.[7]

Throughout the decade of the 1990s,[8] interest rate policy was oriented, with an increasing degree of determination, to hit an exchange rate target (see Chart 1) which was publicly announced by the Bank of Greece on an annual basis, see Table 2.

5 In the context of the harmonisation of Greek legislation and of the Statute of the Bank of Greece to the Treaty on European Union (the Maastricht Treaty), in December 1997 it was determined by article 1 para. 1 of Greek Law 2548 ("Provisions relating to the Bank of Greece") that: "*The primary objective of the Bank of Greece shall be to ensure price stability. Without prejudice to this primary objective, the Bank shall support the general economic policy of the government.*"

6 *"**Monetary policy for 1991**: In the context of overall economic policy ...monetary policy for 1991 seeks to contribute to the deceleration of inflation and to the attainment of external balance. At the same time, the process leading to the complete deregulation of the banking system and the further development of money and capital markets is continuing", Annual Report of the Governor for 1990*, p. 32.

7 Moreover, in the period 1991-1996, the Bank of Greece stated explicitly that the ultimate inflation objective as well as (the values for) the monetary target and the exchange rate target (1995 onwards) were set consistently with the normative projections of the Greek Government (usually incorporated in the Convergence Programme).

8 *"Interest rate policy will remain the basic means of ...ensuring that exchange rate policy retains its disinflationary stance", Annual Report of the Governor for 1990,* pp. 33-34.

"Exchange rate policy in 1991 retained its disinflationary stance, as it did not fully offset the inflation differential between Greece and its trading partners. On the basis of the weighted exchange rate index compiled by the Bank of Greece, the drachma depreciated by 11.2 per cent in 1991, at average annual levels. This rate of depreciation was about one percentage point less than the inflation differential between Greece and its trading partners", Annual Report of the Governor for 1991, pp. 18-19.

Table 1
The monetary policy strategy of the Bank of Greece: Ultimate objectives 1990-2000

1990	To contribute to the achievement of the central aims of economic policy, i.e., to strengthen aggregate output growth, to contain inflation[1] and to support the balance of payments.
1991	To contribute to disinflation and to equilibrating the basic balance of payments. The liberalisation of the banking system and the development of the money and capital markets continue in parallel.
1992	To support the general economic policies for stabilisation. The liberalisation of the banking system and the development of indirect methods of monetary control to continue.
1993	To further reduce inflation.
1994	To further reduce inflation.
1995	To further reduce inflation based on the Consumer Price Index (CPI) to 7% by the end of 1995. Without prejudice to this ultimate objective, monetary policy to contribute to the creation of monetary conditions supportive of aggregate output growth as targeted by the Government.
1996	To further reduce inflation based on the Consumer Price Index to 5% by the end of 1996.
1997	To further reduce inflation based on the Consumer Price Index to less than 3% by the end of 1998, thus creating conditions for sustainable output growth.
1998	To achieve price stability, i.e., to further reduce inflation based on the Consumer Price Index to below 2% by the end of 1999.
1999	To establish price stability "on time" within 1999.
2000	To restore price stability.

1 A decrease in inflation was not considered to be feasible in that year.

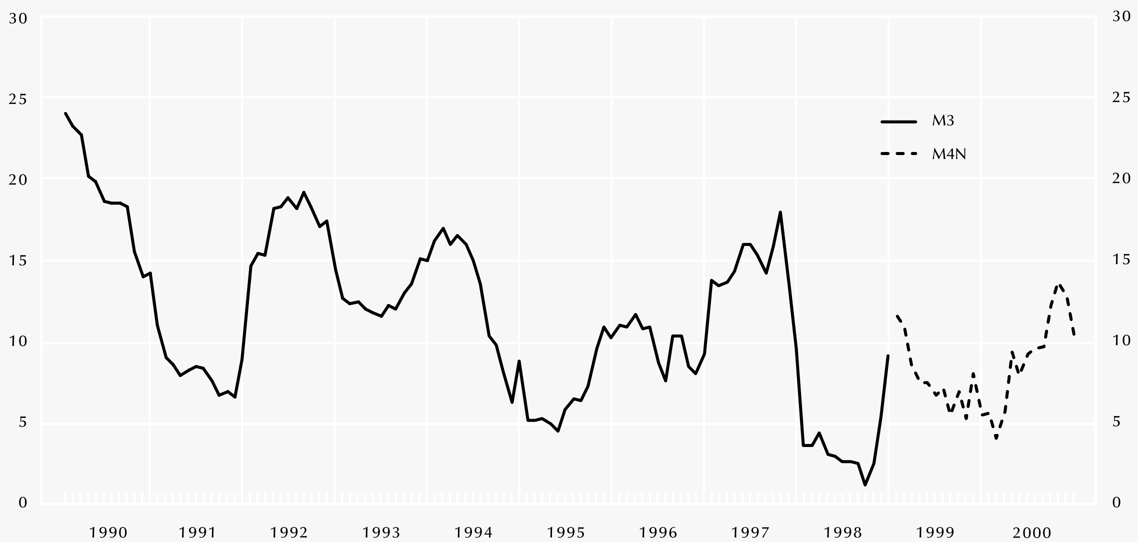
Early in the nineties (e.g., in 1991), the exchange rate target was expressed in terms of the nominal effective exchange rate of the drachma. The Bank of Greece sought to limit the effective depreciation of the drachma below the inflation differential between Greece and trading partners.

Later (since 1995) the exchange rate target aimed, at first, to limit the depreciation (the so-called "slide") of the drachma – in subsequent years to ensure broad stability of the drachma, against the ECU or against "the constituent currencies" of the ECU. Following entry in the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) in 1998, it was aimed to keep the drachma stable around the central parity. However, it was additionally specified by the Bank of Greece that drachma appreciation over the central

Chart 2

Money supply M3 (Jan. 1990-Dec. 1998) and liquidity indicator M4N (Jan. 1999-Dec. 2000),[1] in Greece

(Percentage change in outstanding amount of M3/M4N in comparison with corresponding month of previous year)



1 M3: currency in circulation, sight, savings and time deposits (in drachmas), repos and bank bonds. M4N: M3 *plus* private sector investments in Greek Government securities (in the primary or secondary market) with maturities up to one year or in money market fund units (in drachmas) *plus* bank deposits of residents in foreign exchange. The chart shows the twelve-month growth rate of M3 for the period 1990-1998 during which the Bank of Greece set a target range or monitoring range for this monetary aggregate. Note that M3 does not include repos or bank bonds before the year 1992. For the period 1999-2000 the chart shows the twelve-month growth rate of M4N because then the Bank of Greece set a monitoring range for this latter aggregate (and not M3).

parity could be allowed if required to facilitate disinflation domestically. In 1999 this position was confirmed, while in 2000 it was acknowledged that interest rates in Greece and the exchange rate would have to be left to converge gradually, during the second half of the year, respectively to the levels prevailing in the euro area and to the euro conversion rate of the drachma (irrevocably fixed since 1 January 2001).

The exchange rate target in Greece coexisted with monetary and (calculated consistently with the former) credit targets (see Charts 2 and 9), which became gradually tighter in the course of the decade of the 1990s, see Table 2. However, from the beginning of the decade (as early as from the *Annual Report of the Governor for 1990*), the Bank of Greece increasingly recognised that monetary aggregates (credit aggregates too) might not be related to the final objective of monetary policy or to nominal incomes in a stable fashion, see Table 3.

Money demand instability in Greece was attributed by the Bank generally to deregulation of the banking system (which was in its final stages then, see Table 7) or specifically to capital movement liberalisation (see Table 5) as well as to financial innovation while, on occasion, changes in the supply of Greek Government securities (reflecting modifications in public debt management policy, late in the decade of the 1990s) and tax factors also seemed to be causing shifts in portfolio allocation. For example, monetary developments in Greece were affected by the imposition of a tax on bank deposit interest (1991), and later on interest from Greek Government securities (1997), by the sub-

Table 2

The monetary policy strategy of the Bank of Greece: Intermediate targets 1990-2000

Year	Exchange rate policy target	Monetary and credit aggregates and elements of direct inflation targeting
1990	The depreciation of the drachma must not compensate fully for inflation differentials between Greece and remaining EU countries/trading partners in general.	Target for M3: 19%-21%. Target[1] for domestic credit expansion: 16%-17.5%. Target for credit expansion to the private sector: 15%-16%. Target for credit expansion to the public sector: 17.5%-18.5%.
1991	The depreciation of the drachma must not compensate fully for inflation differentials between Greece and trading partners.	Target for M3: 14%-16%. M4: Monitored as a supplementary liquidity indicator. Target for domestic credit expansion: 12.5%-13.5%. Target for credit expansion to the private sector: <14%. Target for credit expansion to the public sector: 12%-13%.
1992	The depreciation of the drachma must not compensate fully for inflation differentials between Greece and trading partners.	M3: Redefined to include repos (i.e., sales of securities by banks to the "private sector[2]" with an agreement to repurchase) as well as bank bonds. Target for M3: 9%-12%. M4: Monitored as a supplementary liquidity indicator. Target for domestic credit expansion: 7%-9% excluding capitalised interest.[3] Monitoring range for credit expansion to the private sector: 14%-16%. It is noted that separate *targets* for credit expansion to the private sector, on the one hand, and for credit expansion to the public sector, on the other, are not going to be set any longer.
1993	The depreciation of the drachma must not compensate fully for inflation differentials between Greece and trading partners.	Target for M3: 9%-12%. M4: Monitored as a supplementary liquidity indicator. Target[4] for domestic credit expansion: 6%-8%. Monitoring range for credit expansion to the private sector: 13%-15%.
1994	Attributed equal importance with the target for M3. The depreciation of the drachma shall not compensate fully for the *expected* inflation differentials between Greece and trading partners, *especially EU countries.*	Target for M3: 8%-11%. M4: Monitored as a supplementary liquidity indicator. Target for domestic credit expansion: 6%-8%. Monitoring range for credit expansion to the private sector: <11%.
1995	Characterised as an "intermediate" target and attributed equal importance with the target for M3. The depreciation of the drachma against the ECU shall not exceed 3%,[5] as envisaged in the Revised Convergence Programme (June 1994).	Intermediate target for M3: 7%-9%. M4: Redefined to include Greek Government securities (with an original maturity up to one year) acquired by the "private sector "not only from the primary market (in which case the practice to that date was to include the acquisitions in M4) but also from banks on the secondary market.[6] Monitoring range for M4: 11%-13%. Monitoring range for domestic credit expansion: 6%-8%.

1 Every year, the *Annual Report of the Governor* points out that credit targets/monitoring ranges are worked out so as to be consistent with the monetary target. Note also that 'monitoring range' is a generic term contrasting to 'target' and intended to encompass its various synonyms used from time to time in the English translations of the *Annual Report of the Governor*, namely 'forecast', 'forecast range', 'indicative projection', 'reference range'.
2 The "private sector" includes enterprises, but not credit institutions.
3 Capitalised interest (see the following footnote) had not been included in credit expansion in previous years either.
4 From this year on and up to and including 1998, domestic credit expansion includes accrued interest on Greek Government bonds held by credit institutions, which is not paid in cash to credit institutions but is rather capitalised.
5 Comparing end-1995 to end-1994.
6 However, M4 still does not include "private sector" investment in *coupons* stripped from Greek Government bonds and offered to the "private sector" from banks' portfolios.

Table 2 *(continued)*

The monetary policy strategy of the Bank of Greece: Intermediate targets 1990-2000

Year	Exchange rate policy target	Monetary and credit aggregates and elements of direct inflation targeting
1996	Characterised as an "intermediate" target and attributed equal importance with the target for M3. The exchange rate of the drachma *vis-à-vis* the ECU shall be maintained *broadly stable*[7] *on average* over the year, as envisaged in the Revised Convergence Programme (June 1994). Some exchange rate variability might be allowed within the year.	Intermediate target for M3: 6%-9%, with a medium-term perspective.[8] Monitoring range for M4: 9%-12%. Monitoring range for domestic credit expansion: 5%-7%.
1997	Characterised as an "intermediate" target and attributed equal importance with the target for M3. The exchange rate of the drachma *vis-à-vis* each of the remaining currencies which constitute the ECU shall remain stable. To discourage short-term speculative position-taking, leading to capital inflows in Greece, wide fluctuations of the exchange rate of the drachma shall be allowed momentarily.	Intermediate target for M3: 6%-9%, with a medium-term perspective. Monitoring range for M4: 8%-11%. Monitoring range for domestic credit expansion: 4%-6%. *Elements of direct inflation targeting:* The principle of direct inflation targeting is adopted, i.e., interest rates (and other monetary policy instruments) should be made directly responsive to the expected medium-term trend for *core* inflation.
1998	In view of the entry of the drachma in the Exchange Rate Mechanism, it becomes *the only* intermediate target of monetary policy. The exchange rate of the drachma *vis-à-vis* each of the remaining currencies participating in the Exchange Rate Mechanism shall remain stable *on average over the duration of 1998,* i.e., it shall move within a narrow fluctuation band of plus or minus 2.5% around the respective central rate. Nonetheless, an appreciation of the drachma (outside this narrow band) should be sought, if necessary for achieving the inflation target.[9]	Monitoring range for M3: 6%-9%. Monitoring range for domestic credit expansion: 4%-6%. *Elements from the "second pillar":*[10] Various factors[11] influencing *core* inflation are monitored.
1999	It is the only intermediate target. The exchange rate of the drachma *vis-à-vis* the euro shall remain relatively stable. The drachma might remain stronger than its euro central rate if necessary for achieving the inflation target.[12]	M4 is redefined (and renamed M4N) to include bank deposits of residents in foreign exchange and money market fund units (in drachmas) held by the "private sector".[13] Monitoring range for M4N: 7%-9%. Monitoring range for domestic credit expansion: 7%-9%. *Elements from the "second pillar":* Various factors[14] influencing *core* inflation are monitored.

7 The Revised Convergence Programme quantified "*broadly stable*" as a rate of annual depreciation equal to 1%.
8 It is stated that short-run divergences of the growth rate of M3 from the target might be tolerated by the Bank of Greece without triggering an adjustment in the Bank's key interest rates.
9 See Table 1.
10 The "second pillar" of the monetary policy strategy of the Eurosystem encompasses the non-monetary factors affecting inflation in the euro area. The Eurosystem bases interest rate decisions on an analysis of these factors ("*economic analysis*") additional to, and indeed preceding, its examination of monetary developments ("*monetary analysis*").
11 For example, the rate of unemployment and capacity utilisation, i.e., indicators pertaining to the labour market and to aggregate demand and aggregate supply.
12 See Table 1.
13 Apart from credit institutions, henceforth money market funds too are considered to be outside the "private sector".
14 These include monetary and credit aggregates, labour market indicators, capacity utilisation and other indicators referring to aggregate demand and aggregate supply.

Table 2 *(continued)*
The monetary policy strategy of the Bank of Greece: Intermediate targets 1990-2000

Year	Exchange rate policy target	Monetary and credit aggregates and elements of direct inflation targeting
2000	During the first half of 2000, monetary policy shall strive to ensure satisfaction of the convergence criteria on price stability, on interest rates and on participation in the Exchange Rate Mechanism. It is acknowledged that the ability of the Bank of Greece to exercise independent monetary policy is bound to become increasingly circumscribed over the course of the second half of 2000. What will remain for the Bank of Greece then will be to ensure, through appropriate interventions in the money and the foreign exchange markets, that the convergence of interest rates and of the exchange rate takes place smoothly.	Monitoring range for M4N: 5%-7%. *Elements from the "second pillar":* Various factors[15] influencing *core* inflation are monitored.

15 These include monetary and credit aggregates, wages and other indicators of conditions prevailing in the labour market, capacity utilisation and the yield curve for Greek Government paper.

jection of the return on repos to taxation (1994), and by the subsequent exemption of the return on repos from taxation (1998) and the exemption of repos from the reserve requirement (2000), as well as presumably by the variations in the Special Tax on Banking Transactions (EFTE) and other charges which influenced borrowing costs from the Greek banking system.

The Bank of Greece also acknowledged that capital movement liberalisation might cause problems of consistency between the monetary and the exchange rate target.

Thus, while at the beginning of the decade of the 1990s M3 was explicitly referred to as *"the central target of monetary policy"* (1990), in the subsequent year (1991) the Bank of Greece felt it necessary to add in a supplementary liquidity indicator, M4, see Table 2. Credit aggregates were also monitored by the Bank of Greece, mainly domestic credit expansion but, in the early years (pre-1995), private credit too separately.

After the completion of capital movement liberalisation in Greece in 1994, the exchange rate target was elevated to the status of an *"intermediate"* target, on an equal footing with the intermediate monetary target. Subsequently, the monetary target was progressively de-emphasised by the Bank of Greece, losing the status of an intermediate target (1998) and becoming simply another indicator to be monitored in the context of the formulation of monetary policy, see Table 2.

However, the Bank of Greece still believed that the monetary monitoring range conditions inflationary expectations and might give forewarnings about inflation.

The empirical findings of Hall and Zonzilos (1997) are consistent with this position of the Bank:

"The output gap, no matter how it is measured, retains its significance in predicting future inflationary developments. In addition,...money, as measured by M3, and foreign prices adjusted by the effective exchange rate are the only factors from those tested which have a strong effect on the long-run level of prices... Unit labour cost has only a short-run significant contribution to price inflation forecasting. Fuel prices cannot improve the forecasting ability of the model either in the short or in the long run" (sample: 1955-95).[9]

In 1999, the monitoring range for M3 was dropped in favour of M4N, see Chart 2. In the year 2000, the setting of a monitoring range for the credit aggregate was discontinued by the Bank of Greece in view of the likely effects of interest rate convergence and of an anticipated reduction in the Special Tax on Banking Transactions (EFTE), incident on borrowers, as well as in view of likely pent up credit demand, following the abolition (after March 2000, see Section 3 below) of a special *asset side* temporary reserve requirement imposed in order to arrest rapid credit growth in Greece.

In addition, towards the end of the decade (1997 onwards) we meet in Greece elements of direct inflation targeting. The Bank of Greece felt that the interest rate instrument should also react *directly* to current inflation (in actuality to "core" inflation) or to expected inflation developments, see Table 2.

Throughout the decade of the 1990s, interest rate reactions, occasionally quite sizeable, took place in Greece in response to pressures on the exchange rate of the drachma, see Charts 3A and 3B. We encounter interest rate reactions as early as in 1992 in response to the turmoil in the EMS. The drachma did not participate in the ERM then. In May 1994 and again in November 1997 the overdraft rate[10] of the Bank of Greece approached respectively 180% and 170% p.a. That the short-term interest rate should be an instrument for implementing exchange rate policy, and generally for ensuring orderly conditions in the foreign exchange market, has been the position of the Bank of Greece in all the *Annual Reports of the Governor* over the period 1990-1999. In the late nineties (after markets had matured, e.g., in 1997), intervention policy in the market for foreign exchange was mentioned by the Bank of Greece as an extra instrument useful for flanking interest rate reactions.

Starting to count from the day of inception of operation at the Bank of Greece of the "Lombard-type" facility and of reactivation of the rediscount facility (15 June 1993),[11] until the accession of

9 From the available unpublished translation of p. 59 in the Greek. Gibson and Lazaretou (1999, p. 35) find that *"even though the composite indices* [one of which incorporates money supply M0, wholesale prices, commodities prices and import prices] *were not constructed to anticipate either the level of inflation or future inflation movements, they do help in predicting inflation peaks and troughs* [the index, the composition of which we described above, is capable of making such predictions along a very short-run horizon of the order of three months]. *Moreover, statistical tests prove that these indices can contribute significantly to reducing the inflation forecast errors made by a simple autoregressive model"* (sample: 1954-98).

Finally, Hondroyiannis (2000, p. 59) arrives at empirical results which *"support the hypothesis that wages exert an autonomous influence on price levels and that inflation depends on the size of wage increases that employees achieve, as well as on changes in the money supply* [M3]*"* (sample: 1975-98).

10 A literal translation of the corresponding Greek term, occasionally used in publications of the Bank of Greece, reads: "interest rate on the debit balances of credit institutions' current accounts with the Bank of Greece".

11 These standing facilities had been formally established since 24 March 1993 by an Act of the Governor of the Bank of Greece. The "Lombard-type" facility was to provide finance to credit institutions against (pledged) collateral of Greek Government securities, see Annex. The rediscount facility had been reactivated for credit institutions to discount at the Bank of Greece private bills of exchange and promissory notes.

Table 3

Factors[1] (other than GDP, the gross own-return on money and the gross return on government paper) influencing the demand for M3[2]/M4N[3] in real terms

Year		Effect on M3 or M4N
1990	*M3 below target* 1. Expectations of imposition of taxation on interest income from bank deposits as from January 1991 cause a deceleration in the growth rate of bank deposits.	 Negative
1991	*M3 below target* 1. Taxation (10%) of interest income from bank deposits in January 1991. 2. Introduction of financial innovation of repos: Sales of Greek Government securities by banks to the private sector, with a repurchase agreement; initially repos are not included in M3.	 Negative Negative
1992	*M3 above target* 1. Increase in taxation (15%) of interest income from bank deposits in September 1992. 2. In the context of the monetary turbulence (EMS crisis, September 1992), expectations for rapid drachma depreciation emerge.	 Negative Negative
1993	*M3 above target* 1. Increased liquidity preference due to uncertainty sourcing from the prospect of a general election (a general election was officially announced in September 1993).	 Positive
1994	*M3 within target* 1. Extension of taxation of bank deposit interest to returns from repos in May 1994. 2. Development of the secondary market for Greek Government securities (including coupon strips and principal strips): Coupon strips and other bonds with a short residual maturity substitute for repos. 3. A decrease in liquidity preference results from enhanced policy credibility after the successful resolution of the May 1994 foreign exchange crisis.	 Negative Negative Negative
1995	*M3 above target* 1. Introduction of financial innovation of synthetic swaps: Brissimis and Gibson (1997): "*Synthetic swaps involved the following transactions: Customers who wished to make drachma deposits were offered foreign currency deposits abroad with an appropriate forward contract to receive drachmas when the deposit matured. The foreign bank with whom the deposit was placed then placed a foreign currency deposit with the Greek bank. However, the substitution of foreign currency bank accounts for drachma accounts reduced the broad monetary aggregates when no reduction in liquidity had in fact occurred. Synthetic swaps became popular because, until end-1996, they offered tax advantages (only interest and not capital gains was taxed in Greece) ... From 1997, capital gains from forward transactions are liable to tax*".[4] 2. Development of the secondary market for Greek Government securities (including coupon strips and principal strips). 3. Technical factor[5]: "Base effect", i.e., comparison with the low M3 level of the previous year, generates artificially high twelve-month growth rates of M3 for the current year.	 Negative Negative Positive

1 These are usually grouped under "special factors". Cf. European Central Bank: *Monetary Analysis: Tools and Applications* (Frankfurt: European Central Bank, 2001), p. 132: "*Special factors, i.e. those factors affecting M3 which fall outside the range of the main traditional determinants of estimated money demand models for which long and reliable data series are available (e.g. output and interest rates)*". Furthermore, see European Central Bank, "Framework and Tools of Monetary Analysis", *Monthly Bulletin* (May 2001), p. 47: "*A **special factor** is typically an identifiable monetary disturbance... which may not have implications for price developments. For example, it could refer to institutional changes, such as a change in taxation affecting the relative attractiveness of monetary holdings.... Ideally, a detailed institutional analysis can provide some additional insight by providing information concerning special events, thus reducing the unexplained part of monetary growth*".

2 M3: currency in circulation, sight, savings and time deposits in drachmas. Repos and bank bonds are included in 1992.

3 M4N is first defined in 1998 as: M3 *plus* private sector investments in Greek Government securities (in the primary or secondary market) with maturities up to one year or in money market fund units (in drachmas) *plus* bank deposits of residents in foreign exchange.

4 From the available unpublished English translation of p. 28, footnote 8, in the Greek.

5 This factor concerns the supply (expressed as a twelve-month rate of change) and *not* the demand for M3.

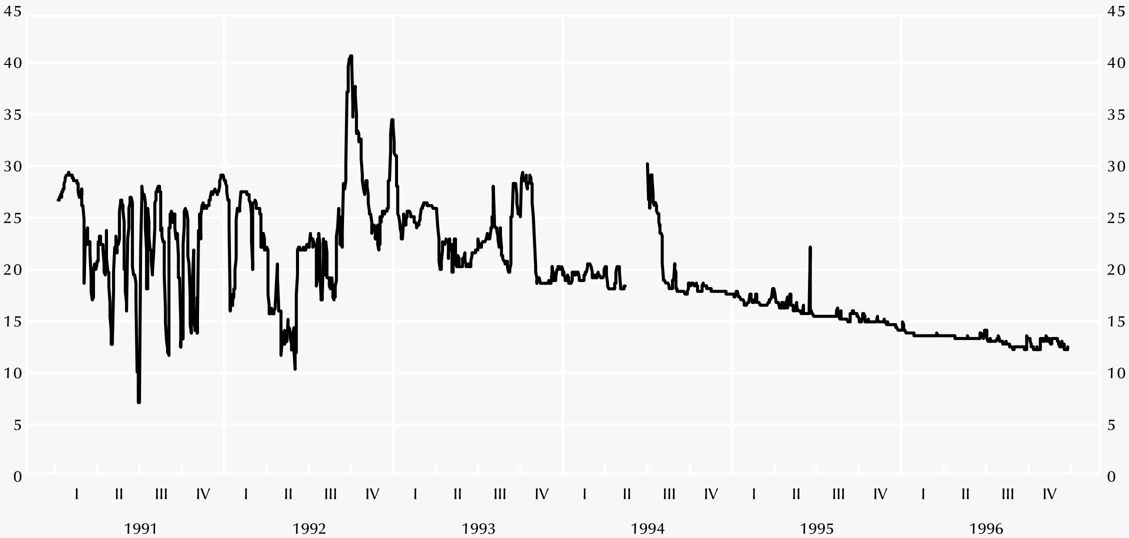
T a b l e 3 *(continued)*

Factors (other than GDP, the gross own-return on money and the gross return on government paper) influencing the demand for M3/M4N in real terms

Year		Effect on M3 or M4N
1996	*M3 very close to target*	
	1. Expectations of imposition of taxation on interest income from Greek Government securities in January 1997 cause portfolio investment in Greek Government paper to be brought forward.	Negative
1997	*M3 close to target*	
	1 Taxation (7.5%) of interest income from Greek Government securities in January 1997.[6]	Positive
	2. Taxation (15%) of income generated by financial derivatives (including synthetic swaps).	Positive
	3. Public debt management policy: Already since 1995, it had been noted that restricting the number of Treasury bill issues – a strategy which was then starting to be implemented – with the aim of prolonging the average maturity of the Greek public debt would have a depressing effect on the growth rate of M4.	Positive
	4. Liquid assets held in abundance in order to finance increased transactions in the stock exchange.	Positive
	5. Proliferation of the financial innovation of money market funds.	Negative
	6. In the context of the financial turmoil in South East Asia (October 1997), returns on synthetic swaps and on money market funds rise rapidly (*ditto* for the yield of Greek Government paper in the secondary market).	Negative
1998	*M3 within target*	
	1. Abolition of taxation of returns from repos in September 1998.	Positive
	2. Liberalisation of foreign currency deposits with domestic credit institutions.[7]	Negative
	3. The upward course of equity prices in the stock market leads to an increase in portfolio investment in shares.	Negative
	4. Continuing proliferation of synthetic swaps.	Negative
	5. Technical factor[8]: "Base effect", i.e., comparison with the low M3 level of the previous year, generates artificially high twelve-month growth rates of M3 for the current year.	Positive
1999	*M4N below target*	
	1. Public debt management policy: Restriction of the number of Treasury bill issues.	Negative
	2. The continuing upward course of equity prices in the stock market leads to portfolio shifts from money market funds and time deposits to equity-type mutual funds and shares.	Negative
	3. Liquid assets (mainly sight and even savings deposits) held in abundance to finance increased transactions in the stock exchange.	Positive
	4. Continuing impact from the abolition of taxation of returns from repos back in September 1998.	Positive
2000	*M4N above target*	
	1. The drop in equity prices in the stock market leads to portfolio shifts from equity-type mutual funds to money market funds and from shares to assets included in M4N (e.g., repos).	Positive
	2. Public debt management policy: The restriction of the number of Treasury bill issues continues.	Negative
	3. Exclusion of repos from the basis for credit institutions' minimum reserves in June 2000; continuation of the impact from the abolition of taxation of returns from repos back in September 1998.	Positive
	4. Technical factor[9]: "Base effect", i.e., comparison with the low M4N level of the previous year, generates artificially high twelve-month growth rates of M4N for the current year.	Positive

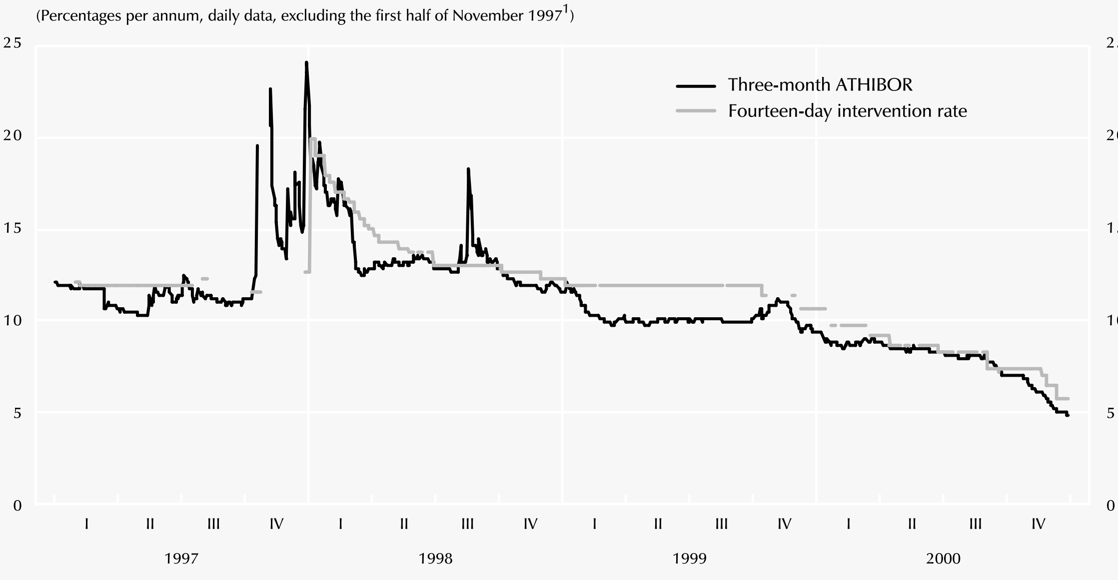
6 The tax rate is raised to 10% in January 1998.
7 To some degree, foreign currency deposits with domestic credit institutions are used for synthetic swaps (which were previously based on foreign currency deposits with banks abroad).
8 This factor concerns the supply (expressed as a twelve-month rate of change) and *not* the demand for M3.
9 This factor concerns the supply (expressed as a twelve-month rate of change) and *not* the demand for M4N.

Chart 3A
Overnight interbank drachma interest rate,[1] 1991-1996
(Percentages per annum, daily data, excluding the second half of May 1994[2])



1 For the sake of clarity, we show only the interbank market rate and not the intervention rate of the Bank of Greece. Before the second quarter of 1992, Bank of Greece interventions in the interbank market occurred only rarely. Subsequently, the interventions of the Bank of Greece in the interbank market became more frequent. Since July 1994, Bank of Greece interventions have been occurring almost daily. The overnight market rate remained near the intervention rate of the Bank of Greece. The average (of the absolute value of the) divergence between market and intervention rate was 60 basis points over the period 1991-1993 (when the market rate stood at 23.6% on average) and 24 basis points over the period 1994-1996 (when the market rate stood at 18.6% on average).
2 Brief period with very high interbank rates: Average overnight interest rate=117.9%.

Chart 3B
Three-month ATHIBOR, and Bank of Greece intervention rate for operations (collection of deposits/repos) in the interbank market with fourteen-day maturity,1997-2000
(Percentages per annum, daily data, excluding the first half of November 1997[1])



1 Brief period with very high interbank rates: Average three-month ATHIBOR= 30.6%.

Greece to the Monetary Union, we counted 42 distinct occasions on which changes in official rates on *standing facilities* of the Bank of Greece were decided,[12] see Table 4. That is to say, we counted the dates on which it was decided to modify the rate on the "Lombard-type" facility or the interest rate on the rediscount facility and/or the rate on the overdraft facility and/or the rate on either of the two tiers of the deposit facility. These adjustments in official interest rates were implemented by means of Acts of the Governor (lately of the Monetary Policy Council) of the Bank of Greece. The text of each Act was preceded by one or more *recitals* setting out in summary form the rationale behind the interest rate change.

Among these Acts we have counted fourteen (33% of the total number of Acts) invoking in the recital *exclusively "monetary and credit conditions"*. Presumably, in some cases, this general term, *"monetary and credit conditions",* covers developments in the foreign exchange market too (such as in the Acts of the Governor issued during the period May-July 1994 in order to counter the foreign exchange market turmoil). Nine Acts (21% of the total) make some reference to the market for foreign exchange or to changes in official rates in other EU countries. Six Acts (14% of the total) make some reference to interest rate convergence with the euro area. So more than a third (35% of the total) of the Acts view interest rates in Greece as reacting to international influences.[13] Eight Acts invoke, *inter alia*, purely technical factors, i.e., mainly the need to align rates on standing facilities to interbank market interest rates or to the interbank intervention rate of the Bank of Greece.[14] Five Acts (12% of the total) view interest rate changes as direct reactions of the Bank of Greece to inflationary developments and do not mention international factors at all, though they make some reference to domestic monetary developments too. All these latter Acts date from the period since 1997, when some elements from direct inflation targeting were imported into the monetary strategy of the Bank of Greece. Three Acts contain references both to inflation and to international factors. We have classified these three Acts in the 35% of the total number of Acts which invoke international factors.

12 On 15 June 1993 the official rates on the standing facilities of the Bank of Greece were as follows (in parentheses we give the difference between nominal interest rate and inflation, after rounding): "Lombard-type" facility: 25.5% (10%); Rediscount facility: 21.5% (6%); Overdraft facility: 29% (13%).

By 29 December 2000, the official rates had declined to: "Lombard-type" facility: 5.75% (2%); Deposit facility: 3.75% uniform (0%). Note that the deposit facility (see Annex) had been in operation since 26 March 1997, the rediscount facility had been abolished on 10 April 1998, and the overdraft facility became redundant on 9 March 2000.

The peak values of the official rates on the standing facilities of the Bank of Greece over the period 1993-2000 occurred as follows: "Lombard-type" facility: 26.5% (14%) on 30 Sept. 1993 and 16 May 1994 (16%); Rediscount facility: 22.5% (12%) on 16 May 1994; Deposit facility 1st tier: 11.9% (6%) at inception and on 8 July 1998 (7%); 2nd tier: 9.9% (4%) at inception; Overdraft facility: 180% (169%) on 16 May 1994. Earlier, during the period 1990-1993, the overdraft rate had peaked to 40% (25%) on 17 Sept. 1992, i.e., the day the British pound and the Italian lira suspended membership in the ERM.

13 H. Gibson points out that this is to be expected from a "small open economy". *"This has been the experience and practice of other countries as well —especially small and open economies— which have employed the exchange rate as their intermediate monetary policy objective, some even abandoning the use of other variables as intermediate targets or indicators"*, from the available unpublished English translation of a speech by L. Papademos, Governor of the Bank of Greece at the time, (p. 65 in the Greek which came out in the) *Economic Bulletin*, November 1996.

14 Half these Acts do not invoke technical factors exclusively, but also mention monetary and credit conditions or inflation developments. We assume that technical factors provided the primary rationale for the decision to adjust official rates. *Per contra*, three Acts invoke technical factors while mentioning also official rate changes in other Member States of the European Union. In view of the fact that influences from the foreign exchange market are typically quite pressing, we have assumed that these latter Acts constituted a response, on the part of the Bank of Greece, to external factors.

T a b l e 4

Changes in Bank of Greece official interest rates, 1993-2000

Date of decision	Bank of Greece official interest rates	Percent-ages[1]	*The Bank of Greece adjusted its official interest rates, after taking into consideration:*
15.6.93	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	21.5 25.5 29	*"the current monetary and credit conditions"*
13.8.93	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	21 24.5	*"the current monetary and credit conditions"*
30.9.93	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	22 26.5 32	*"the current monetary and credit conditions"*
25.10.93	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	21.5 25.5 30	*"the current monetary and credit conditions"*
16.5.94	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility) Imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece	22.5 26.5 33 0.4 *per diem*	*"the current monetary and credit conditions"*
30.5.94	Imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece	0.3 *per diem*	*"the current monetary and credit conditions"*
17.6.94	Imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece	0.1 *per diem*	*"the current monetary and credit conditions"*
8.7.94	Termination of the daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece		*"the current money market and foreign exchange market conditions"*
27.9.94	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	21.5 25 30	*"the current monetary and credit conditions"*
18.11.94	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	20.5 24	*"the current monetary and credit conditions"* *"the need to structure interest rates applying to the intervention mechanisms of the Bank of Greece in the money market in a more rational way"*

1 *Per annum*, unless otherwise stated.

Table 4 *(continued)*

Changes in Bank of Greece official interest rates, 1993-2000

Date of decision	Bank of Greece official interest rates	Percentages[1]	*The Bank of Greece adjusted its official interest rates, after taking into consideration:*
31.3.95	Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	28	*"the development of domestic monetary and credit aggregates"* *"recent adjustments of analogous interest rates in the EU money markets"*
27.7.95	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	19.5 23 27	*"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
25.8.95	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	18.5 22	*"the deceleration of inflation"* *"recent adjustments in key interest rates of EU central banks"* *"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
15.12.95	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	18 21.5	*"recent adjustments in key interest rates of EU central banks"* *"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
19.4.96	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	17.5 21 26	*"recent adjustments in key interest rates of EU central banks"* *"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
17.12.96	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	16.5 25	*"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
14.2.97	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility)	15.5 20	*"the development of inflation"* *"the need to adjust interest rates on Bank of Greece standing facilities (offered to banks) to the interbank intervention rates"*
26.3.97	Deposit facility first tier second tier	 11.9 9.9	*"the current monetary and credit conditions"*
12.5.97	Rediscount of private bills of exchange and promissory notes Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	14.5 19 24	*"the need to adjust interest rates applying for banks' borrowing from the Bank of Greece to the interbank intervention rates"*
24.7.97	Deposit facility first tier second tier	 11.6 9.6	*"the current monetary and credit conditions"*
14.8.97	Deposit facility first tier	 11.3	*"the current monetary and credit conditions"*
7.10.97	Deposit facility first tier	 10.9	*"the current monetary and credit conditions"*

Table 4 *(continued)*

Changes in Bank of Greece official interest rates, 1993-2000

Date of decision	Bank of Greece official interest rates	Percent-ages[1]	*The Bank of Greece adjusted its official interest rates, after taking into consideration:*
31.10.97	Imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece	0.4 *per diem*	*"the current monetary and credit conditions"*
24.12.97	Imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece	0.2 *per diem*	*"the current monetary conditions"*
8.1.98	Lending against collateral of Greek Government securities ("Lombard-type" facility)	23	*"the current money market conditions"*
30.3.98	Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)[2]	19 22	*"the conditions currently prevailing in the money market and in the foreign exchange market, after the entry of the drachma in the Exchange Rate Mechanism of the European Monetary System"*
22.4.98	Deposit facility first tier second tier	 11.5 9.75	*"the current money market conditions"* *"the need to curtail inflationary pressures"*
8.7.98	Deposit facility first tier	 11.9	*"the need to further rationalise the relationships among different Bank of Greece intervention rates in the interbank market"* *"the conditions prevailing in the money market and in the loans market and the need to further reduce inflation"*
31.7.98	Lending against collateral of Greek Government securities ("Lombard-type" facility)	16	*"the need to adjust this specific interest rate to the remaining Bank of Greece intervention rates in the interbank market"* *"the current money market conditions"*
9.12.98	Deposit facility first tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 11.6 15.5	*"the course of inflation and, in particular, the deceleration of core inflation, as well as factors shaping the outlook for inflation in 1999"* *"the conditions prevailing in the money market, the capital market and the foreign exchange market and the recent cuts in EU central banks' intervention rates"* *"developments in money and capital markets and, specifically, in the market for bank loans"* *"the latest projections for the evolution of labour costs and productivity in 1999"*
12.1.99	Deposit facility first tier Lending against collateral of Greek Government securities ("Lombard-type" facility) Debit balances of credit institutions' current accounts with the Bank of Greece (overdraft facility)	 11.5 13.5 20	*"the development of inflation and the prospects for further deceleration in the coming months, the conditions prevailing in the drachma interbank market and in the foreign exchange market"* *"the need to reduce the scope for fluctuations in short-term interest rates in the drachma interbank market in the event of a change in the autonomous factors affecting liquidity or of a change in the procedures for liquidity absorption through the regular tenders of the Bank of Greece"*

2 The imposition of a daily surcharge on the interest rate on debit balances of credit institutions' current accounts with the Bank of Greece is terminated on the same day.

T a b l e 4 *(continued)*
Changes in Bank of Greece official interest rates, 1993-2000

Date of decision	Bank of Greece official interest rates	Percent-ages[1]	*The Bank of Greece adjusted its official interest rates, after taking into consideration:*
20.10.99	Deposit facility first tier second tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 11 9.25 13	*"the reduction in inflation since the last cut in Bank of Greece interest rates in January 1999"* *"the recent deceleration in core inflation and the outlook for core inflation"* *"the monetary conditions and, particularly, the deceleration in the growth rate of the liquidity indicator for the economy (M4N)"*
15.12.99	Deposit facility first tier second tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 10.25 9 12.25	*"the stabilisation of core inflation at around 2% and the prospect for core inflation to remain at the same level in the coming months"* *"the anticipated satisfactory evolution of average annual inflation on the basis of the Harmonised Index of Consumer Prices"* *"the annual growth rate of the wider liquidity indicator for the economy M4N estimated at levels below the indicative projection (7-9%)"* *"the Updated Convergence Programme of Greece 1999 to 2002"*
24.12.99	Lending against collateral of Greek Government securities ("Lombard-type" facility)	11.5	*"the need to facilitate credit institutions in case they are called upon to deal with unanticipated changes in liquidity in view of the transition to the year 2000"* *"the need to reduce the scope for fluctuations in short-term interest rates in the interbank market"*
26.1.00	Deposit facility first tier second tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 9.5 8.5 11	*"the outlook for average annual inflation on the basis of the Harmonised Index of Consumer Prices"* *"the estimated favourable impact on inflation from the recent revaluation of the central rate of the drachma against the euro in the Exchange Rate Mechanism II"* *"the containment of the annual growth rate of the wider liquidity indicator for the economy (M4N) near the lower limit of the forecast range (7-9%) for 1999"*
7.3.00	Deposit facility first tier second tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 8.75 8 10.25	*"the continuing deceleration in core inflation, despite the pick-up in consumer price inflation after the increase in international oil prices"* *"the deceleration in average annual inflation on the basis of the Harmonised Index of Consumer Prices and the anticipated fulfilment of the convergence criterion about inflation"* *"the containment of the annual growth rate of the wider liquidity indicator for the economy M4N within the indicative projection (5-7%) for 2000"* *"the prospect for increases in interest rates in world money markets"*

T a b l e 4 *(continued)*

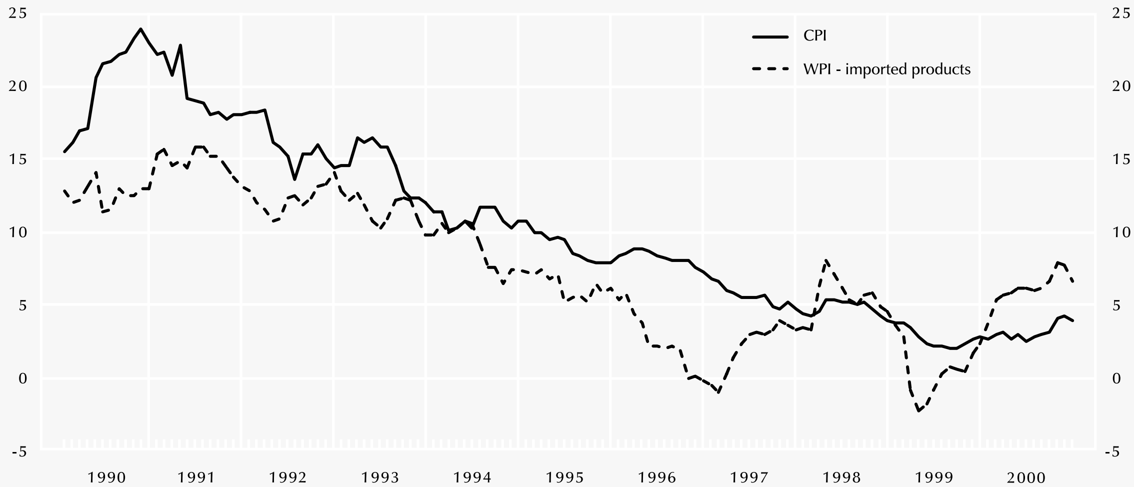
Changes in Bank of Greece official interest rates, 1993-2000

Date of decision	Bank of Greece official interest rates	Percent-ages[1]	*The Bank of Greece adjusted its official interest rates, after taking into consideration:*
18.4.00	Deposit facility first tier second tier Lending against collateral of Greek Government securities ("Lombard-type" facility)	 8 7.5 9.5	*"the continuing deceleration in core inflation"* *"the anticipated favourable effect of the recent decline in international oil prices on inflation"* *"the maintenance of the growth rate of liquidity M4N below the indicative projection"* *"the estimated impact on inflation and economic activity of the conditions which prevail in the capital markets"*
28.6.00	Interest rate on the deposit facility with the two tiers "unified" Lending against collateral of Greek Government securities ("Lombard-type" facility)	7.25 9	*"the EU Council Decision allowing Greece to participate fully in EMU as of 1 January 2001 and the consequent convergence of drachma money market interest rates to the corresponding euro area rates"* *"the latest data and projections for the development of the Consumer Price Index, in particular the favourable prospects for core inflation"*
5.9.00	Deposit facility Lending against collateral of Greek Government securities ("Lombard-type" facility)	6.5 8.25	*"projections for the development of the Consumer Price Index and the favourable evolution of core inflation"* *"the aim of a smooth entry into the euro area and the required convergence of Bank of Greece interest rates to the corresponding European Central Bank interest rates by 1 January 2001, in view of the full participation of Greece in the Economic and Monetary Union"* *"the conditions prevailing in the money market and in the bank loan market"*
14.11.00	Deposit facility Lending against collateral of Greek Government securities ("Lombard-type" facility)	6 7.75	*"the forthcoming entry of Greece into the euro area, which entails adoption of the single monetary policy and, consequently, full convergence of Bank of Greece interest rates to the corresponding European Central Bank interest rates by end-2000"* *"the desirability of adjusting interest rates gradually"*
28.11.00	Deposit facility Lending against collateral of Greek Government securities ("Lombard-type" facility)	5.5 7.25	*"the desirability of adjusting interest rates gradually in view of the entry of Greece into the euro area as from 1 January 2001, which requires full convergence of Bank of Greece interest rates to the corresponding European Central Bank interest rates"*
12.12.00	Deposit facility Lending against collateral of Greek Government securities ("Lombard-type" facility)	4.75 6.5	*"the necessary full convergence of Bank of Greece interest rates to the corresponding European Central Bank interest rates, in view of the entry of Greece into the euro area as from 1 January 2001"*
27.12.00	Deposit facility Lending against collateral of Greek Government securities ("Lombard-type" facility)	3.75 5.75	*"the entry of Greece into the euro area as from 1 January 2001"*

Chart 4

Inflation according to the Consumer Price Index,[1] and inflation based on the Wholesale Price Index[2] for imported products, Greece, Jan. 1990 - Dec. 2000

(Percentage change in price index in comparison with corresponding month of previous year)



1 CPI (1999 = 100).
2 WPI (1990=100).

The Bank of Greece consistently achieved the annual exchange rate target and we can observe a characteristic decline in the annual rate of depreciation of the drachma against the ECU as the decade of the nineties progressed (1990: 11.1%, 1999: *minus* 1.8%, i.e., appreciation), see Chart 1. This strategy of slowing the "slide" of the drachma limited imported inflation (1990: 12.5%, 1999: 0.5%), thus influencing domestic inflation favourably, see Chart 4. At the same time, the strategy of containing the "slide" of the drachma exerted an indirect moderating influence on the prices of import-substitutes and on inflationary expectations. As far as potential output costs from limiting the "slide" of the drachma are concerned, the Bank of Greece had argued from the beginning that:

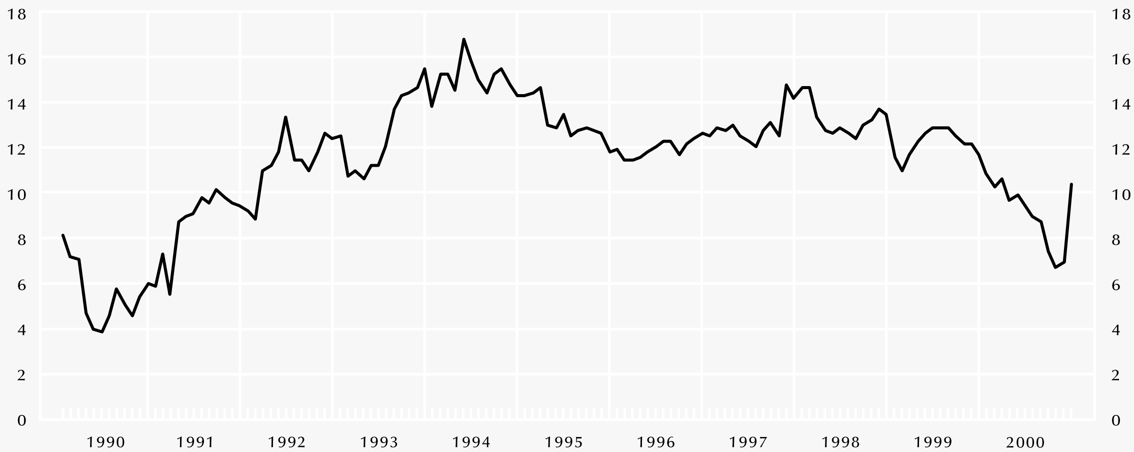
"In a country where import content is high, as in Greece, the increase in the cost of production following a devaluation would offset to a significant extent its favourable effects on competitiveness", Annual Report of the Governor for 1990, p. 23.

The consequences of limiting the depreciation of the drachma have been investigated, among other issues, in some studies of the Greek economy partially covering the period under review in this article. Indeed, Papazoglou (1999, pp. 14-15) demonstrated empirically, for a sample extending over the period 1980-1997, that the strategy of slowing the "slide" of the drachma in essence did not affect economic activity in Greece negatively:

"The contractionary effect of a real appreciation of the drachma on the economy's output is temporary. The decline is mainly due to the decrease in aggregate demand stemming from the deterioration in the current account balance; this, in turn, is a direct consequence of the worsening of the international competitiveness of

Chart 5

Real[1] short-term drachma bank lending rate for enterprises, Jan. 1990 - Dec. 2000
(Percentages per annum, monthly data)



1 Monthly average nominal interest rate in month T *minus* rate of CPI-inflation in month T.

domestic products. Thereafter, however, the favourable effect of the appreciation on production costs, through the reduced costs of imported raw materials, has an expansionary effect on aggregate supply. This leads to a recovery of output in the medium term."

Brissimis, Magginas, Simigiannis and Tavlas (2001, p. 261) provide independent econometric confirmation, for a sample 1987-1999, that an appreciation of the drachma does not affect economic activity in Greece undesirably in the medium term, while it does exert a beneficial influence on prices. The authors come up with an alternative explanation for this observation:

"Exchange-rate-based stabilisations may have positive effects on growth, associated with higher domestic ***demand****, mainly through an improvement of the terms of trade and a corresponding rise in personal disposable income."*

In general, there was concern at the Bank of Greece, throughout the decade of the 1990s, to adjust interest rates downwards (see Charts 3A and 3B) at most in line with, and certainly no faster than, the decline in inflation. The most clear statements of this principle are to be found in the *Annual Report of the Governor for 1992* (both where it reviews monetary developments in 1992 and where it refers to monetary policy intentions for 1993), and in the *Annual Reports of the Governor for 1995* and *for 1998*. In the *Annual Reports of the Governor for 1991* and *for 1993* (where they formulate monetary policy intentions for the succeeding year), the possibility of a reduction in real interest rates is made strictly conditional on other favourable developments (e.g., progress with the achievement of internal balance in Greece, etc).

Anyhow, slowing the pace of the "slide" of the drachma necessitated the maintenance of high real short-term interest rates in Greece, at least in *ex post* terms, see Chart 5. Indeed, the Bank of

Greece often noted that this was a consequence,[15] *inter alia*, of the fiscal imbalances which prevailed in Greece throughout most of the nineties. Thus, the real short-term drachma bank lending rate for enterprises[16] averaged over 10% during the decade (it was 10.6% in the first half and 12.7% in the second half of the decade), which must have exercised an independent contractionary influence on economic activity in Greece quite apart from any repercussions from keeping the depreciation of the drachma limited.

2. Critical moments in Greek monetary policy

The effort to slow the pace of the depreciation of the drachma did not lack critical turning points. Towards the end of the 1980s and in the beginning of the 1990s, a series of Community legislative instruments postponed successively the deadlines by which Greece was obliged to liberalise various types of foreign exchange transactions (mostly cross-border capital flows, see Table 5). This did not prevent gradual progress with dismantling foreign exchange restrictions. Indeed, by 1994 the main remaining controls in Greece pertained to short-term cross-border flows (that is to say, to short-term deposits placed by residents with non-resident financial institutions and short-term loans to or from non-residents). According to an earlier Council[17] Directive (No. 112 of 1992), these were going to be removed by Greece *vis-à-vis* EU countries by 30 June 1994, and this was confirmed in contemporaneous Greek legislation too.

As the day approached, and certainly by May 1994, market rumours arose[18] that the abolition of remaining restrictions would bring on a significant acceleration in the pace of the depreciation of the drachma. This market perception caused pressure on the drachma (monthly depreciation against ECU, average Jan.-May: 0.8%, June: 1.3%) and on interbank interest rates (O/N[19] on 13 May: 18.7%, on 16 May: 29.9%, peak on 26 May: 178.6%) as well as funding difficulties for the Government. To defuse market anticipations, the Greek Government had to bring forward the completion of capital liberalisation, both *vis-à-vis* the European Union and third countries, to 16 May 1994.

Moreover, the Bank of Greece reacted to counter pressures in the foreign exchange market by raising interest rates drastically – in part through the imposition of a daily surcharge of 0.4% on the cost of borrowing from the overdraft facility which it offered to credit institutions. The sur-

15 *"Fiscal imbalances are the root cause of the high domestic real interest rates"*, from the available unpublished English translation of a speech by L. Papademos, then Governor of the Bank of Greece, (p. 70 in the Greek which came out in the) *Economic Bulletin*, November 1996.

"Without fiscal adjustment, monetary policy aimed at limiting monetary expansion and attaining relative exchange rate stability will result in high real interest rates with adverse effects on investment and economic activity, thus aggravating fiscal imbalances", Annual Report of the Governor for 1994, pp. 45-46.

16 Note, however, that this proxy overstates borrowing costs for business in view of the proliferation of low cost foreign currency loans. Indeed, these became increasingly common in Greece as the decade of the nineties progressed (from 4% of outstanding credit to the private sector in 1990 to 24% in 1999). The proxy does not incorporate fiscal charges, e.g., the Special Tax on Banking Transactions (EFTE), which borrowers had to pay, over and above interest.

17 The Council of Ministers (known also as the EU Council).

18 *"Liberalisation of short-term capital movements, which was scheduled to take place by July 1, 1994, had prompted discussions and comments regarding the effects of such a measure on the exchange rate policy being pursued. Pressures in the foreign exchange market stemmed from expectations that liberalisation would be accompanied by a faster sliding of the exchange parity or even by a step-wise depreciation", Economic Bulletin,* November 1994, p. 7.

19 "Overnight" interest rate.

Table 5

Brief chronology of the liberalisation of cross-border capital movements to/from Greece[1] from the second half of the 1980s onwards

Before the accession of Greece to the European Community

"The consequent competence of the Currency Committee for foreign exchange policy entails authority to decide, independently from any other legislative provisions, on the terms of acquisition or provision of foreign exchange, foreign banknotes, gold bullion and gold coin (whether these assets are located within or outside the country) by all natural and legal persons resident in Greece" Greek Law 1837 of 8-12 June 1951.

1981: Accession of Greece to the European Community

The Accession Treaty (1979) gives to Greece derogations from capital movements liberalisation, until 31 December 1985, with respect to:

- outward direct investment from Greece to Community Member States
- repatriation from Greece to Community Member States of direct investment as well as repatriation of investment in real estate
- outward investment from Greece in securities and in real estate in Community Member States.

A derogation is also granted with respect to the liberalisation of the foreign exchange allowance for tourists going from Greece to Community Member States.

1985

A European Commission Decision[2] permits to Greece maintenance, until 22 November 1988,[3] of restrictions[4] *vis-à-vis* the Community Member States on:

- outward direct investment from Greece to Community Member States
- outward investment from Greece in securities and in real estate in Community Member States
- capital movements of a personal nature (e.g., donations) from Greece to Community Member States.

1986

The Council[5] Directives on capital liberalisation[6] are transposed into Greek legislation.[7] As a result, the following capital movements are liberalised:

- inward direct investment into Greece from Community Member States and third countries
- inward investment from Community Member States in securities quoted in the stock exchange[8] and in real estate in Greece
- inward capital movements of a personal nature into Greece.

Blocked deposits[9] of non-residents (originating from other Community Member States) are liberalised.[10]

1987

Borrowing in foreign currencies (from resident or non-resident credit institutions) is allowed to specific classes of enterprises[11] in Greece.

The new Council Directive[12] on capital liberalisation is transposed into Greek legislation by a Presidential Decree.[13]

1 The focus of attention in the table is on liberalisation *vis-à-vis* the Community Member States rather than *erga omnes*.
2 Commission Decision No. 594 of 1985, authorising exemptions from Council (i.e., the Council of Ministers) Directive No. 921 of 1960 (on capital liberalisation) and Council Directive No. 21 of 1963 (on capital liberalisation).
3 Commission Decision No. 600 issued on 22 November 1988 postponed this deadline to 31 December 1989 for outward investment from Greece in securities and in real estate and to 30 June 1989 for outward direct investment from Greece.
4 These restrictions were reconfirmed in 1987 by Commission Decision No. 152 of 1987 authorising exemptions from the then most recent Council Directive No. 566 of 1986 (on capital liberalisation).
5 The Council of Ministers.
6 Council Directive No. 921 of 1960 and Council Directive No. 21 of 1963.
7 By means of Greek Presidential Decree No. 170 of 19 May 1986.
8 Liberalisation of inward investment in securities in Greece was further confirmed and extended *vis-à-vis* third countries in 1987 by an Act of the Governor of the Bank of Greece. Later (by an Act of the Governor in 1990) inward investment into Greece in debt securities not quoted in the stock exchange was liberalised.
9 For example, a monetary bequest to a non-resident, as well as equity shares or bonds purchased by a non-resident or the proceeds from the sale of the securities, would remain blocked (Greek Law 128 of 1975).
10 Blocked deposits of residents from (other) Community Member States were abolished, with retroactive effect from 1 January 1986, by a Bank of Greece Circular in 1988 as required by the Accession Treaty 1979. Initially, in 1986, capital movements of a personal nature only were allowed from blocked deposits of residents in (other) Community Member States.
11 Initially manufacturing, mining and hotel enterprises, later (1988) the right to borrow in foreign currencies was extended to commercial enterprises and co-operatives and (in 1990) generally to enterprises in the services sector. In 1990, it was stipulated that the term of the foreign currency loans should be at least one year. This restriction on the term was abolished in 1994.
12 Council Directive No. 566 of 1987.
13 Greek Presidential Decree No. 207 of 1987. This succeeded Presidential Decree No. 170 of 1986 and was succeeded by Presidential Decree No. 96 of 1993.

Table 5 *(continued)*

Brief chronology of the liberalisation of cross-border capital movements to/from Greece[1] from the second half of the 1980s onwards

1988

A European Commission Decision[14] extends the deadline until which Greece is allowed to maintain restrictions on capital movements *vis-à-vis* the Community Member States and third countries:

- to 30 June 1989 for outward direct investment from Greece
- to 31 December 1989[15] for outward investment from Greece in securities and in real estate.

Capital movements of a personal nature[16] are liberalised.

1989

A European Commission Decision[17] extends the deadline of 31 December 1989 for the liberalisation of outward investment from Greece in securities and in real estate[18] to 30 June 1990.

Outward direct investment from Greece is liberalised *vis-à-vis* the Community Member States.

1990

European Commission Decisions[19] extend the deadline of 30 June 1990 (for the liberalisation of outward investment from Greece in securities and in real estate[20]) first to 31 December 1990, subsequently to 30 June 1991.

1991

A Council Decision[21] grants a medium-term Community Loan to Greece (for balance of payments support). The Decision requires abolition of the capital controls, which had been authorised by Commission Decision No. 663 of 1990, by June 1991.

Liberalisation[22] *vis-à-vis* the Community Member States[23] of outward investment from Greece in securities (equity shares and bonds with original maturity > two years[24] as well as units of undertakings for collective investment in securities) and in real estate.

1992[25]

Liberalisation of forward foreign exchange transactions.[26]

1993

A Presidential Decree[27] transposes into Greek legislation two Council Directives on capital liberalisation[28] and on derogations allowable to Greece therefrom.[29]

Thus, all medium- and long-term capital movements from Greece are liberalised *vis-à-vis* the Community Member States.

However, some short-term capital movements[30] remain subject to restrictions until 30 June 1994, according to Council Directive No. 122 of 1992.

14 Commission Decision No. 600 of 1988 authorising exemptions from Council Directive No. 566 of 1986 (on capital liberalisation).
15 This was the date until which restrictions could also be maintained on the foreign exchange allowance to outgoing Greek tourists.
16 Not including personal loans.
17 Commission Decision No. 600 of 1988.
18 As well as for the liberalisation of the foreign exchange allowance to outgoing Greek tourists.
19 Commission Decisions No. 348 and No. 663 of 1990.
20 As well as for the liberalisation of the foreign exchange allowance to outgoing Greek tourists.
21 Council Decision No. 136 of March 1991.
22 By two Acts of the Governor of the Bank of Greece in May 1991. The foreign exchange allowance to outgoing Greek tourists was also liberalised *vis-à-vis* Community Member States (by another Act of the Governor).
23 Liberalisation *vis-à-vis* third countries took place in 1992.
24 Reduced to one year by an Act of the Governor of the Bank of Greece in 1992.
25 Greece acquires IMF-Article VIII status, as the liberalisation of current account invisibles transactions (e.g., repatriation of profits) is completed. This is important in the context of *capital* liberalisation too, since it was often suspected by the Bank of Greece that transactions on current account (e.g., acquisition of foreign exchange ostensibly to finance tourist expenditures) would be used to circumvent prohibitions on capital movements (e.g., on outward portfolio investment). E. Pantelidis provided this insight.
26 Initially covering foreign exchange futures and swaps with the purpose of hedging underlying commercial transactions. Liberalisation was generalised to non-commercial transactions in 1993. In that year, currency options were allowed too.
27 Greek Presidential Decree No. 96 of March 1993.
28 Council Directive No. 361 of 1988 and Council Directive No. 122 of 1992.
29 Council Directive No. 122 of 1992.
30 As well as imports/exports of means of payment (i.e., documents which embody value, such as banknotes).

T a b l e 5 *(continued)*
Brief chronology of the liberalisation of cross-border capital movements to/from Greece[1] from the second half of the 1980s onwards

1993 *(continued)*

These are:
- current accounts and other deposits, with maturity < one year, with non-resident financial institutions
- loans to/from Greek residents, including personal loans, with maturity < one year.

In accordance with article 7 of Council Directive No. 361 of 1988 (on capital liberalisation), similar liberalisation is effected *vis-à-vis* third countries with minor exceptions.[31]

1994

Completion of capital movements liberalisation with the removal of controls on short-term capital.[32]

Controls are only retained *vis-à-vis* third countries[33] on inward investment in certain "*sensitive sectors*" (e.g., direct investment in border areas, participations in broadcasting) in Greece.

1997

Foreign currency deposits of residents with resident credit institutions[34] are completely liberalised. Means of payment (especially banknotes) can be exported without restriction.

2000

Buying and selling of gold (gold sovereigns, gold coin and standardised gold bars or gold ingots) which is not used for commercial or industrial purposes is permitted to the Bank of Greece, the credit institutions and natural or legal persons whether resident in Greece or non-residents.

31 The exceptions concern personal loans (to/from non-residents), sureties, other guarantees and rights of pledge (granted by residents). These capital movements were liberalised in 1994 by Greek Presidential Decree No. 104.
32 By Greek Presidential Decree No. 104 of 14 May 1994.
33 This is allowed by Maastricht Treaty article 73c para.1 (article 57 para.1 in the new numbering of the Treaty of Amsterdam).
34 Foreign currency deposits with non-resident credit institutions had been liberalised already in 1994 by Greek Presidential Decree No. 104.

charge brought the corresponding annual interest rate to 180%. The Bank of Greece also bought drachmas extensively on the foreign exchanges and subsequently attempted to replenish reserves through foreign currency swaps with domestic counterparties (to the amount of 200 billion drachmas or €587 million[20]) which faced an acute shortage of liquidity. Further to ease the liquidity situation, the Bank of Greece also released blocked deposits it kept from commercial banks in relatively small amounts (24.4 billion drachmas or €72 million). These funds were to be channelled to small and medium-sized manufacturing/handicraft enterprises, a relic of the nexus of selective credit controls in Greece which had been gradually liberalised starting in 1987, see Table 7.

Within the next two months, calm was fully restored (average July-Dec., O/N: 18.3%, monthly drachma depreciation against ECU: 0.3%, see Chart 3A), as the markets were assured of the determination of the Greek monetary authorities to stick to the policy of limiting drachma depreciation – a lasting gain in credibility had been won.

A similar situation of emergence of market anticipations arose in relation with ERM entry of the drachma. ERM entry had been on and off the Greek policy agenda for several years, since early

20 This represented a substantial sum. For example, during the preceding year 1993, liquidity provision by the Bank of Greece to the interbank market had never exceeded a daily outstanding amount of 150 billion drachmas or €440 million.

in the nineties: entry in 1993 was entertained in 1992, before the ERM troubles; mid-1996 was another premature target date. In the context of the South-East Asian currency turmoil, at around mid-1997, the drachma came under pressure (monthly depreciation against ECU, average in 1996: 0.04%, 1997 first quarter: 0.1%, second quarter: 0.4%, third quarter: 0.2%) and Greek Government securities yields started to rise (ten-year yield, average third quarter 1997: 9.5%, Nov.-Dec.: 10.6%, Jan.-Feb. 1998: 11.0%). Markets focused on the weak current account position (a sizeable deficit of 4% of GDP in 1997) and high external debt of the country (gross *public* debt alone stood at 24% of GDP in 1997).

The Bank of Greece fought off the persisting pressures for several months (around ten), intervening in the foreign exchange market and raising interest rates (three-month ATHIBOR, average Jan.-Sept. 1997: 11.4%, fourth quarter: 17.2%, first quarter 1998: 16.8%, see Chart 3B). As in the 1994 turmoil, the Bank made use again of the device of a daily surcharge of 0.4% to be added to the borrowing cost from its overdraft facility. This raised the corresponding annual interest rate to 170%. Towards the end of 1997, funding of the Greek Government confronted, as in the 1994 turbulence, difficulties which it countered by relying on the issuance of ECU-indexed paper.

This time the pressures did not seem to go away and Greece entered 1998 burdened with elevated interest rates – certainly there took place a persisting interruption in the shallow downward trend, especially of interbank, interest rates (see Chart 3B), while the real short-term drachma bank lending rate for enterprises hovered around 15% in the opening two months of 1998, compared with an average of 12.7% in the second half of the 1990s, see Chart 5. A less important phenomenon, observed in the course of the turmoil on the foreign exchange market in 1994, recurred in Greece during the final months of 1997 and in the opening months of 1998: the steep rise in interbank rates to counter pressures on the drachma was transmitted to increases in the rates offered by credit institutions for time deposits. In turn, the rise in rates brought about an acceleration in the growth of time deposits which, of course, constitute a component of M3 (twelve-month growth rate of time deposits, average Jan.-Sept. 1997: 3.5%, fourth quarter: 16.0%, first quarter 1998: 8.3%).

By the beginning of 1998, a rumour[21] lingered in the markets that the selection of countries for the first wave of Monetary Union in May 1998 was likely to be combined with ERM entry by Greece. Anyway, markets reasoned, ERM entry had to take place by May 1998, if Greece were to stand a chance[22] of attaining her ultimate objective of joining the euro area in 2001. Importantly, it was thought in the markets that ERM entry would provide an opportunity for devaluation of the drachma.

21 *"Market opinion on foreign exchange risk began to be affected. Market assessments were also influenced by predictions and rumours of impending entry of the drachma in the ERM during the first half of 1998"*, from a speech by L. Papademos, Governor of the Bank of Greece at the time, *Economic Bulletin*, December 1997 (the translation from p. 85 of the Greek is ours).

22 For a Member State of the European Union to be allowed to adopt the euro, it must have attained *"durability...of... participation in the exchange rate mechanism of the European Monetary System"*, specifically its currency must have *"respected the normal fluctuation margins provided for by the exchange rate mechanism of the European Monetary System without severe tensions* ***for at least two years*** *before the examination"* [the country in question must] *"not have devalued its currency's bilateral central rate against any other Member State's currency"* Maastricht Treaty, article 109i and protocol No. 6 (article 121 in the new numbering of the Treaty of Amsterdam).

To release the resulting tensions on the foreign exchanges, the Greek Government had to bring forward ERM entry of the drachma to 16 March 1998. As noted by the present Governor of the Bank of Greece, N. Garganas (then Deputy Governor), in a speech at the London School of Economics *"a smooth exit from an unsustainable relatively fixed exchange rate regime had... become a necessity"* (*Economic Bulletin*, December 1998, p. 11). The central parity had to be set at 357[23] GRD/ECU, corresponding to a 12.3% devaluation of the drachma below the market exchange rate vis-à-vis the ECU as determined in the penultimate fixing session of the Bank of Greece before ERM entry, see Chart 1. The standard 15% fluctuation band was put in place.[24]

The 12.3% devaluation of the drachma was considered to be necessary for trouble-free participation, first in the exchange rate mechanism and, subsequently, in the Monetary Union without stifling growth or endangering the Greek balance of payments, given that competitiveness losses had accumulated for Greek products over the years and had to be recouped. To compensate for the inflationary consequences of the devaluation of the drachma, ERM entry was accompanied with the announcement of a package of fiscal expenditure cuts in Greece nearing 1% of GDP in 1998 and of structural reforms, expected to generate privatisation revenues of the order of 1% of GDP per year in 1998-1999.

The Bank of Greece subscribed to the view that the ERM exercises a beneficial influence on inflationary expectations, wage bargaining and pricing behaviour and reinforces generally policy credibility. The ERM provides a framework within which stability-oriented monetary, fiscal, incomes and structural policies can be conducted consistently. The wide standard fluctuation band helps to minimise unwarranted pressures on the exchange rate, e.g., spillovers from the international financial turmoil.

In the immediate run, ERM entry brought relief to the markets and rapid reductions in interbank rates and in bond yields in Greece, see Chart 3B. By the end of March 1998, compared to the day before entry, the three-month ATHIBOR had declined by 3.5 percentage points to 12.5% and the ten-year yield had declined by 2.1 percentage points to 8.2%. In the medium run, ERM participation encouraged wage moderation in Greece, beginning with the two-year wage agreement negotiated in the private sector in May 1998 and continuing with the beneficial influence of the 17 January 2000 revaluation (see below) on the negotiations for the subsequent two-year wage agreement in May 2000.[25]

23 The central rate in ERM II became 353.109 GRD/€. A. Mantzavinos, member of the Monetary Policy Council of the Bank of Greece, draws our attention to the following, *par excellence* technical, issue: *"The drachma did not enter ERM II at the central rate of 357 drachmas per ECU, in force under ERM, although the ECU was converted into euro at a 1:1 rate, as stipulated in the Maastricht Treaty. This difference in the central rate reflects the fact that the central rates of the euro against the currencies participating in ERM II were calculated through the rate of German mark conversion to the euro, so that the exchange rates of these currencies, which had been fixed on 16 March 1998, would remain unchanged. However, the ECU depreciated relative to the German mark in the period from 16 March to 31 December 1998, owing to the weakening of the pound sterling, which participated in the ECU basket"*, *Monetary Policy Report*, March 1999, p. 52, footnote 80.

24 H. Gibson stresses that, with effect from 2 August 1993, currencies participated in the ERM with a fluctuation band of plus or minus 15%, with the exception of the German mark and the Dutch guilder which continued to fluctuate against each other within the old "narrow" band of plus or minus 2.25%.

25 For example, here are some figures for the average annual rise in contractual wages, under branch-level agreements in the private sector, based on corresponding two-year National General Collective Labour Agreements: 1996: 8.6%; 1997: 8.2%; 1998: 5.7%; 1999: 3.9%; 2000: 4.2%.

Chart 6

Percentage deviation of the drachma[1] from its central rate against the ECU (16 Mar. 1998 - 31 Dec. 1998)/against the euro (4 Jan. 1999 - 29 Dec. 2000)

(Daily data)

1 To be precise, the chart depicts the (absolute value of the) depreciation of the actual exchange rate of the ECU/euro (in terms of the drachma) relative to the central rate in force: respectively, ECU 1 = GRD 357; €1=GRD 353.109; €1=GRD 340.750.

The Bank of Greece acted in a manner which made sure that the 12.3% devaluation of the drachma would not prevent fulfilment of the inflation convergence criterion in time for Greece to join the euro area in 2001. Indeed, the Bank of Greece allowed the exchange rate of the drachma to appreciate over the central rate, thus limiting the *de facto* devaluation of the drachma (see Chart 6): throughout participation in ERM/ERM II, the exchange rate was never weaker than the central parity. The average appreciation[26] over central parity, during the period 16 March 1998-15 January 2000, was 7%. At times the exchange rate of the drachma appreciated as far as 9% over the central rate. The foreign exchange value of the drachma in terms of the ECU remained, during its participation in ERM/ERM II, below the corresponding value before the drachma had joined the ERM, albeit by considerably less than 12.3% in practice. In this way, the wide bands of the ERM facilitated the disinflation strategy in Greece.

In the end, the central rate had to be revalued by 3.5% to 340.750 GRD/€, less than two years after entry of the drachma in the ERM on 17 January 2000, see Chart 6. The drachma, which had started to reverse its appreciation by February 1999 in line with interest rate convergence, only returned to its (new) central rate in ERM II a fortnight before the adoption of the euro in Greece.

Attempting to control the appreciation of the exchange rate, the Bank of Greece intervened, buy-

26 Strictly speaking, these figures, 7% and 9%, as well as what is plotted in Chart 6, do not give the "appreciation of the drachma" but rather the depreciation of the ECU below the drachma value implied (for the ECU) by the central parity.

ing foreign currency most of the time the drachma participated in the ERM and ERM II. We note that exchange rate convergence (towards the euro conversion rate of the drachma) was aided by Council[27] Decision No. 427 of 19 June 2000, admitting Greece in the euro area (as of 1 January 2001) and by the concurrent pre-announcement of the euro conversion rate of the drachma by means of Community legislation, i.e., Council[28] Regulation No. 1478 of 2000. From that moment on, the forward rate of the euro against the drachma for end-December 2000 became practically identical to the central rate of the drachma in ERM II.

3. Difficulties encountered by monetary policy in Greece

Though winning the day in the end, monetary policy in Greece confronted various difficulties during the period 1990-2000. A frequent complaint of the Bank of Greece was that, in order to achieve disinflation, real interest rates had to be raised very much, because[29] of the substantial demand pressure which the fiscal imbalances exercised on the Greek economy (general government deficit as a percentage of GDP, average in the first half of the nineties: 12.7%, second half: 5.4%). High interest rates caused a number of side-effects, among them overvaluation[30] of the real exchange rate. Some of the overvaluation could be interpreted as a reflection of *catching up* by Greece (the notorious Balassa-Samuelson effect). Yet, mostly, overvaluation could be seen as an immediate result of the policy of not accommodating inflation differentials *vis-à-vis* trading partners by drachma depreciation or equivalently of sluggishness in the adjustment of domestic wages and prices, despite the policy of limiting the "slide" of the drachma.

Overvaluation of the drachma, together with buoyant domestic output growth in Greece (3.0%, on average) with a high investment content (annual investment growth: 7.2% on average), and with investment goods having a high import content, caused a progressive deterioration in the Greek balance of payments in the second half of the nineties (current account deficit as a percentage of GDP: 3.5% on average). Of course, the Bank of Greece had often noted that the ULC-based real exchange rate overdramatised the overvaluation of the drachma since it did not reflect the effect of lower financial costs as interest rates converged. In addition, pre-1999 Greek balance of payments statistics suffered from considerable export under-recording, especially in relation with the growing trade with the Balkan countries.

An additional side-effect of high Greek interest rates —the counterpart of a deteriorating current account— was the attraction of large capital inflows. In an article about monetary policy, capital inflows and disinflation in Greece, Brissimis and Gibson (1997) explore the nature of the side-effect:

"The source of net capital inflows can be traced mainly to the large increase in foreign borrowing by Greek busi-

27 The Council of Ministers (also known as the EU Council).
28 See previous footnote.
29 H. Gibson pointed out that, apart from the direct effect of fiscal imbalances, high drachma interest rates reflected other influences too, notably risk aversion. As a consequence, it can be remarked about the subsequent decline of long-term drachma interest rates that "*the main factors underlying this trend were the significant decline in the inflation differential and the reduction in risk premia on drachma-denominated financial instruments...along with smaller risk premia due to exchange rate stability*", from a speech by N. Garganas, then Deputy Governor, presently Governor of the Bank of Greece, *Economic Bulletin*, December 1998, pp. 11-12.
30 Garganas and Tavlas (2001) acknowledge overvaluation as a problem with the "hard-drachma" policy.

nesses but these inflows also include portfolio investment in government securities and in the interbank market...Not all the flows recorded [1993-1996] *in the private capital account* [known as "entrepreneurial capital" until 1998] *are genuine cross-border flows but include borrowing by firms in foreign currency from domestic banks... This borrowing was financed to a large extent through a reduction by the Bank of Greece in the redeposit requirement on foreign exchange deposits* [this took place in 1995, see Box 2 below]...*The freed deposits were gradually released to banks...that ... could then on-lend to businesses in Greece.* [Nonetheless] *a proportion of these redeposits may have been invested abroad...Had the redeposits not been released, there is every reason to believe that demand for foreign currency loans would have been satisfied from abroad and that commercial banks would have borrowed from abroad to satisfy demand from small and medium-sized firms."*[31]

Karapappas and Milionis (1999, p. 47) isolate (cumulated) "genuine" capital flows from total corporate borrowing in foreign exchange for the year 1997:

"Given that, according to Bank of Greece data, total borrowing in foreign currency [by resident firms] *from resident credit institutions was 2.74 trillion drachmas* [or €8.041 billion] *on 31 December 1997, external debt* [i.e., loans from non-resident monetary financial institutions (MFIs) plus any corporate debentures] *amounts to 17.3 per cent of this total."*

The proliferation of foreign currency loans to domestic firms demonstrates stabilisation of exchange rate expectations and the advantage of such loans over drachma borrowing[32] with respect to interest costs and "contributions to the common account", see below. It is not surprising that, at times of exchange rate uncertainty (e.g., in the context of the EMS turmoil in 1992 or in the context of the South-East Asian financial turmoil in 1997-1998), substitution could be observed in reverse, out of foreign currency loans and into drachma borrowing.

By contrast, the more successful was the policy of stabilising the exchange rate of the drachma and the greater the credibility which it built up, the more plentiful were the capital inflows attracted to Greece given the interest rate spread in favour of drachma assets. These capital inflows caused a persistent liquidity surplus in the interbank market (late 1994 onwards) and required sterilisation operations by the Bank of Greece, mainly by collecting deposits from credit institutions (see Chart 7), to limit the decline in interbank interest rates and the attendant acceleration in monetary and credit growth in Greece. In turn, sterilisation operations entailed significant costs for the Bank of Greece (i.e., payments of interest to commercial banks) and generally required continuous vigilance by the Bank.[33]

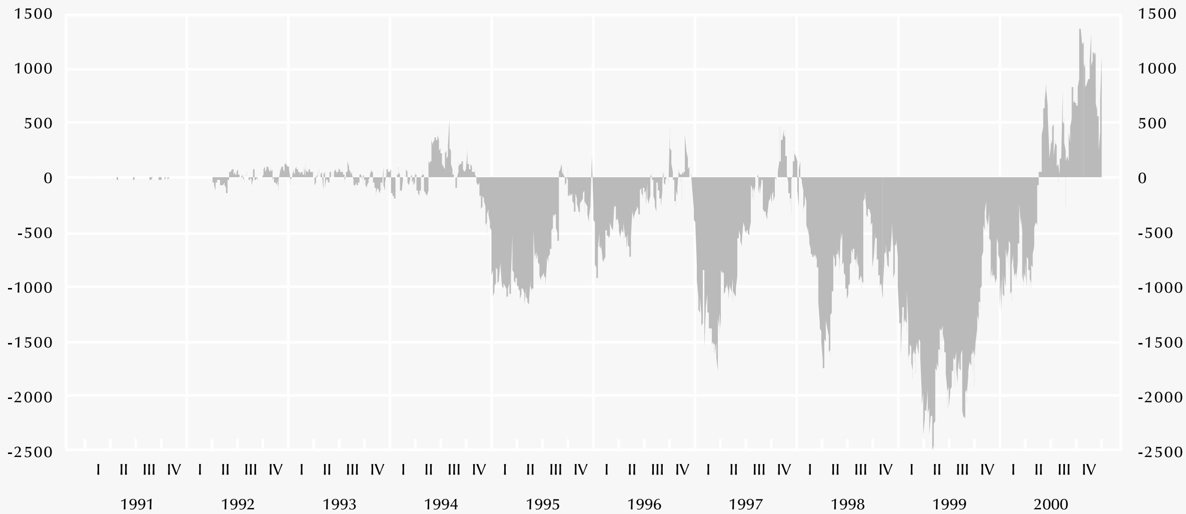
31 From the available unpublished English translation of pp. 25-27 in the Greek.

32 For example, over the period 1995-1997, the three-month ATHIBOR averaged to 14.3%; the annual depreciation of the drachma against the ECU averaged to 1%; the interest rate on three-month ECU deposits averaged to 4.8%.

33 For illustration, according to the *Annual Reports of the Governor*, liquidity absorption by the Bank of Greece reached a daily outstanding amount of: 550 billion drachmas or €1.614 billion (4.5%), on average, in the period January-May 1996; 1,300 billion drachmas or €3.815 billion (12.1%), on average, over the period January-March 1997; 750 billion drachmas or €2.201 billion (6.4%), on average, in 1998; 1,500 billion drachmas or €4.402 billion (11.7%), on average, in 1999; 760 billion drachmas or €2.23 billion (6.5%), on average, from January until mid-May 2000. In the second half of 2000, liquidity *provision* by the Bank of Greece to the interbank market reached, on average, a daily outstanding amount of 625 billion drachmas or €1.834 billion (5.4%). For comparison, we give in parentheses the percentage of the liabilities of the Bank of Greece (at the end of the respective year) represented by the daily outstanding amount of liquidity absorbed.

Chart 7
Liquidity injection (+) into, and liquidity absorption (-)[1] from, the interbank market, 1991-2000, by the Bank of Greece through "open market operations" (all maturities) and through standing facilities[2,3]

(Net outstanding daily balance in billion drachmas)



1 Negative values along the vertical axis indicate liquidity absorption from the interbank market, which corresponds to the Bank of Greece assuming liabilities *vis-à-vis* credit institutions.
2 See Table 6, for the distinction between open market operations and standing facilities.
3 Overdrafts on credit institutions' current accounts with the Bank of Greece are not added in.

At times (e.g., in 1997) the Bank of Greece attempted to discourage capital inflows by engineering some exchange rate fluctuation within the year. The Bank of Greece also pleaded (see interview given by L. Papademos, as Governor of the Bank of Greece, in the Winter 1995-1996 volume of *Central Banking* (periodical) p. 56, which was devoted to the Bank of Greece), for the abolition of certain, essentially fiscal, provisions in Greek legislation which encouraged borrowing from non-resident credit institutions. Some of these provisions also encouraged obtaining loans (from resident credit institutions) in currencies bearing relatively low interest rates. This was because the "fiscal" charge, i.e., the so-called percentage "contribution to the common account", applied to the value of each outstanding loan, varied directly with the level of the loan rate. In addition, the Bank of Greece recommended restriction of official foreign borrowing. The Greek Government responded and Karapappas and Milionis (1999, p. 49) explain the solution it devised:

"Until 1 September 1997... loans from non-resident credit institutions [these were mostly in foreign currencies and constituted "genuine" capital inflows] were not subject to the [percentage "contribution to the common account"] *under Law 128/75* [nor, of course, to the Special Tax on Banking Transactions (EFTE)]. *On the other hand, loans from resident credit institutions, with interest rates exceeding 5 per cent, were burdened with the above* [percentage "contribution to the common account"]*, which varied according to the interest rate. There was also an additional EFTE surcharge of 4 per cent on interest...in order to prevent a possible massive shift of resident firms towards loans from foreign credit insti-*

tutions, the Ministry of Finance —by article 22 of Law 2515/97— imposed a 1.2 per cent ["contribution to the common account"] *on all loans, irrespective of their origin, and reduced EFTE from 4 per cent to 3 per cent"*[34] [note that only domestic banks and foreign banking corporations operating in Greece were subject to EFTE].

Moreover in March 1997, the Bank of Greece put in place a deposit facility with two tiers (see Annex), ensuring that plentiful interbank liquidity would induce a reduction in the average cost/effective deposit rate at which it would be absorbed (by the Bank of Greece).[35] The automatic reduction in the deposit rate offered by the Bank of Greece would discourage further liquidity generating capital inflows. By contrast, Garganas and Tavlas (2001, p. 84) comment for (conventional) sterilisation operations: *"Sterilisation ...prevents domestic interest rates from falling in response to the inflows and thus tends to maintain the yield differential that gave rise to them"* [i.e., to the capital inflows]. The Bank of Greece argued that the establishment of the deposit facility yielded immediate results in terms of a reduction in the interbank liquidity surplus during April-May 1997.

Sterilisation operations were not completely successful in arresting rapid monetary and credit growth in Greece. Towards the end of the decade of the 1990s and in the year 2000 convergence trades, that is to say large purchases of Greek Government securities by foreign investors in the expectation of capital gains as interest rates converge, fuelled credit expansion to the public sector. This occurred at a time when debt management in Greece increasingly relied on sales of long-term debt, which proved particularly appealing not only to non-residents but to domestic banks too. By contrast, such debt instruments were not absorbed by the domestic private non-bank sector, which used to acquire the lion's share in new Greek Treasury bill issues in the past. As a result, expansion of the consolidated balance sheet of the Greek banking system took place. Indeed, while sales of Treasury bills (original maturity up to one year) represented over 64% of total domestic borrowing by the Greek Government on average in 1994-1996, the domestic private non-bank sector financing directly around two-thirds, on average, of the central government borrowing requirement, the share of Treasury bills fell to 38% in 1997-1999, with fixed coupon securities becoming the primary funding instrument. For illustration, holdings of Greek Government securities by non-residents increased by 2,715 billion drachmas or €7.968 billion in 2000, at the same time as holdings by the domestic private non-bank sector decreased by 3,125 billion drachmas or €9.171 billion and holdings of domestic MFIs (excluding the Bank of Greece) increased by 1,855 billion drachmas or €5.444 billion.[36]

34 The *Monetary Policy Report*, February 2000, pp. 34-35, elaborates further: *"The adoption, on 1 September 1997, of a single charge rate (1.2 per cent) for the contribution to the "common account for the refunding of interest differences" (Law 128/75), instead of the previously adopted method of linking the level of the charge with the level of the interest rate...the adoption of a single rate affected only foreign currency loans, which, because of their low interest rate, were burdened either very slightly (10 per cent of the normal contribution) or not at all under the previous regime"*.

35 This happened because a credit institution could deposit only a limited amount in the first tier; this limited amount would then be remunerated at a higher interest rate (relative to deposits in the second tier). After exhausting the limit on the first tier, further amounts could be placed by the credit institution in the second tier *only*; these further amounts would then be remunerated at a lower interest rate (relative to first-tier deposits).

36 This compares with outstanding medium- and long-term Greek Government bonds over 33,000 billion drachmas or €96.845 billion in 2000. There also occurred capital inflows for the purchase of quoted equities by non-residents to an amount of 643 billion drachmas or €1.887 billion in 2000. During that year, total market turnover in the Athens Stock Exchange reached about 34,000 billion drachmas or €99.779 billion and total funds raised through the stock market (equities) 2,994 billion drachmas or €8.787 billion.

Credit expansion to the Greek private sector was rapid too, see Charts 8 and 9. It was underpinned by intensifying competition among credit institutions, indeed the Greek banking sector experienced considerable restructuring in the 1990s, see Hardy and Simigiannis (1998) and Eichengreen and Gibson (2001) for detailed description and assessment of relevant developments. In addition, valuation differences on foreign currency loans, partly due to the "slide" of the drachma, inflated the figures for domestic credit expansion to the private sector in Greece. Towards the completion of nominal convergence in 1999 and 2000, rapid credit growth was also fuelled by the anticipation, on the part of borrowers, that floating rates would soon decline drastically, while banks actually started reducing lending rates in advance of official rate convergence. The phenomena described here and in the previous paragraph largely explain why the domestic credit expansion target/monitoring range of the Bank of Greece was overshot in two-thirds of the years after capital controls were lifted in 1994.

Worried that rapid credit growth would compromise the inflation primary objective and would impact adversely on the Greek trade balance, the Bank of Greece attempted to contain it by adjusting the reserve requirement, see Annex. In June 1995,[37] the reserve ratio was increased from 9% to 11% and the reserve base was expanded to encompass foreign exchange (apart from drachma) liabilities to non-residents. Bank liabilities either to residents or to non-residents linked with fund management agreements were also included.

In June 1996,[38] the reserve ratio was increased again in Greece from 11% to 12%, some additional bank liabilities were brought within the reserve base (liabilities to non-residents with a maturity over two years) and the reserve requirement was extended (albeit at a reduced coefficient) to mortgage and housing banks which had been exempt until then. Some additional restrictions (e.g., a downpayment requirement on purchases on credit, personal loans from a single credit institution only) were imposed specifically on consumer credit.

Furthermore, in April 1999[39] a special *asset-side* temporary reserve requirement was devised, whereby banks had to place credit growth, in excess of a quarterly ceiling, in a non-interest bearing deposit with the Bank of Greece.[40] The Bank of Greece was particularly concerned to curtail consumer loans and loans financing domestic or import trade, thus a separate ceiling was applied to such loans. For consumer loans the required non-interest bearing deposit with the Bank of Greece was raised, in July 1999, to twice the excess of consumer credit growth over the respective quarterly ceiling.[41]

On all the occasions mentioned above, the Bank of

37 Twelve-month growth rate of private loans, average during the first half of 1995: 15.6%, second half: 21.4%.

38 Twelve-month growth rate of private loans, average during the first half of 1996: 22.7%, second half: 19.9%.

39 Twelve-month growth rate of private loans, average during the first quarter of 1999: 12.5%, during the remaining three quarters: 14%.

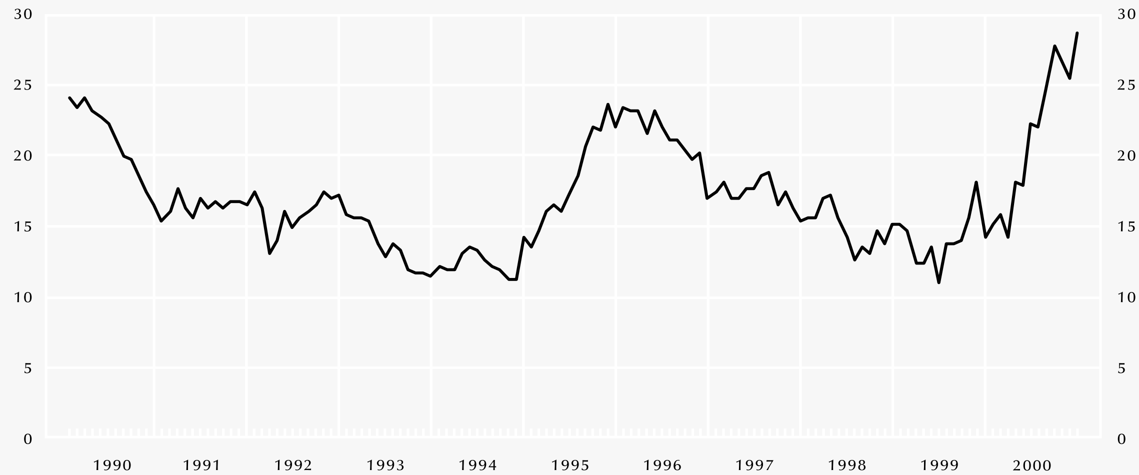
40 Approximately ten years earlier, during the last quarter of 1989, we encounter a prior instance of the Bank of Greece turning to the application of quantitative ceilings and an asset side reserve requirement, on *total* lending to the private sector, with the aim of arresting rapid credit expansion. In 1989, the ceilings and the asset side reserve requirement were imposed on the commercial banks, the Agricultural Bank of Greece and the mortgage banks – 25% of any excess over bank specific limits on the extension of credit had to be deposited with the Bank of Greece without remuneration for six months.

41 Twelve-month growth rate of consumer loans, average during the first half of 1999: 43%, second half: 40.3%.

Chart 8

Credit expansion to the private sector by domestic banks (in drachmas or foreign exchange), Greece, Jan. 1990 - Dec. 2000

(Percentage change in outstanding credit[1,2] in comparison with corresponding month of previous year)

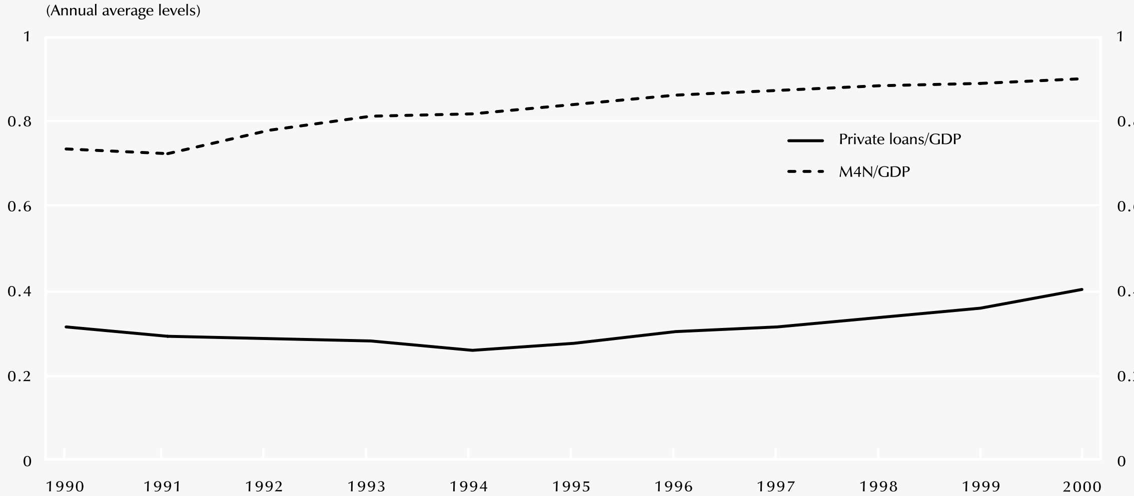


1 Without adjustment for foreign exchange valuation differences.
2 Bond issues not included.

Chart 9

Ratio of M4N[1], and of outstanding credit[2] to the private sector, to nominal GDP, Greece, 1990-2000

(Annual average levels)



1 M4N: currency in circulation, sight, savings and time deposits (in drachmas), repos and bank bonds, private sector investments in Greek Government securities (in the primary or secondary market) with maturities up to one year and in money market fund units (in drachmas), bank deposits of residents in foreign exchange.
2 Without adjustment for foreign exchange valuation differences.

Greece pointed out that the tightening of the reserve requirement had been, at least temporarily, successful in terms of a reduction in the interbank liquidity surplus and/or in terms of containment of monetary and credit growth (compared at least to what might have been expected in the absence of the policy measures). Certainly inspection of Chart 8 reveals that the twelve-month growth rate of private loans trended downwards during most of the period 1996-1999, and this at a time when GDP growth was accelerating in Greece.

The final difficulty which monetary policy had to overcome in Greece was posed by interest rate and exchange rate convergence in the "home-stretch", so to speak, before getting into the euro area. A participating country cannot sustain a different money market rate from all other countries in the Monetary Union. The exchange rate of a participating currency does not fluctuate *vis-à-vis* the rest of the Monetary Union currencies but is irrevocably fixed. In the first-wave countries the irrevocably fixed exchange rates corresponded to the ERM bilateral central parities which prevailed on 3 May 1998.

Aiming to adopt the euro on 1 January 2001, Greece entered the year 2000 with a three-month interest rate (ATHIBOR) differential of more than 6 percentage points against the euro area (see Chart 3B) and an appreciation of the exchange rate of the drachma of more than 6.5 percentage points in relation with the central parity, see Chart 6.

In these circumstances, there was likelihood that converging to the euro area would entail significant inflationary pressures as short-term interest rates declined by much and the exchange rate depreciated considerably, in order to reach the euro conversion rate, which was set equal to the revalued central parity. All this took place in an environment of buoyant output growth in Greece (over 4% in 2000) continuing since a number of years in the past, and while the price of oil shot up.

Of course there were countervailing forces, as pointed out by the Bank of Greece: the household sector in Greece, which is a net creditor, suffered losses of interest income on Greek Government securities and bank deposits held. All other things being equal, if interest rates had not declined, the growth rate of gross private disposable income in Greece would not have reached only 5% in 2000 but would have been 3 percentage points higher. Moreover, the Athens Stock Exchange decline in late 1999 (by around 13% from the peak on 17 Sept. to the end of the year), which continued in 2000 (when it amounted to around 40%), might have induced some negative wealth effects. For the business sector in Greece, the reduction in drachma interest rates[42] constituted a positive supply shock. Anyway, the Bank of Greece argued that expansionary effects on the business sector must have been relatively muted, in view of the proliferation of foreign currency loans (33% of private credit expansion in 2000), as well as in view of significant recourse, in 2000 and just before, to new issues of equity capital.[43] The cost of both above-mentioned sources of funds was not, of course, affected directly by convergence.

Nevertheless it had often been pointed out (for example in the Council[44] Opinion of 31 January 2000 on the updated convergence programme of Greece 1999 to 2002) that the inflationary risks in Greece would be countered best by adjusting fiscal policy and intensifying structural reform, while the help of incomes policy was also deemed necessary. At any rate, the inflationary risk was lim-

42 The short-term drachma bank lending rate for enterprises declined by 4.5 percentage points over the duration of the year 2000.
43 Indeed, 2,994 billion drachmas or €8.787 billion were raised by non-financial companies through issues of equity capital on the stock market in 2000, compared with credit expansion to the private sector of 4,173 billion drachmas or €12.247 billion, incl. valuation differences.
44 The Council of Ministers (also known as the EU Council).

ited by revaluing the central rate of the drachma against the euro by 3.5% on 17 January 2000 as mentioned above. The revaluation was estimated to have had a favourable impact on the inflation rate in Greece (annual average CPI for 2000: 3.2%) of the order of 0.5 percentage point.

As the required depreciation of the drachma was limited by realigning, on the level of the exchange rate mechanism, so the increase in the ECB Main Refinancing Operations ("MRO") rate by 1.75 percentage points, on the level of the euro area in the course of 2000, limited the required decline in short-term interest rates in Greece.

The Bank of Greece, in part wishing to avoid any last minute exchange rate turbulence, but also wishing to limit the duration of any inflationary stimulus to the Greek economy, delayed as far as possible the reduction of its policy rates towards euro area levels. It broke the reduction down in nine steps-cuts of the key fourteen-day (deposit collection/repo) rate, over the course of 2000. Slightly less than half (46%) of the reduction (by 6 percentage points *in toto*), in the fourteen-day intervention rate of the Bank of Greece over the course of 2000, took place during the final quarter of the year. Indeed, final alignment of the Bank's policy rates with the ECB rates occurred less than a week before adoption of the euro in Greece (27 December 2000), see Chart 3B, whilst the exchange rate of the drachma had reached the central parity about a fortnight earlier (15 December), see Chart 6.

4. Structural monetary policy:[45] The adaptation of the monetary policy instruments of the Bank of Greece to the euro, and other reforms

Independently from the prospect of entry into the Monetary Union, the adoption of an efficient operational framework was a long-standing desideratum for the Bank of Greece as it would further its ability to achieve and establish price stability in Greece.

Thus, even before the preparatory work of the European Monetary Institute (EMI) which started officially in 1994,[46] the Bank of Greece attempts to introduce "best-practice"/"state-of-the-art" in monetary policy operations, making early use of the repo technique (1989-1990) and combining it with interest rate tenders. A "Lombard-type" facility, to provide credit to banks against collateral of Greek Government securities, was also established quite early (1993).

With the inception of the second stage of EMU (1994-1998), it becomes necessary for the Bank of Greece to prepare for its operational integration

45 The following institutional reforms concerned the Bank of Greece, had significant repercussions on the operation of the Greek economy, took place during the period 1990-2000 and were necessary for the admission of Greece into the Monetary Union, yet remain outside the scope of this article: the abolition of monetary financing of the public sector by the central bank and the enshrinment of Bank of Greece independence in legislation. Finally, we do not examine the evolution of intervention techniques in the foreign exchange market.

46 Maastricht Treaty, article 109f (article 117 in the new numbering of the Treaty of Amsterdam): "*For the preparation of the third stage, the EMI* [European Monetary Institute] *shall*:
— *prepare the instruments and the procedures necessary for carrying out a single monetary policy in the third stage....*
At the latest by 31 December 1996, the EMI shall specify the regulatory, organisational and logistical framework necessary for the ESCB [European System of Central Banks] *to perform its tasks in the third stage. This framework shall be submitted for decision to the ECB at the date of its establishment*."

Table 6
Eurosystem monetary policy operations

<table>
<tr><th rowspan="2">Monetary policy operations</th><th colspan="2">Types of transactions</th><th rowspan="2">Maturity</th><th rowspan="2">Frequency</th><th rowspan="2">Procedure</th></tr>
<tr><th>Provision of liquidity</th><th>Absorption of liquidity</th></tr>
<tr><td colspan="6">Open market operations</td></tr>
<tr><td>Main refinancing operations</td><td>• Reverse transactions</td><td>–</td><td>• Two weeks</td><td>• Weekly</td><td>• Standard tenders</td></tr>
<tr><td>Longer-term refinancing operations</td><td>• Reverse transactions</td><td>–</td><td>• Three months</td><td>• Monthly</td><td>• Standard tenders</td></tr>
<tr><td rowspan="2">Fine-tuning operations</td><td>• Reverse transactions
• Foreign exchange swaps</td><td>• Foreign exchange swaps
• Collection of fixed-term deposits
• Reverse transactions</td><td>• Non-standardised</td><td>• Non-regular</td><td>• Quick tenders
• Bilateral procedures</td></tr>
<tr><td>• Outright purchases</td><td>• Outright purchases</td><td>–</td><td>• Non-regular</td><td>• Bilateral procedures</td></tr>
<tr><td rowspan="2">Structural operations</td><td>• Reverse transactions</td><td>• Issuance of debt certificates</td><td>• Standardised/ non-standardised</td><td>• Regular and non-regular</td><td>• Standard tenders</td></tr>
<tr><td>• Outright purchases</td><td>• Outright purchases</td><td>–</td><td>• Non-regular</td><td>• Bilateral procedures</td></tr>
<tr><td colspan="6">Standing facilities</td></tr>
<tr><td>Marginal lending facility</td><td>• Reverse transactions</td><td>–</td><td>• Overnight</td><td colspan="2">• Access at the discretion of counterparties</td></tr>
<tr><td>Deposit facility</td><td>–</td><td>• Deposits</td><td>• Overnight</td><td colspan="2">• Access at the discretion of counterparties</td></tr>
</table>

Source: *The Single Monetary Policy in Stage Three: General Documentation on Eurosystem Monetary Policy Instruments and Procedures* (Frankfurt: ECB, November 2000).

in the Eurosystem, i.e., to align monetary policy instruments and procedures in its armamentarium with the operational framework[47] of the Eurosystem designed by the EMI. Otherwise, it would not be possible to implement the single[48] monetary policy in Greece.

Officially, the design of the operational frame-

47 *The Single Monetary Policy in Stage Three: General Documentation on Eurosystem Monetary Policy Instruments and Procedures* (Frankfurt: ECB, November 2000) considers the "operational framework" as a synonym for the monetary policy framework. Further, it states that the operational framework consists of official descriptions of open market operations and standing facilities, of the minimum reserve system, of the counterparties of the central bank, of the collateral which the central bank accepts as eligible security and of the monetary policy procedures (e.g., the tender procedure).
48 "Single" means, *inter alia*, "without differentiation from country to country".

work by the EMI had to be completed by the end of 1996, in practice, however, it continued to be perfected for another two years. In the end, the operational framework of the Eurosystem encompassed, besides the reserve requirement, the instruments of monetary policy presented in Table 6.

Extensive adaptations are undertaken by the Bank of Greece in piecemeal fashion mainly during the late 1990s and in the year 2000. Early adaptation of monetary policy instruments secures a longer duration for the learning process of counterparties (credit institutions), and indeed of the Bank of Greece. Familiarisation with the new techniques of monetary control is necessary if only because active financial markets appeared as a relatively late feature of the Greek scene.

However, premature completion of certain adaptations would have deprived the Bank of Greece of means to handle the liquidity surplus which, as explained above, occurred chronically in the interbank market since mid-1994. For example, main or longer-term refinancing operations cannot be tried in Greece since there is no need for the Bank of Greece to provide liquidity regularly to the interbank market before the second half of 2000. Nor can "unification" of the two tiers of the deposit facility be attempted, as long as capital inflows into Greece remain strong. Similarly, the rate of remuneration of required reserves can only be adapted in line with the gradual downward movement of interbank interest rates.

Some adaptations (e.g., risk control measures) have to await the deepening of securities markets and the development of related market infrastructure in Greece. Other changes (e.g., the creation of settlement accounts and the abolition of the overdraft facility of the Bank of Greece) have to await the establishment of a real-time gross settlement (RTGS) system for domestic monetary policy purposes, which inevitably takes some time.

Still, coping with the chronic liquidity surplus in the interbank market does encourage *some* adjustments on the part of the Bank of Greece which are in the direction of the operational framework of the Eurosystem. We have already seen that increases in the reserve requirement (in the coverage of subject institutions and liabilities) are implemented in Greece in 1995 and 1996, in order to limit the chronic interbank liquidity surplus and its effects on monetary and credit aggregates. This ensures a gradual approach[49] to the wide reserve base and the comprehensive list of subject credit institutions eventually adopted by the Eurosystem. Only very few categories of liabilities, subjected to the reserve requirement in Greece in the course of the 1990s, had to be taken out of the reserve base in June 2000 in order to attain complete harmonisation with the euro area.

Conjunctural factors (e.g., the world financial turmoil in 1997-1998) also influenced the type of operations which the Bank of Greece could undertake. Thus, situations of tension in the foreign exchange market provide the occasion to the Bank of Greece for trying foreign exchange swaps.

Moreover, the large inflows of capital into Greece after mid-1994 create the necessity for a *standing* deposit facility (1997), as opposed to the *ad hoc*

49 Still, this was combined in Greece with increases in the reserve ratio, i.e., further diverging from the low reserve requirement and full remuneration eventually adopted by the Eurosystem.

deposit collection from the interbank market on the initiative *of the Bank of Greece*, which had been taking place until then.

In few cases, the timing of adaptation does not really have a significant impact on the money market. Throughout its life, recourse to the "Lombard-type" facility of the Bank of Greece remains limited and exceptional so that the abolition of the, mostly non-binding, global ceiling on drawings from this facility has no substantial liquidity implications. Still, abolition could be construed as signalling a relaxation of the monetary policy stance in Greece. For this reason, as well as for the sake of progressive familiarisation, the global ceiling is phased out gradually, its eventual abolition in 2000 following only after stepwise increases over the period 1998-1999.

There was some uncertainty, in the early years of preparation of the single monetary policy, as to whether a "Discount-type" facility would be included in the operational framework of the Eurosystem. This explains the initial reactivation (March 1993) and late abolition (April 1998) of the rediscount facility of the Bank of Greece, for private bills of exchange and promissory notes, after a period during which the facility had remained inactive.

A strategy that is often followed by the Bank of Greece is to introduce, at the earliest opportunity, monetary policy instruments which are generally similar, *though not exactly identical*, to those of the Eurosystem. For example, in March 1997 a deposit facility, albeit in two tiers (which contrasts with the Eurosystem), is introduced in Greece.

Subsequently, the Bank of Greece achieves full harmonisation with the Eurosystem by adjusting *piecemeal* the various technical parameters of the monetary policy instruments. For example, though there was no reason to carry out liquidity *providing* operations in Greece before mid-2000, the Bank of Greece chose to organise the *absorption* of liquidity, as of 1997, in part through market operations, which had a maturity and a frequency analogous to the main (and later, since 1999, to the longer-term) refinancing operations of the Eurosystem. Earlier (1994-1995), the Bank of Greece had tried intervention in a longer maturity (one month) on as regular a schedule as possible. Interest rate tenders had also been tried.

As a further example of piecemeal adaption, reserve averaging (in contradistinction to an obligation to keep required reserves at a given constant level, day-by-day, throughout the maintenance period) was adopted in Greece in three steps: in March 1996, averaging was first introduced but was confined to only one-tenth of the required reserves for each credit institution. Later, in December 1999, this proportion was raised to 15%.[50] Only in June 2000, when the reserve ratio had been drastically reduced, was averaging applied to the total, and not just to a fraction, of required reserves.

In general, harmonisation of the reserve ratio earlier in the decade of the 1990s would have aggravated the interbank liquidity surplus in Greece. Even after conditions in the interbank market had begun normalising in the second half of the year 2000, the reduction in the reserve ratio, from 12% to 2% in June 2000, was deemed to present risks

50 Averaging is not allowed to mortgage and housing banks.

because of the unprecedented injection of liquidity it would bring about. This would occur during the delicate "interim" period[51] in Greece, when it was felt necessary to avoid any perturbation in financial markets so as to ensure smoothness in the final stages of interest and exchange rate convergence. Moreover, that was a time when progress with disinflation in Greece was difficult – it was expected to be just sufficient to satisfy the respective convergence criterion. Indeed, it did not prove possible to fulfil the criterion before December 1999. By itself, an abrupt increase in liquidity could have influenced inflationary expectations adversely. Thus, a specific transitional arrangement, in relation with the reduction of the reserve ratio in Greece, had to be put in place.

To avoid an abrupt swell in interbank liquidity, required reserves accumulated by credit institutions at the Bank of Greece under the 12% ratio, which in their largest part became *excess reserves* when the reserve ratio was reduced to 2%, are not released at once (apart from a tiny amount per credit institution). They are placed in remunerated[52] term deposits with the Bank of Greece, with staggered redemption dates extending over one-and-a-half years (January 2001-July 2002).

The Greek institutional framework presented an additional complication: There was a requirement on credit institutions to "redeposit", with the Bank of Greece, foreign exchange initially deposited with them by certain types of depositors (as of the late 1990s, only "Greek seamen and emigrant workers/employees"). This amounted to a separate special reserve requirement on certain types of foreign exchange deposit – with a very high reserve ratio (70%), and with "required reserve" holdings at the Bank of Greece themselves denominated in *foreign currencies* and enjoying *favourable treatment* (in terms of the rate of interest and the rate of commission at which they were remunerated, etc.) In the Eurosystem's minimum reserve system, foreign currency deposits are not accorded special treatment and, therefore, the special high reserve requirement of the Bank of Greece on certain foreign exchange deposits had to be removed – anyway its maintenance would no longer have served any purpose.

Considerations similar to those with the "drachma" reserve requirement advise in favour of gradual release of euro (formerly ECU), legacy currency,[53] and foreign exchange "redeposits". Here again the method is used (December 2000) of converting accumulated "redeposits", maintained by credit institutions at the Bank of Greece, into term deposits. Thus, euro liquidity and foreign exchange (sourcing from "redeposits" of out- or third-currencies) is released into the Greek banking system gradually over a period of fifteen months (January 2001-March 2002).[54]

The "redeposit" system had been designed in the late 1960s in order to attract into the country, through the offer of favourable terms, and subse-

51 This is the period between the decision on adoption of the euro and adoption (of the euro) itself. For the first wave of countries which joined the euro area, the "interim" period extended from 3 May until 31 December 1998 (for Greece it lasted from 19 June until 31 December 2000). At various points fears had been expressed that the "interim" period would be characterised by turbulence on the foreign exchange markets in the European Union.
52 At the "MRO" rate of the Eurosystem, as of 2001.
53 The "old" national currencies of the Member States of the euro area.
54 The *Annual Report of the Governor for 2000* (p. 42) states that *"the total liquidity released and restored to banks' free management, as a result of the harmonisation of both the reserve ratio and the reserve base, amounts to about 4.3 trillion drachmas"* or €12.619 billion, which corresponds to roughly 10% of Greek nominal GDP in 2000.

quently to centralise at the Bank of Greece, foreign exchange which was scarce then. There was a belief that the behaviour of individual depositors who possessed ties to Greece, in conjunction with the operation of the "law of large numbers", would secure some degree of stability for aggregate deposits in foreign currency, especially as compared with alternative sources of foreign exchange. Monetary developments and inflation reduction, three decades later, enabled financial reform in Greece, which culminated in the complete removal of the system of "redeposits" in December 2000. There had preceded rationalisation and simplification of the system of "redeposits" in April 1995, exemption of the deposits of "domestic permanent residents/residents of Greece" in July 1997, adjustment of the percentage of foreign exchange deposits required to be "redeposited" from 70% to 60% in June 1998, and gradual reduction of the rate of commission and of the interest rate bonus (the latter was offered on condition that the depositor agreed to receive interest in drachmas), see Annex.

In the Annex we describe in detail the adjustments made by the Bank of Greece to its monetary policy instruments and procedures, primarily during the second half of the 1990s and the year 2000, in order to align them with the prototypes provided by the operational framework of the Eurosystem on the way to 1 January 2001. The operational framework of the Eurosystem is briefly presented in Table 6 as well as in quotations from *The Single Monetary Policy in Stage Three: General Documentation on Eurosystem Monetary Policy Instruments and Procedures* (Frankfurt: ECB, November 2000), prefacing corresponding parts of the Annex to this article or placed in footnote.

The ability to "operationally integrate" the Bank of Greece into the Eurosystem had deeper roots: ultimately, it was founded on the achievement of nominal convergence on the level of the Greek macroeconomy as well as on prior institutional reform in the banking system in Greece, see Tables 5 and 7.

Reliance on indirect methods of monetary control in Greece, *a fortiori* implementation of the operational framework of the Eurosystem, would have been unthinkable if the domestic activities of credit institutions had not been thoroughly liberalised beforehand, *"from the suffocating fetters with which they had been bound by the extraordinarily complicated system of specialised credit regulations, detailed provisions and bureaucratic procedures that had been established gradually since the mid-1950s"*,[55] and if the money and government debt markets had not developed as a result.

For example, late in the decade of the 1980s, an important monetary instrument was the, mostly binding, floor on the savings deposit rate, which was administered by the Bank of Greece and only rarely changed. *The Annual Report of the Governor for 1988* argues that:

"The administrative determination of the savings deposit rate and of the two interest rate floors applying for bank loans is essentially a monetary policy measure: It aims to underpin counterinflationary monetary policy, specifically to prevent a fall in interest rates below a certain level".[56]

55 *Annual Report of the Governor for 1986*, the translation from p. 39 of the Greek is ours.
56 The translation from p. 38 of the Greek is ours.

Table 7

Chronology[1] of the liberalisation[2] of the domestic activities of banks in Greece, from 1987 onwards

I. Quantitative ceilings imposed on lending and borrowing (through the issue of bank bonds) by credit institutions are removed. Compulsory investments in Greek Government securities, and other obligations on credit institutions to provide loans, are terminated. Other qualitative credit controls, besides preferential interest rates, are lifted.

1987

1. The obligation on the commercial banks to channel 15% of deposits[3] into financing *"productive investment"* is lifted (June, December).

1988

2. The role[4] of the Bank of Greece in channelling financial resources to the Agricultural Bank of Greece[5] and to the mortgage banks lapses (February).

3. An important component of the nexus of selective credit controls, the "reserve/rebate-withdrawal" system[6] on bank loans, is terminated[7] with effect from 31 December.

4. Restrictions on banks financing certain sectors of the economy such as construction, trade and commerce and, generally, services are lifted.[8]

1 Dates given in this Table refer to the time of *announcement* of liberalisation measures, unless otherwise indicated, which does not coincide necessarily with (but is normally in advance of) the time of *implementation*/*coming* into effect of the liberalisation measures. The order in which the liberalisation measures announced during a particular year are enumerated here is conceptual and not chronological (i.e., the ordering is *not* by month of announcement). Grouping measures in parts **I** to **V** is inevitably somewhat arbitrary. In general, we do not describe institutional arrangements before 1980. Special thanks go to C. Kodella, E. Gatzonas and S. Papadopoulos for helping us with the translation into English of terms from their respective fields of competence.

2 In their great majority, liberalisation measures were instituted by Acts of the Governor of the Bank of Greece. An asterisk next to the month of announcement signifies that the measure in question has been instituted by Decision of the Monetary/Banking and Credit Committee of the Bank of Greece.

3 This percentage had been in force since the sixties. Over the course of 1986 (June, November, December), the percentage had been raised to 19.5%. It was specified, however, that the commercial banks should loan out amounts in excess of 15% of their deposits to public enterprises and public entities. In January 1986 it was specified that "unused funds" (i.e., bank resources earmarked in compliance with the obligation which, however, it did not prove possible for banks to channel into the kind of loans required by the obligation) could be invested in Greek Treasury bills. After abolition of the obligation, "unused funds" were released back to the credit institutions gradually in the course of the second half of 1987.

4 *"The Bank of Greece...channels a large proportion of...funds [under its control] to the finance of medium- and long-term lending programs of the specialised credit institutions. This is actually unusual for central banks"*, D. J. Halikias: *Money and Credit in a Developing Economy: The Greek Case* (New York: New York University Press, 1978), p.7.

5 In practice, the Agricultural Bank of Greece continues to draw on its loan account with the Bank of Greece until 1989.

6 *"In 1966, the monetary authorities introduced a new system for controlling the overall liquidity of the commercial banking system. Compulsory reserve requirements with the central bank* [were no longer determined as a percentage of private bank deposits but] *were fixed on the banks' outstanding loans, the relative percentages varying substantially according to the type of lending. Thus, no reserve requirements were imposed on the amount of outstanding loans to export trade and handicrafts, while the percentage of reserve requirements was fixed at 30 percent on outstanding loans to import and domestic trade and at 5 percent on all other lending (including loans to manufacturing industry). At the same time, the commercial banks were allowed to withdraw from the Bank of Greece funds amounting to 40 percent of their outstanding loans to economic sectors or activities which were favored by the monetary authorities and were thus charged at lower interest rates. These withdrawals were free of any charge. Through this combination of compulsory reserve requirements and withdrawals, the net receipts of the commercial banks (estimated on the basis of the official interest rates and commission charges by type of loans)..."*, D. J. Halikias: *Money and Credit in a Developing Economy: The Greek Case* (New York: New York University Press, 1978), p. 236, *" ...were as follows: 1. Domestic trade: 9.6%; 2. Import trade: 9.6%; 3. Manufacturing industry, a. Discounting of bills of exchange: 9.0%, b. Working capital: 9.1%, c. Long-term loans: 8.5%; 4. Export trade: 10.8%*. Our translation from the Greek in p. 204 of: D. J. Halikias, *Possibilities and Problems of Credit Policy: The Greek Experience*, Bank of Greece Papers and Lectures (Athens: Bank of Greece, 1976), "*...such a method, aimed at influencing the portfolio policies of the commercial banks might, if properly used, overcome...the reluctance of the commercial banks to extend finance on favorable terms to certain economic sectors and activities, to the extent that this reluctance originates from the structure of the official interest rates. Such a technique could well be more appropriate, as a means of influencing the allocation of bank lending, than a highly complex system of qualitative credit controls and regulations. It relies on incentives to the banks and thus does not prevent the operation of the credit market mechanism"*, D. J. Halikias: *Money and Credit in a Developing Economy: The Greek Case* (New York: New York University Press, 1978), pp. 236-37.

7 In February 1988, the Postal Savings Bank and the Deposits and Loans Fund had been just brought within the "reserve/rebate-withdrawal" system on bank loans. In addition, "reserves/rebates-withdrawals" applied, besides the commercial banks, to some of the lending of the Agricultural Bank of Greece, of the investment banks and of the mortgage banks.

8 In February 1986, the ceilings by individual bank and the global ceiling (applicable to all the commercial banks taken together) on lending to commercial enterprises and professionals for buildings and equipment had been removed.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1988 *(continued)*

In particular, the commercial banks, the Agricultural Bank of Greece, the investment banks and the mortgage banks are allowed (May) to finance the acquisition of equipment and premises by members of any of the professions. Differentiation by category of product in the eligibility for import trade finance, from the commercial banks and the Agricultural Bank of Greece, is terminated (September). Banks are explicitly authorised[9] (December*) to finance enterprises in the services sector, such as tourist and transport enterprises, private schools and colleges, etc.

1989

5. The elimination is essentially completed of restrictions on banks financing certain sectors of the economy such as construction, trade and commerce and, generally, services.

In particular banks are allowed (February) to finance contractors and construction companies, undertaking the construction of buildings[10] and other projects, by loans at freely negotiable interest rates and remaining lending terms. Working capital finance by the commercial banks for commercial enterprises is liberalised (February), and the three-month restriction on maturity applicable to trade finance is lifted (March*).

1990

6. The gradual elimination begins (March) of the obligation on the commercial banks to channel a percentage of deposits into loans to public enterprises and public entities.[11] The percentage to be channelled is reduced from 10.5%[12] to 9.5% on 30 April 1990, and to 9% on 31 May 1990. The percentage of the *increment* in deposits, channelled in compliance with the obligation, is reduced further to 6% on 1 November 1990 (dates of coming into effect).

In general, no corresponding obligation is imposed on the specialised credit institutions,[13] with the exception of the Postal Savings Bank, which came to be subject to a requirement, in March 1989, to channel 3% of deposits into the financing of social security funds (for *"financial needs other than repayment of interest and capital on borrowing"*).[14]

7. The compulsory loan-to-project cost ratio of 70%[15] imposed on credit institutions in the provision of finance for buildings and equipment is removed[16] (August).

9 In July* 1990, brokerage firms and closed-end mutual funds are explicitly barred from bank finance.

10 Earlier (e.g., in June 1981), the commercial and the mortgage banks had-been allowed to finance the construction of buildings through loans which, however, could cover only up to 50% of the total cost of construction and which had an administered interest rate.

11 Note that placements of bank resources, earmarked in compliance with the obligation, alternative to compulsory loans are allowed in certain periods. For example, earmarked funds may be placed in interest-bearing deposits with the Bank of Greece (March 1989), in Greek Treasury bills (December 1989), in bank bonds issued by the Hellenic Industrial Development Bank (ETBA) (June 1991). It is also allowed (August 1991) to count, towards fulfilment of the obligation, Greek Government bonds delivered to banks in replacement of loans, granted in the past by the banks to public enterprises or public entities in compliance with the obligation, in respect of which loans, however, repayment of principal is overdue. Note that the interest rate applicable to credit extended in compliance with the obligation is liberalised in 1989. Before that, during the 1980s, the administrative interest rate for loans financing fixed capital formation (18.5% including commission) applied normally.

12 The percentage of bank deposits (initially, until June 1987, to be channelled into lending to public enterprises only) had been increased during the 1980s, from 2% to 2.5% in mid-December 1981, to 3.5% at end-July 1984, to 4.5% at end-June 1987, to 9% at end-July 1987, to 10% at end-September 1987, and to 10.5% at end-November 1987 (dates of coming into effect). Also counting towards fulfilment of the obligation were bank loans to public enterprises and public entities which had been extended in the context of that, other, obligation on the commercial banks (abolished in 1987, see above) to channel 15% of deposits into financing productive investment.

13 The specialised credit institutions comprise the Agricultural Bank of Greece, the Postal Savings Bank, the Deposits and Loans Fund, the investment banks and the mortgage banks.

14 "Unused funds" (i.e., bank resources earmarked in compliance with the obligation which, however, it did not prove possible for the Postal Savings Bank to channel into the kind of loans required by the obligation) remain in a non-interest-bearing deposit with the Bank of Greece. It is also allowed (December 1991) to count towards fulfilment of the obligation Greek Government bonds delivered to the Postal Savings Bank in replacement of claims against social security funds, in respect of which claims, however, repayment of principal is overdue. In addition, in December 1991, it is stipulated that the obligation is no longer to apply to new deposits of the Postal Savings Bank. The obligation still applies to the stock of outstanding deposits – 3% of the deposits of the Postal Savings Bank outstanding on 30 November 1991 is earmarked to be placed as required by the obligation. This 'stock-requirement' is finally removed in February 1994.

15 For example, lending to commercial enterprises and professionals could not exceed (e.g., March 1981) 70% of the cost of constructing buildings and 50% (70% since February 1986) of the total cost of purchasing and installing equipment. 70% was the limit for: financing the cost of purchasing *plus* installing electronic computers (December 1985); financing the costs of acquiring capital goods second-hand from manufacturing, mining, quarrying, hotel and construction enterprises (December 1985, December 1986); financing expenditures to improve installations of hotels (June 1984); financing the construction of garages (March 1980), financing purchases of vehicles for public transport (November 1985), etc.

16 Provided that lending is not covered by Government guarantees and provided that the loan rate is not subsidised but is freely negotiable.

Table 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1991

8. The gradual lifting continues[17] of the obligation on the commercial banks to channel a percentage of deposits into loans to public enterprises and public entities. The percentage of the increment in deposits, to be channelled in compliance with the obligation, is reduced to 3% on 1 January 1991, and to zero on 1 April 1991 (dates of coming into effect). Thus, no obligation to channel part of any *new* deposits into loans to public enterprises and public entities exists after 1 April 1991.

Nevertheless, an obligation remains[18] on banks to replace compulsory loans, which are being repaid, by new loans to public entities or, alternatively since December 1992, by loans to public enterprises too, on condition that these latter loans are guaranteed by the Government and finance repayment of debt by public enterprises to social security funds. This means that total obligatory loans to public enterprises and public entities continue to represent 9% of the bank deposits outstanding on 31 October 1990.

9. The gradual lifting begins (January) of the obligation on the commercial banks to invest 40% of deposits[19] in Greek Treasury bills, Greek Government bonds 'for economic development' or public enterprise bonds.[20] The percentage of the increment in bank deposits to be compulsorily invested is reduced from 40% to 35% on 1 February 1991, and to 30% on 1 July 1991 (dates of coming into effect).

In general, no corresponding obligation is imposed on the specialised credit institutions (with the exception of the investment banks[21]). Nevertheless, at the beginning of the nineties (e.g., March, July 1990, January 1991), the Agricultural Bank of Greece, the Postal Savings Bank and the National Mortgage Bank of Greece (EKTE)[22] come under an explicit obligation to roll over continuously their investments in Greek Treasury bills.

10. The commercial banks begin (September) to replace maturing Greek Treasury bills, rolled over regularly in the past so as to be maintained at a level corresponding to 40% of deposits in compliance with the aforementioned obligation, with *negotiable* medium-term (e.g., "at least" five-year) newly issued Greek Government bonds which banks are free to sell subsequently.[23]

The Agricultural Bank of Greece, the Postal Savings Bank and the National Mortgage Bank of Greece (EKTE) are allowed (December) to invest proceeds from redemptions of Greek Treasury bills in their hands into "newly issued Greek Government drachma bonds with a maturity of at least five years" which are freely negotiable.[24]

11. Ceilings, by credit institution, on the issuance of (bank) bonds are abolished (February). Credit institutions entitled[25] to issue such debt instruments may freely decide the total amount of their bank bonds to be outstanding.

12. In the context of the liberalisation of bank finance to small and medium-sized manufacturing enterprises/handicraft firms, the "Committee for Credit to Small and Medium-Sized Manufacturing Enterprises/Handicraft Firms[26]", which served to screen applications for such credit, is dissolved and its tasks are transferred to the commercial banks providing the loans (October).[27]

1992

13. The gradual lifting continues (January) of the obligation on the commercial banks to invest 40% of deposits in Greek Treasury bills, Greek Government bonds 'for economic development' or public enterprise bonds. The percentage of the increment in bank deposits to be compulsorily invested is reduced to 25% on 1 February 1992, to 20% on 1 July 1992, and to 15% on 1 October 1992 (dates of coming into effect).

17 By an Act of the Governor of the Bank of Greece in October 1990.
18 Already since October 1990.
19 This percentage, 40%, was applied (to the stock of deposits outstanding) since March 1990. Before then, the percentage had been set at 38% (August 1984) and subsequently raised to 39% (December 1989).
20 In August 1991, it is allowed to count towards fulfilment of the obligation Greek Government bonds delivered to banks in replacement of claims (i.e., principal and interest owed on past non-obligatory bank loans) against public enterprises or public entities, in respect of which claims, however, repayment is overdue. In September 1991, it is stipulated that newly issued Greek Government bonds of at least two-year, three-year or five-year maturity also count towards fulfilment of the obligation and, therefore, may replace maturing Treasury bills in banks' portfolios.
21 From October 1990 through to June 1991.
22 Already since March 1989.
23 *"The ability of banks to sell these bonds provided the basis for the development of the market for repurchase agreements and of the secondary market for government paper* [in Greece]", *Annual Report of the Governor for 1994* (p. 32).
24 Further liquidations of remaining Treasury bills are allowed during the period 1992-1994.
25 The Hellenic Industrial Development Bank (ETBA), the National Mortgage Bank of Greece (EKTE), the National Investment Bank for Industrial Development (ETEBA), the Investment Bank, the National Housing Bank of Greece (ESTE).
26 The (official) "Committee for Credit to Small and Medium-Sized Manufacturing Enterprises/Handicraft Firms" comprised members from the Bank of Greece, ministries with economic competences, the commercial banks and trade associations of small and medium-sized manufacturing enterprises/handicraft firms. The Committee had various regional Subcommittees.
27 By an Act of the Governor of the Bank of Greece, which was subsequently (February 1992) supplemented.

Table 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1992 *(continued)*

14. The gradual lifting begins[28] of the obligation on the commercial banks[29] to channel a percentage of the increment in deposits[30] into loans[31] to small and medium-sized manufacturing enterprises[32]/handicraft firms, i.e., into so-called "special small and medium-sized manufacturing loans" or "small and medium-sized manufacturing development loans". The percentage of the increment in bank deposits to be channelled into compulsory loans is reduced from 10%[33] to 8% on 1 January 1992, to 7% on 1 July 1992, and to 6.5% on 30 September 1992 (dates of coming into effect).

28 By Acts of the Governor of the Bank of Greece in October 1991 and September 1992.

29 No corresponding obligation is imposed on the specialised credit institutions.

30 To be precise, the increment in deposits was computed *vis-à-vis* 1 January 1966.

31 A series of Decisions of the Currency Committee, Acts of the Governor of the Bank of Greece, and Decisions of the Monetary and Credit Committee of the Bank of Greece stipulate, from time to time, that if bank resources earmarked in compliance with the obligation cannot be channelled by the banks to loans to small and medium-sized manufacturing enterprises/handicraft firms, they may instead be placed in, e.g.: interest-bearing deposits with the Bank of Greece (until February 1988, the interest rate varied with the amount deposited; an Act of the Governor of the Bank of Greece in January 1992 terminates the payment of interest); in Greek Treasury bills (the possibility of such placement existed already since the decade of the 1960s but was discontinued by Acts of the Governor of the Bank of Greece in October 1991, January and June 1992); in bonds issued by the Hellenic Industrial Development Bank (ETBA) (feasible from June 1991 until September 1995, following successive extensions of the deadline for such investments —the last extension was granted by an Act of the Governor of the Bank of Greece in March 1995); in loans to public entities (October 1992, elimination of this possibility in February 1995); in loans to public enterprises or other enterprises 'of public interest'— these loans should be covered by Government guarantee and be used to discharge obligations of such enterprises towards social security funds (November 1992, elimination of this possibility in February 1995).

In April 1982 and February* 1992, it becomes possible to redistribute earmarked funds remaining "unused" by one commercial bank to another commercial bank, in order that the latter bank may channel the funds into loans to small and medium-sized manufacturing enterprises/handicraft firms. In May 1984 (confirmation of this possibility in February 1985 and June 1987, elimination in April* 1992) the commercial banks are allowed to channel a limited part of the so-called "special fund" (earmarked under the obligation) to financing *"merchants and professionals for cash purchases of domestically produced goods directly from small and medium-sized manufacturing enterprises/handicraft firms"*. In March* 1989, the commercial banks are allowed to finance small and medium-sized manufacturing enterprises/handicraft firms so that these enterprises may discharge debts, towards the *Hellenic Organisation of Small and Medium-Sized Manufacturing Enterprises and Handicraft*, in respect of which repayment is overdue. In November* 1992, the commercial banks are allowed to finance victims of fires in the centre of Athens and to refinance loans (including rescheduled loans) obtained in the past by small and medium-sized manufacturing enterprises/handicraft firms on freely negotiated terms. In June* 1994, commercial banks are allowed to use amounts from the so-called "special fund" to finance daily newspapers and, finally, in February* 1997 to finance the purchase of vehicles by small and medium-sized manufacturing enterprises/handicraft firms. In May 1993, it is allowed to count towards fulfilment of this obligation Greek Government bonds delivered to the commercial banks in replacement of loans, granted in the past from the so-called "special fund" for the finance of small and medium-sized manufacturing enterprises/handicraft firms, in respect of which loans repayment is overdue. *Exclusively in June and July 1994*, in the effort to restore bank liquidity subsequent to the foreign exchange crisis of May 1994, the commercial banks are allowed to count towards fulfilment of the obligation drachma loans to small and medium-sized manufacturing enterprises/handicraft firms granted in the past voluntarily from the banks' 'free reserves'.

During the early nineties *"the banks appear to be reluctant to lend funds to small and medium-sized manufacturers" Annual Report of the Governor for 1990*, p.39, *"...the increase in outstanding "special loans" to small and medium-sized manufacturing enterprises/handicraft firms was just 21 billion drachmas* [or €62 million] *in 1990...earmarked funds remaining "unused" and thus invested in Greek Treasury bills or deposited with the Bank of Greece reached 240 billion drachmas* [or €704 million] *in December 1990", Annual Report of the Governor for 1990* (the translation from p. 57 of the Greek is ours).

32 A series of Decisions of the Currency Committee, Acts of the Governor of the Bank of Greece, and Decisions of the Monetary and Credit Committee of the Bank of Greece (e.g., January 1981, July and August 1985, July* 1987, March 1988, January 1989, October 1991, May* 1992, July* and November* 1994, January* 1996) specifies in detail the economic characteristics of enterprises eligible to obtain finance from the so-called "special fund", e.g., objective of entrepreneurial activities/sector to which the enterprise belongs (enterprises with 'mixed' commercial-manufacturing operations are acceptable, January 1981, March 1985, March 1988, October 1991, October* 1992, November* 1994), maximum acceptable turnover, maximum acceptable number of employees, number of shifts, form of incorporation (August 1980, January 1981), degree to which the entrepreneur (whether an individual or a legal person) is involved in the productive and economic activities of the enterprise (August 1985).

It is allowed (April 1989) to commercial banks to finance purchases of electronic computers and software and to provide loans to software producers without any constraints or preconditions. Ceilings are set by borrowing enterprise for the various types of loan (e.g., on loans financing purchase of a *"fully equipped workshop"*, August 1980, May 1984, March 1988) and on total financing (August 1980, January 1981, January 1982, March 1988, October 1991, November* 1994, January* 1996). Up to October 1991, the maximum allowable term for the loans was administratively specified too.

The modalities of the provision of Government guarantees for part of the loans from the so-called "special fund" are regulated (August 1980, January 1981, March 1981, January 1982, April 1982). Decisions of the Currency Committee, Acts of the Governor of the Bank of Greece, and Decisions of the Monetary and Credit Committee of the Bank of Greece (e.g., August 1980, October 1980, January 1981, June 1981, January 1982, May 1984, July 1986, November 1988, May* 1990) clarify the division of labour between banks (proposal to the Committee and, for small loans, direct loan approval) and the Committee and Subcommittees "for Credit to Small and Medium-Sized Manufacturing Enterprises/Handicraft Firms" (loan approval). In October 1991, the loan rate is linked with the twelve-month Treasury bill rate. Before that, the interest rate was determined administratively, based on the general regulations for lending rates (e.g., *Decision of the Currency Committee No. 275/3/21 June 1980*, para. A/IV/(special interest rates) (d)): *"loans to small and medium-sized manufacturing enterprises/handicraft firms from funds of Decision 197/78 based on the decisions* [i.e., loan approvals] *of the relevant Committees"*.

33 During the first half of the decade of the 1980s, the percentage (applied to both the stock of outstanding deposits and to its increment) had been raised from 6% (June 1980) to 10% (May 1984).

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1992 *(continued)*

15. Quantitative ceilings[34] are no longer to be set (February) on credit expansion in the context of the annual financial planning of the Agricultural Bank of Greece, or of the Postal Savings Bank, or of the Deposits and Loans Fund, or of the investment banks or of the mortgage banks.

1993

16. The gradual lifting continues (March) of the obligation on the commercial banks to invest 40% of deposits in Greek Treasury bills, Greek Government bonds 'for economic development' or public enterprise bonds. The percentage of the increment in bank deposits to be compulsorily invested is reduced to zero on 1 May 1993 (date of coming into effect).

17. The gradual lifting is completed[35] of the obligation on the commercial banks to channel a percentage of *new* deposits into loans to small and medium-sized manufacturing enterprises/handicraft firms. The percentage of *new* deposits to be channelled to compulsory loans is reduced to 5% on 1 November 1992, to 2.5% on 1 March 1993, and to zero on 1 July 1993 (dates of coming into effect). There remains an obligation on the commercial banks to continue rolling over past loans to small and medium-sized manufacturing enterprises/handicraft firms as they mature so that an absolute amount corresponding to 6.5% of the bank deposits outstanding on 30 September 1992 remains earmarked to finance such loans.

1994

18. The gradual lifting is completed (June) of the obligation on the commercial banks to invest 40% of deposits in Greek Treasury bills, Greek Government bonds 'for economic development' or public enterprise bonds. Thus, banks become free not to renew any longer Treasury bills which they have accumulated in compliance with the obligation. Actually, very few Greek Treasury bills had been left in the hands of the commercial banks. Most of the Treasury bills, which had accumulated over the years, had been converted into negotiable Greek Government bonds.

19. The gradual lifting is completed of the obligation on the commercial banks to channel a percentage of deposits into loans to public enterprises and public entities. It is no longer required (February) to earmark an amount of funds, constant in absolute terms (stock-requirement), to roll over into loans in compliance with the obligation.The corresponding obligation on the Postal Savings Bank is also removed.

34 During the period 1988-1989, loans at a freely negotiable interest rate by the Postal Savings Bank, the Deposits and Loans Fund and the mortgage banks had been exempted from the ceilings. There had been a similar exemption for the two mortgage banks in 1991, covering other individual types of loans too.

35 By an Act of the Governor of the Bank of Greece in October 1992.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

II. Various portfolio restrictions on credit institutions (additional to compulsory investments) are removed.

1987

1. Banks are allowed (October) to invest (free reserves) into bonds issued by the public or the private sector (apart from bank bonds) without requiring prior approval from the Bank of Greece.

2. Banks may (November*, December*) transfer loan assets among themselves ('assignment and acceptance' of loans).

1989

3. Credit institutions are allowed (October) to invest in equity shares *"issued to accumulate initial capital for a newly established company or to add to the capital of an existing company"* without requiring prior approval from the Bank of Greece.

4. Banks may (April*) transfer among themselves housing loans extended at freely negotiable interest rates ('assignment and acceptance' of loans).

1990[36]

5. Credit institutions are allowed (April) to invest in equity shares on the secondary market (apart from shares in corporations belonging to the financial sector, May*[37]) and in units in open-end mutual funds, without requiring prior approval from the Bank of Greece, provided that, over a six-month period, new investments in equity shares or in units in open-end mutual funds do not exceed 75% of the proceeds from the liquidation of securities by the credit institution.[38]

1991

6. Credit institutions are allowed (June) to invest in new issues of bank bonds.

2000

7. Regulations relating to participations of the credit institutions in the share capital of corporations belonging to the financial sector are codified (August*).

Bank of Greece approval is required for a credit institution to obtain *ab initio* a stake into such a corporation exceeding 500 million drachmas or €1,467,000 in the case of commercial or investment banks and 100 million drachmas or €293,000 for the other credit institutions.[39]

Fresh approval is required from the Bank of Greece for a credit institution to increase a pre-existing participation by an amount in excess of: *the lower sum* comparing 2% of the buying credit institution's own funds and 2 billion drachmas[40] (€6 million).

Nonetheless, these limits (2% of own funds or 2 billion drachmas [€6 million]) are not to apply to credit institutions which already possess more than 50% of the equity shares in the corporation belonging to the financial sector or in the case that the credit institution is buying back shares which it had previously sold or in the case of a free distribution of shares[41] or in the case that the credit institution is acquiring a stake *ab initio* or increases a pre-existing participation through a closed-end mutual fund.[42]

36 Since June 1990, the commercial banks no longer require approval from the Bank of Greece in order to buy premises to house their operations (provided that total investment in buildings does not exceed 50% of the bank's own funds). If this condition is not fulfilled, the cost of purchasing new premises must not exceed 75% of the proceeds from disposals of buildings by the commercial bank. Nevertheless, since April 1981 it had been already stipulated that approval by the Bank of Greece for purchases of bank premises *"would be forthcoming without any conditions attached, provided that total investments in buildings do not exceed 50% of the commercial bank's own funds"*.

37 With respect to investment in equity shares issued by corporations belonging to the financial sector, prior approval is required from the Bank of Greece (May* 1990) in the case that *"the acquisition of shares causes direct or indirect participation by the credit institution to equal or to exceed 10% of the share capital* [of the corporation in the financial sector]...*or, in case a pre-existing participation exceeds this percentage, if the acquisition of shares* [by the credit institution] *causes an absolute increase in its participation in the capital of the corporation* [belonging to the financial sector]*"*.

38 Miscellaneous modalities, e.g., to cover the case of newly established banks or of banks which resume operations after some interruption, are specified later (February 1991, April and December* 1992). In April 1992, the investment banks are exempted from the 75%-of-liquidation-proceeds restriction. In February* 1993, a limit of 25% of own funds is placed on commercial banks' investments in units in open-end mutual funds or equity shares, including shares in newly established companies and shares offered in the context of a capital increase. For investments over this limit (expressed as a percentage of own funds), the 75%-of-liquidation-proceeds limit is activated.

39 In November* 1995, the limit had been set at 10% of the share capital of the corporation in the financial sector. In July* 1999, the limit was set at 100 million drachmas or €293,000 for the commercial and the investment banks.

40 In November* 1995, the limits (above which Bank of Greece approval is required) were set at (the lower amount comparing) 1% of the credit institution's own funds and 100 million drachmas or €293,000 —200 million drachmas or €587,000 since November* 1996. In June* 1998, the limits were further increased to 2% and 700 million drachmas or €2,054,000 respectively— 2 billion drachmas or €6 million since June* 2000.

Already since November* 1995, when checking observance of these limits, indirect participations through subsidiaries in which the credit institution has a stake over 20% are added in; securities left in the hands of credit institutions as a consequence of underwriting, for a period not longer than 12 months after the deadline for the distribution of securities by the underwriter, are not added in when checking observance of the limits.

41 This held since July* 1997.

42 This holds since June *2000.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

III. Interest rates and remaining terms for deposits with, and loans from, credit institutions are liberalised.

1987

1. Interest rates on loans from the commercial banks and the specialised credit institutions are liberalised.

In the past, maximum allowable bank lending rates, differentiated by loan category, had been set, e.g., *"working capital finance for industry, domestic or import trade or professionals: maximum lending rate=21.5% (including 1% commission)[43]"; "financing of fixed capital formation in industry, small scale manufacturing/handicraft, mining and commerce (domestic trade, export trade, tobacco trade): maximum lending rate=18.5% (including 0.5% commission)[44]"; "export finance (to cover the period after merchandise has been loaded for transport): maximum lending rate=21.5% (no commission charged)[45]" (Decision of the Currency Committee No. 275/3/21 June 1980)*.

In 1987 maximum allowable bank lending rates which equal or exceed 20% (including commission) are replaced (for a transitional period from 30 June until the end of the year) by a *minimum* lending rate of 21%. At the same time (June), general minima on bank lending rates are specified:[46] 17% for working capital finance and 16% for medium-to-long term borrowing, not including commission. Subsequently, the minimum lending rate of 21% is discontinued on 1 January 1988, but the general minima on bank lending rates for working capital finance and for medium-to-long term loans continue to apply,[47] occasionally adjusted, until 1994 when they are removed – in practice they prove to be non-binding.

2. Credit institutions are explicitly authorised (November) to finance, at a freely negotiable lending rate,[48] fixed capital formation[49] by industrial, small-scale manufacturing/handicraft, mining, hotel and shipping enterprises.

3. Interest rates[50] on time deposits (including certificates of deposit) and on deposits at notice with the credit institutions are liberalised (February, June, November).

4. Interest rates and remaining terms (e.g., original maturity) on bank bonds are liberalised (November).[51]

5. It is allowed to collateralise bank loans by Greek Government bonds (March*, October*).

1988

6. The minimum lending rate of 21%, applicable to certain types of mostly short-term bank credit, is abolished effective 1 January.

7. Credit institutions are allowed (April) to reschedule their claims [i.e., they may determine the interest rate, the term, the grace period, securitisation (July), etc.] against manufacturing, mining, quarrying and hotel enterprises as well as against co-operatives.[52]

8. The mortgage banks are allowed (March) to determine freely interest rate and remaining terms for the housing loan-deposit scheme (in drachmas).

43 This held since 16 June 1981. Previously, the interest rate had been 23.5% (including 1% commission) since 1 July 1980.
44 This held since 1 July 1980. The lending rate was reduced by two percentage points for loans concluded over the duration of 1982 (January, July) and banks were actually reimbursed for this 'difference in interest rates'. Incidentally, note that the Agricultural Bank of Greece and the Postal Savings Bank were also reimbursed for 'differences in interest rates' (e.g., July 1980, June 1981, April 1982) so as to be in a position to offer relatively higher rates of interest to their depositors than the commercial banks.
45 This held since 3 May 1983. Earlier, the lending rate had been much lower, at 10.5% since 1 July 1980. The impact of the increase in borrowing costs on exporters was attenuated because they were reimbursed for the 'difference in interest rates'.
46 Minimum allowable lending rates had been defined (with reference to the savings deposit rate) already since October 1985 for working capital finance and since June 1986 for medium-to-long term loans (excluding housing loans). These minimum allowable lending rates applied for all the credit institutions and co-existed, until 1987, with the maximum allowable lending rates.
47 The liberalisation of various lending rates, in the years which follow, takes place without prejudice to these general minima on bank lending rates.
48 The term, the grace period and the amortisation schedule (but *not* the interest rate) for loans to enterprises and professionals for the acquisition of buildings and equipment had been liberalised in May 1986.
49 In addition, the interest rate is liberalised (March* 1988) on remaining categories of loans, where it used to be linked to the lending rate for fixed capital formation in industry.
50 To be precise, administrative maximum payable interest rates are removed. In addition, Acts of the Governor of the Bank of Greece introduce (February, June respectively) seven-day to three-month time deposits and certificates of deposit as "financial innovations". Further, the distinction between "common" and "special" time deposits is discontinued (November). Note that interest rates on interbank deposits had been freely determined in any case (June 1980).
51 Until then interest rates had been prescribed administratively. The requirement that the original maturity of bank bonds be, at a minimum, one-year continues to apply.
52 In October* 1987, banks had been allowed to reschedule freely loans, extended against collateral of securities, in respect of which repayment is overdue.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1989

9. The commercial banks, the Postal Savings Bank, the Deposits and Loans Fund and the investment banks are allowed (October) to finance, without requiring prior approval from the Bank of Greece, public enterprises and public entities through loans at freely negotiable interest rates and remaining lending terms.[53]

10. Enterprises and professionals may (June) obtain finance by overdrawing on their sight deposits.

11. Interest rates[54] on sight deposits (when in credit as well as when in debit) and on current accounts are liberalised (June).

12. The interest rate payable on blocked deposits and the default interest rate (i.e., the penal rate applicable to overdue debts)[55] are liberalised (June).

13. Credit institutions are allowed (February, October) to reschedule claims arising from any type of loan or from the forfeiture of a letter of guarantee.[56]

1991

14. The transfer of competence for the determination of lending terms to credit institutions is, in effect,[57] completed:

*Act of the Governor of the Bank of Greece No. 1955/2 July 1991: "**A. Loans for working capital or for buildings and equipment:**...The credit institutions determine the lending terms without prejudice to existing regulations in relation with minima on bank lending rates ... Special legal provisions regulating the following types of lending remain in force: a) shipping finance; b) the financing of small and medium-sized manufacturing enterprises/handicraft firms from the so-called 'special fund'; c) the financing of exports (payment for which is to be effected at a future date); d) lending covered by Government guarantees and lending at subsidised interest rates; e) the financing of public enterprises or public entities which are subject to borrowing limits ... It is not allowed to banks to finance securities purchases[58] by brokerage firms, closed-end mutual funds or companies managing open-end mutual funds".*

15. The administrative ceiling on the term of trade credit,[59] offered to customer enterprises, in the context of product sales or service provision by enterprises which are being financed by banks, is removed (April).

16. It is prohibited (August, September) to the credit institutions to charge commission on loans at freely determined interest rates, except from commitment fees on unused credit lines[60] and management fees on syndicated loans.

1993

17. The floor[61] on the interest rate payable on savings deposits, which make up the major part, i.e., around two-thirds, of bank deposits, is liberalised (March). In practice, this interest rate floor had proved to be binding.

1994

18. The general minima on bank lending rates for working capital and for medium-to-long term loans are removed (August).

19. The rate for discounting Greek Government paper at credit institutions is liberalised (August).

20. It is no longer required (August) that time deposits have a minimum maturity of seven days.

53 In December 1985, it had been prohibited to channel funds earmarked in compliance with the obligation on commercial banks to lend to public enterprises and public entities, towards quarrying and manufacturing enterprises in which the state holds a majority stake. Lending terms for such enterprises had been made similar to those prevailing then for industries in the private sector, i.e., interest rate for working capital finance: 21.5%, and interest rate for the financing of fixed capital formation: 18.5%, including commission. Later (October 1990) it is prohibited to grant loans to public enterprises (though loans can still be granted to public entities) from funds earmarked in compliance with the obligation on commercial banks to lend to public enterprises and public entities (see above).

54 To be precise, the maximum allowable interest rate on current accounts and the overdraft rate are liberalised and the provision prohibiting the payment of interest on sight deposits is repealed.

55 In July 1996, it is determined that the penal rate on overdue debt/the default interest rate on loans extended or renewed since 1 August 1996 cannot exceed the lending rate for loans serviced regularly by more than 2.5 percentage points.

56 In case the loan rate is subsidised, loan renegotiation must not entail an increase or prolongation in the total subsidy (February, October).

57 *"Interest rates on special loans to small scale manufacturing, representing 7 per cent of total bank credit to the private sector, as well as those applicable to certain special categories of housing loans, are the only rates that are still set administratively", Annual Report of the Governor for 1990,* p. 36.

58 This part of the Act of the Governor of the Bank of Greece was supplemented by a Decision of the Monetary and Credit Committee of the Bank of Greece on 6 December 1991 (point 4). In June* 1999, it was clarified that the prohibition on financing brokerage firms, etc., is to be upheld even if their acquiring equity shares enables them to obtain a controlling stake in the issuing company.

59 In May 1986, the administrative ceiling on the term of trade credit had been set at five months *"for all products without exception"*. Other portfolio restrictions (e.g., prohibition of acquisition of bank bonds, May 1981) had been imposed on enterprises in receipt of bank finance. These portfolio restrictions were removed in February* and December* 1987, in June 1988 and February* 1990.

60 Later (January* 1992) charging commission on contracts for revolving credit accounts is prohibited.

61 An administrative interest rate *floor* had been set in June 1989 for the first time. Before that, the deposit rate itself (rather than the floor thereon) was administered (November 1987, July 1988). Even earlier (e.g., June 1980, February 1984), a deposit rate *ceiling* was being set.

Table 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

IV. The regulatory framework for the provision of housing and consumer credit becomes progressively more generous or is completely liberalised.

1987

1. Quantitative limits, by individual borrower and by lending bank, on housing loans at a freely negotiable lending rate are removed (September).[62]

2. The commercial banks, the Agricultural Bank of Greece, the Postal Savings Bank, the Deposits and Loans Fund and the mortgage banks are allowed (September, October) to extend loans, at freely negotiable interest rates and remaining lending terms, to building proprietors to finance repair and maintenance expenditures.

3. Quantitative limits by bank on the extension of credit through the use of credit cards are removed (November).

4. The credit limit per holder of credit card is doubled, to 150,000 drachmas or €440, and the limit on cash withdrawals by credit card is quadrupled to 20,000 drachmas or €59 per month (December).

1988

5. The quantitative limit per borrower on housing loans, extended by the Postal Savings Bank or the Deposits and Loans Fund to civil servants and employees of bodies governed by public law or of other public entities, is increased (September).

6. The mortgage banks are allowed (March) to determine freely the lending rate (subject to a rate floor) and other lending terms on loans granted within the housing loan-deposit scheme.

7. The maximum amount of credit per depositor for drachma loans granted within the housing loan-deposit scheme of the mortgage banks is more than doubled (March) to 10 million drachmas or €29,347.[63]

8. The mortgage banks are allowed (July) to grant housing loans to owners of mortgage bonds at freely negotiable interest rates and remaining lending terms.

1989

9. The term of housing loans at freely negotiable interest rates is liberalised (April*).

10. Banks are allowed (May*) to determine freely interest rate and remaining lending terms on housing loans which they extend to their staff.[64]

11. Borrowers are allowed (February*) to take out (additional) housing loans from more than one credit institution.

12. Credit institutions issuing cheque guarantee cards[65] are authorised (August) to determine freely the amount per cheque to be guaranteed thereby.

1990

13. The possibilities to use credit cards to discharge financial obligations are generally widened (January*, February*).

1991

14. *Act of the Governor of the Bank of Greece No. 1955/2 July 1991:* ***"B. Loans to individuals for construction, repair or purchase of properties in Greece:*** *The amount of the loan and lending terms are determined by the credit institutions without prejudice to existing regulations in relation with minima on bank lending rates. Borrowing may cover owner-occupied houses or other buildings as well as buildings for commercial use... Special legal provisions regulating the following types of lending* →

62 The commercial banks, the Postal Savings Bank and the mortgage banks had been allowed to offer housing loans at freely negotiable interest rates (above a minimum rate) for the first time in March 1985. A ceiling per borrower and per bank (the latter at 2% of drachma deposits), and a maximum term of fifteen years, were set in relation with such loans. Earlier (e.g., June 1980, April, June, July 1981, January 1986), the administered lending rate and the maximum amount per borrower for housing loans from the specialised credit institutions was differentiated by category of beneficiary (e.g., housing loans to persons importing foreign exchange which there is no legal obligation to surrender to the Bank of Greece, housing loans to "workers-employees") and by geographical region.

63 No limit was set on loans in foreign currencies. A housing loan-deposit scheme in foreign exchange is offered by the Agricultural Bank of Greece too (April* 1988).

64 In October 1980, it had been specified that the interest rate on such loans would equal "*the loan rate applicable for housing loans to civil servants and employees of bodies governed by public law*".

65 The commercial banks, the Agricultural Bank of Greece, the Postal Savings Bank, the National Mortgage Bank of Greece (EKTE). In November 1984, the amount guaranteed per cheque had been prescribed administratively at 15,000 drachmas or €44.

Table 7 *(continued)*
Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1991 *(continued)*

→ *remain in force: a) loans granted within the housing loan-deposit scheme; b) housing loans to civil servants and employees of bodies governed by public law or of public enterprises from the Postal Savings Bank and the Deposits and Loans Fund; c) housing loans to bank employees; d) loans for "labour and popular" housing; e) housing loans for which there is either a Government guarantee or a Government grant or an interest rate subsidy; f)* [loans for the repair of damage caused by extraordinary events]".

15. No prior approval is to be required any longer (May*) from the Bank of Greece for the commercial banks, the Agricultural Bank of Greece and the mortgage banks to issue and distribute credit cards (even in the case distribution is through a bank different from the issuer).

16. The credit limit per holder of credit card and the limit on cash withdrawals by credit card are increased (July), respectively to 200,000 drachmas or €587 and to 25,000 drachmas or €73 per month. The issuers of credit cards determine interest rate and remaining terms for the use of the cards.

17. Credit institutions are allowed (July) to grant personal loans at freely negotiable interest rates, *without* requiring submission of documentary proof of product purchase by the borrower (e.g., in the form of an invoice), up to 200,000 drachmas or €587 per borrower with a repayment period of 18 months at a maximum.

1992

18. The quantitative ceiling per bank on housing credit to bank staff is removed (January*).

19. Liberalisation takes place (April) of the maximum amount, the interest rate and of remaining lending terms on housing loans extended by the Postal Savings Bank or the Deposits and Loans Fund to civil servants and employees of bodies governed by public law or of other public entities.

20. The maximum available amount of credit in drachmas per depositor within the housing loan-deposit scheme of the mortgage banks is raised (July) to 15 million drachmas or €44,021.

21. Credit institutions are allowed (August*) to extend new loans at freely negotiable interest rates and remaining lending terms, including loans granted within the housing loan-deposit scheme (December*), to refinance housing loans which have been granted in the past at a freely negotiable interest rate.[66]

22. The credit institutions are allowed (September) to refinance sales of consumer durables on credit against underlying negotiable instruments (e.g., promissory notes); further, the credit institutions, as well as sellers of consumer durables, are allowed to extend loans directly to consumers. The authorisation for such financing is on condition that the buyer of the consumer durables advances downpayment in cash amounting to at least 30% of the purchase cost of the goods, and that the maximum and the mean duration of credit to be granted does not exceed, respectively, 18 and 10 months.[67]

23. The overdraft limit per depositor for current accounts is quadrupled (February*, June*) to 200,000 drachmas[68] or €587.

1993

24. The terms on housing credit[69] to farmers from the Agricultural Bank of Greece are liberalised (March*).

25. Liberalisation takes place (June) of the minimum downpayment requirement of 30%, and of the limit on the maximum and the mean duration of credit, which had been set as conditions for refinancing by the credit institutions of sales of consumer durables on credit and as preconditions in relation with direct loans for durable goods to consumers.[70]

66 For each credit institution, loans extended to refinance prior borrowing must not exceed one-fifth of all loans granted at a freely negotiable interest rate over the duration of the calendar year. This restriction is removed in June* 1997. Meanwhile, in January* 1996 refinancing of loans granted within the housing loan-deposit scheme is allowed too, while in December* 1997 fresh borrowing is allowed to repay past loans granted "against importation of foreign exchange", financing acquisition or construction of buildings.
67 In May 1986, the minimum downpayment requirement in cash had been set at 40% of the purchase cost and the maximum length for the repayment period at 18 months. There was no provision for discounting or pledging negotiable instruments (bills of exchange, etc.) with banks. Since September 1987, the conditions on the minimum downpayment in cash and on the maximum length for the repayment period also apply in relation with second-hand goods (except from cars).
68 In November 1984, the limit had been set at 50,000 drachmas or €147.
69 The Agricultural Bank of Greece decided the interest rate (already since March 1985), still the maximum amount of credit per borrower was prescribed administratively (albeit with some flexibility).
70 Restrictions are reintroduced in June 1996 to the effect that loans to natural persons for the purchase of consumer durables or services must not exceed 65% of the purchase cost of the durables or services respectively.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1993 *(continued)*

26. The credit limit per holder of credit card and the limit on cash withdrawals by credit card are increased (March), respectively to 300,000 drachmas or €880 and to 100,000 drachmas or €293 per month.

27. The overdraft limit per depositor for current accounts is raised (February*) to 300,000 drachmas or €880.

28. The limit on personal loans, *without* requiring submission of documentary proof of product purchase by the borrower (e.g., in the form of an invoice), is raised (March) to 300,000 drachmas or €880 per person.

1994

29. Consumer credit is, in effect, fully liberalised (January). The limit (per person, per credit institution) on credit for the purchase of consumer durables, against documentary proof of such purchase by the borrower (e.g., in the form of an invoice), is raised to 8 million drachmas or €23,478. (To check observance of this 8-million-drachma limit[71] on consumer credit, any overdrafts on current accounts and credit obtained by using credit cards are to be added in too, besides personal loans.) Interest rates and remaining lending terms are determined by the credit institution which provides the finance.

30. The limit on personal loans, *without* requiring submission of documentary proof of product purchase by the borrower (e.g., in the form of an invoice), is raised (January) to 1 million drachmas or €2,935 per person per credit institution.[72]

1995

31. Loans to natural persons against documentary proof of purchase by the borrower (e.g., in the form of an invoice) are allowed (May) for the purchase of services.

32. Credit institutions are each allowed (May) to provide each natural person with more than one credit card.

33. The limit on cash withdrawals by credit card is raised (May) to the equivalent of ECU 1,000 per person per month.

1997

34. The overdraft limit per depositor for current accounts is increased (September*) to 500,000 drachmas or €1,467.

2000

35. Credit institutions are allowed (July) to provide finance to natural persons too to enable them to discharge tax obligations or obligations in respect of social security contributions. Such loans are not added in when checking observance of the limit of 8 million drachmas or €23,478 on consumer credit per person per credit institution.

71 In May 1995, it is specified that sales of securities by persons to credit institutions with an agreement to repurchase should also be added in, when assessing observance of the 8-million-drachma limit on consumer credit.

72 In June 1996, a restriction is introduced to the effect that natural persons should not draw personal loans (without requiring submission of documentary proof of product purchase by the borrower, e.g., in the form of an invoice) from more than one credit institution.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

V. The scope of activities[73] of the commercial banks and of the specialised credit institutions[74] is widened gradually, thus reducing market segmentation. New forms of financial intermediation appear.

1987

1. The commercial banks are allowed (June) to provide finance to financial leasing companies, through loans at freely negotiable interest rates and remaining lending terms.

2. The commercial banks are allowed (May*, September*) to provide finance[75] for working or fixed capital to non-profit institutions.

3. The commercial banks and the Agricultural Bank of Greece are allowed (March, July) to provide factoring and forfaiting services to exporters (in return for a fee) in connection with claims against overseas debtors.

4. Besides the Agricultural Bank of Greece, the commercial banks are allowed (February) to provide finance[76] for working or fixed capital to private or co-operative enterprises trading or processing agricultural products. Commercial banks are also allowed (July) to provide finance to agricultural co-operatives for purchasing or processing seed, through loans at freely negotiable interest rates.

5. The Agricultural Bank of Greece is allowed (February*) to provide finance for working or fixed capital to private or co-operative agricultural manufacturing enterprises.

6. The investment banks are allowed (November) to engage in securities underwriting without requiring prior approval from the Bank of Greece.[77]

7. The mortgage banks[78] are allowed (November) to finance fixed capital formation (buildings or equipment) by commercial enterprises and professionals.

1988

8. Credit institutions are allowed (March*) to finance municipal enterprises and other enterprises owned by local authorities, through loans at freely negotiable interest rates and remaining lending terms.

9. Banks are allowed (December) to finance, through loans at freely negotiable interest rates and remaining lending terms, acquisitions of equity shares (on the secondary market) on condition that the borrower secures thereby control of the company issuing the shares.[79]

10. The commercial banks, the Agricultural Bank of Greece and the investment banks are allowed (August) to finance, without prior approval from the Bank of Greece, exporters for fixed capital formation (on condition that this physical investment has been authorised by the competent authority) or for operating expenditures abroad.

11. The mortgage banks are allowed (March*) to finance non-profit institutions, through loans at freely negotiable interest rates and remaining lending terms.

1989

12. The commercial banks and the investment banks (as well as the Agricultural Bank of Greece in the case that borrowers are farmers or agricultural organisations and the mortgage banks in the case that borrowers are hoteliers) are allowed (June)[80] to finance the acquisition of second-hand capital goods including existing buildings, through loans at freely negotiable interest rates and remaining lending terms.[81]

73 We do not review historically the expansion of the activities of the credit institutions into foreign exchange operations to the extent that this has been already covered in Table 5 on the liberalisation of cross-border capital movements. We do not describe the expansion in the participation of the specialised credit institutions in the interbank market which took place gradually from the late 1980s onwards.

74 The specialised credit institutions comprise the Agricultural Bank of Greece, the Postal Savings Bank, the Deposits and Loans Fund, the investment banks and the mortgage banks.

75 The interest rate charged is prescribed administratively until September*.

76 Initially, at an interest rate prescribed administratively.

77 Prior approval by the Bank of Greece is required if the companies issuing the shares possess 'close links' with the investment banks (e.g., are subsidiaries of the investment banks).

78 The investment banks had been similarly authorised in May 1986.

79 Previously (December 1986), the commercial banks and the investment banks had been allowed to finance acquisitions (from the secondary market) of equity shares of enterprises in manufacturing, mining or quarrying and of hotels, under additional conditions (further to the requirement that the borrower acquires control), including a restriction that the loan does not exceed 50% of the value of the shares acquired.

80 Earlier (e.g., February 1981, July 1982, December 1985), the commercial banks had been allowed to finance the acquisition of second-hand capital goods by enterprises in specific sectors (industry including small-scale manufacturing/handicraft, mining-quarrying, construction). However, the interest rate and remaining terms for such loans were prescribed administratively. Credit institutions subsequently authorised to finance acquisition of second-hand capital goods were to include the Agricultural Bank of Greece (December 1985), the investment banks (February 1986) and the National Mortgage Bank of Greece (EKTE) (December 1986). The range of eligible borrowers was also extended to all natural and legal persons, the term of the loans was liberalised (December 1986), but the interest rate continued to be determined administratively.

81 Nevertheless, the amount of the loan cannot exceed 70% of the value of the capital goods (including structures) and of the land on which productive installations stand (January 1990).

Table 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1989 *(continued)*

13. The commercial banks are allowed (January*) to finance agricultural co-operatives through loans at freely negotiable interest rates and remaining lending terms.

1990

14. The commercial banks and the Agricultural Bank of Greece are allowed (March, October) to engage in securities underwriting without requiring prior approval from the Bank of Greece.[82]

15. The Agricultural Bank of Greece and the investment banks are allowed (November) to extend loans to financial leasing companies at freely negotiable interest rates and remaining lending terms.

16. The investment banks are allowed (October, November) to offer portfolio management and custodial services to investors-depositors who may open deposit accounts with less than one-year maturity and bearing freely negotiable interest rates.

17. Brokerage firms and stock-brokers are allowed (November) to overdraw on their current accounts temporarily (overdrafts must be eliminated within five working days) in order to cover differences arising from the clearing and settlement of stock exchange transactions through the clearing house.

1991

18. The commercial banks are explicitly authorised (July) to finance farmers and agricultural co-operatives.

19. The Agricultural Bank of Greece is explicitly authorised (July) to extend loans belonging in any of the categories of loans which may be granted by the commercial banks. The Agricultural Bank of Greece is also allowed (May*) to carry out foreign exchange business even if not related to its other activities.

20. The investment banks are authorised (June) to accept time deposits without a restriction of a one-year minimum maturity.[83] Still, they are not allowed to accept sight or savings deposits.

21. The investment banks are allowed (June) to provide working capital finance to a wide range of enterprises (in manufacturing, hotels, mining, quarrying or construction).

22. The investment banks are allowed (May*) to carry out foreign exchange business related to their other activities.

23. The mortgage banks are allowed (February*) to finance enterprises in the services sector for the purchase of buildings and equipment.

24. The mortgage banks[84] are allowed (March*) to open current accounts for natural persons.

25. Loans at freely negotiable interest rates against collateral of equity shares quoted in the stock exchange, of an amount up to 50% of the current value of the shares but not exceeding a ceiling of 5 million drachmas or €14,674 with a repayment period not longer than 18 months, may (July) be extended by credit institutions to natural persons.

1992

26. Credit institutions may offer (June*, October*) savings or time deposits in combination with insurance (e.g., life assurance, health insurance, etc.)

27. The investment banks are allowed (April) to offer all types of deposit (apart from savings deposits and current accounts used for non-commercial payments) in drachmas or in foreign exchange (barring deposits subject to the 'redeposit' requirement, see Annex); to carry out all forms of foreign exchange business (except from provision of foreign exchange for 'personal needs'); to channel 10% of deposits with maturity up to one year[85] into medium- or long-term loans or invest this amount in bonds; to finance export trade.

82 In January 1991, a limit is set on possession of shares of the same issuer by the underwriting bank. The limit is set at 40% of the bank's own funds – special approval from the Bank of Greece is required to exceed it.

83 Deposits with maturity up to one year must not be used to finance long-term loans or the acquisition of bonds or of equity participations by the investment banks. In April 1992, the investment banks are allowed to channel 10% of such deposits into long-term loans or invest this amount in bonds.

84 Initially, only the National Mortgage Bank of Greece (EKTE) had been authorised in July 1987.

85 The 10% limit was removed in March* 1995 for the National Investment Bank for Industrial Development (ETEBA), and in October* 1996 for the Hellenic Industrial Development Bank (ETBA).

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1992 *(continued)*

28. The mortgage banks are allowed (April) to carry out all forms of foreign exchange business[86] except from those relating to export-import trade.

29. The Agricultural Bank of Greece and the Postal Savings Bank are allowed (June*) to open current accounts for natural persons.

30. Credit institutions are allowed (June*) to extend loans to natural persons against collateral of units in open-end mutual funds at freely negotiable interest rates.

1993

31. The mortgage banks are allowed (August*) to extend uncollateralised personal loans[87] on a limited[88] scale.

32. The legal framework for the operation of credit institutions in the form of credit co-operatives is determined (November).

33. The legal framework for the operation of factoring companies with limited liability in the form of *'sociétés anonymes'* is determined (January).

34. The legal framework for the operation of enterprises intermediating between credit institutions in the interbank money and foreign exchange markets is determined (September).

1994

35. Credit institutions are allowed (June*) to determine the full range of activities of their branches, the establishment and operation of which must receive general approval from the Bank of Greece.

36. The mortgage banks are allowed (April*) to engage in securities underwriting.[89]

1995

37. Within limits,[90] the mortgage banks are allowed (August*) to provide working capital finance to all categories of enterprises.

38. Credit institutions are allowed (May) to finance the acquisition of equity shares even in the case that the borrower does not obtain a stake *ab initio* but rather maintains or increases his participation in the share capital so as to secure control of the company issuing shares.

39. The issuance of 'multiple purpose pre-paid cards' is allowed (August) to credit institutions exclusively.

1996

40. The investment banks are allowed[91] to offer all types of deposit with any maturity and in any currency; to provide, within limits,[92] guarantees of any type and loans for working capital finance to enterprises in every sector of the economy.

41. Credit institutions are allowed (November) to issue letters of guarantee in favour of brokerage firms so that the latter may fulfil obligations towards the "Central Securities Depository" *(Société Anonyme)* originating from the clearing and settlement of stock exchange transactions.[93]

42. It is confirmed (December*) that, according to legislation in force, credit institutions are allowed to finance, within limits, companies managing open-end mutual funds (so that the latter may satisfy requests to redeem units) and closed-end mutual funds (so that the latter may invest in securities or in real estate).

86 Initial authorisation for a relatively wide range of foreign exchange transactions had been given to the National Mortgage Bank of Greece (EKTE) in August 1982.
87 Including loans granted within the housing loan-deposit scheme since August* 1995.
88 Up to a limit of 5% (15% since April* 1999) of their total lending.
89 The value of securities underwritten must not exceed 5% of the underwriting mortgage bank's own funds.
90 Up to a limit of 5% (15% since April* 1999) of their total lending.
91 Initially, the National Investment Bank for Industrial Development (ETEBA) is authorised in March* 1995, subsequently the Hellenic Industrial Development Bank (ETBA) is authorised too in October* 1996.
92 The limit is set at 20% of total lending (excluding interbank loans) for the Hellenic Industrial Development Bank (ETBA). The limit had been set at 40% of total lending (excluding interbank loans) for the National Investment Bank for Industrial Development (ETEBA) in March* 1995, to be removed in October* 1996.
93 Initially, credit institutions are authorised to issue letters of guarantee covering the clearing of stock exchange transactions over a period of two months only; there follow, however, successive renewals of the authorisation until the end of 2000.

T a b l e 7 *(continued)*

Chronology of the liberalisation of the domestic activities of banks in Greece, from 1987 onwards

1996 *(continued)*

43. Companies intermediating between credit institutions in the interbank market are allowed (September*) to also mediate in transactions in Greek Government securities denominated in drachmas or in foreign exchange.

1998

44. The legal framework for the operation of Mutual Guarantee Companies is determined (June).

1999

45. Credit institutions are allowed (September) to provide finance to investment firms and brokerage firms in general.

46. The ceiling on bank borrowing by natural persons against collateral of equity shares quoted in the stock exchange is tripled (September) to 15 million drachmas or €44,021. Such borrowing can be used to finance the acquisition of securities or for discharging obligations in respect of past acquisition of securities.[94]

47. Credit institutions are allowed (August) to issue letters of guarantee in favour of members of the Derivatives Clearing House so that members may cover any obligations to offer collateral to the said company.

48. The legal framework for the operation of bureaux de change not owned by credit institutions is determined (January).

2000

49. Credit institutions are allowed (March) to finance the acquisition of equity shares, provided that acquisition enables the borrower to obtain *ab initio* at least 5% participation in the capital of the company issuing the shares or increase a pre-existing participation to at least 5% or maintain a pre-existing participation at 5% and over.

94 In March 2000, the term of such borrowing is liberalised and it is specified that securities offered as collateral may come from the existing portfolio of the borrower or may be those purchased with the loan proceeds.

It was thought that the savings deposit rate should continue to be set administratively as long as interest rates on Greek Government securities, which were substitutes for bank deposits to savers, were determined administratively. Moreover, it was thought that the ability to significantly influence bank deposit and loan rates, through interventions in the interbank market, was circumscribed in view of the restricted size of this latter market in Greece. The *Annual Report of the Governor for 1990* (p. 36) explains further that:

"Changes in the minimum interest rate on savings deposits ... lead to changes over the entire spectrum of lending and time deposit rates, and force the government to adjust interest rates on its securities in order to meet its borrowing requirements."

The liberalisation of domestic transactions in the banking system (see Table 7) as well as the liberalisation of international capital movements (already presented in Table 5) were initiated in Greece in the course of the decade of the 1980s. During the decade of the 1990s, well before entry of Greece into the Monetary Union, we witnessed the virtual completion of these major structural reforms in the financial system.

We must not lose sight of the fact that the development of a broad money market and of a broad capital market (i.e., a market for Greek Government bonds and for equity shares) also constituted a major structural change for the Greek economy. This structural change remains outside the scope of this article, notwithstanding the existence of feedback between the development of financial markets and the liberalisation of the banking system. Indeed, the *Annual Report of the Governor for 1986*, p. 45, maintains that:

"The development of a broad market for money and capital outside the banking sector is likely to influence the conduct of monetary policy...gradually it will bring about an environment conducive for the Bank of Greece to increasingly base monetary policy on suitable market interventions so as to affect monetary conditions... the necessary adaptations in monetary and credit policy [i.e., banking liberalisation and adoption of indirect methods of monetary control in Greece] *must proceed in step with the establishment of broad and efficient markets for money and capital. At the present juncture, this latter development is conditional on corresponding modifications to the borrowing policy of the Government and of public bodies in general."*[57]

The timing of liberalisation in Greece was affected to some extent by the progress with containing the domestic macroeconomic imbalances. For example, to eliminate privileged access of the public sector to the Greek banking system (and indeed to eliminate monetary financing too), it was necessary first to develop a market for Greek Government paper. The Bank of Greece argued that the converse also holds true, i.e., that the elimination itself of privileged access *"contributes to a further development of money and capital markets" (Annual Report of the Governor for 1993*, p. 40). In turn, the development of the market for Greek Government securities was to some extent conditional on inflation reduction and on containment of the government deficit and debt in Greece. As another example, liberalisation of consumer credit was felt, by the Bank of Greece in the early 1990s, to be inappropriate in Greece before lasting progress had been recorded with the reduction of inflation.

The liberalisation of the banking system contributed substantially to prepare, in the wider sense, Greece for the adoption of the euro. With the elimination of disequilibrium credit rationing (attributable primarily to the administrative determination of banking interest rates) and the enhancement of the importance of price signals for the allocation of savings, liberalisation of the domestic activities of Greek banks, and generally the development of financial markets in Greece, must have attenuated differences in the monetary transmission mechanism between Greece and other euro area countries. To that extent, liberalisation must have rendered the implementation of the single monetary policy in Greece easier.

There have been quantitative studies of the effect of banking liberalisation on the transmission mechanism of monetary policy in Greece. For example, Brissimis and Kastrissianakis (1997) conclude that:

"A comparative examination of the credit mechanism's ["credit channel"] *intensity during the period prior to and the one following financial deregulation* [1972-1986 compared to 1987-1996] *points to a weakening of the mechanism once the deregulation process was initiated, as the credit effect* [i.e., the influence of credit in real terms on manufacturing production in Greece] *decreased substantially both in magnitude and importance* [1987-1996]*."*[58]

Bardakas (2000) obtained results which:

"support the assumption that the percentage of income that accrues to consumers facing liquidity constraints is lower during the years of financial deregulation.[59] *As a*

57 The translation from p. 45 of the Greek is ours.
58 From the available unpublished translation of p. 107 in the Greek.
59 Necessarily this had to be identified with the period 1980-1997 (Bardakas's full sample was 1961-1997) so as to obtain sufficient degrees of freedom for the econometric estimations, see also author's footnote 10, p. 81 (*in Greek*).

result, consumer behaviour is altered, with an increase in the percentage of forward-looking consumers during these years. Consumers become less dependent on current income and current wealth and more dependent on permanent income, i.e. the income of forward-looking consumers." [60]

Moreover, to the extent that liberalisation of domestic banking activities has boosted the competitiveness of Greek credit institutions, it must have contributed to preparing them for successful survival in a monetary union with highly integrated financial markets, where price differentials are generally not sustainable (especially on wholesale business).

Indeed, the Bank of Greece had often pointed out that the motivation for financial reform in Greece was intimately associated with European integration: As frequently stated in the *Annual Reports of the Governor* in the late 1980s, the liberalisation of domestic banking was necessary in order to prepare Greek credit institutions for increased competition, expected to materialise within the context of the single European financial market.

In this sense, liberalisation of the domestic activities of Greek banks was a necessary precursor[61] of the liberalisation of international capital movements, which in turn was a crucial component of the integration of financial markets in Europe, indeed was part and parcel of Stage I[62] of EMU.

By mobilising financial resources, liberalisation of the domestic activities of credit institutions (as well as capital movement liberalisation) must have contributed to supporting rapid expansion of investment in Greece (especially throughout the second half of the 1990s), presumably in projects of superior productivity than under administrative interest rates, which, in turn, must have helped to reinforce the international competitiveness of Greek non-financial firms too. Financial liberalisation could thus be acknowledged as a factor in ensuring that nominal convergence during the decade of the 1990s would be accompanied by increasing strength in economic activity in Greece. In a 1994 speech, included in the *Economic Bulletin* of the Bank for March 1995, L. Papademos, Governor of the Bank of Greece at the time, had predicted the manifestation of such a wider phenomenon[63] which he called *"economic growth with stability"*.

Domestic banking liberalisation (e.g., the removal of the obligation on commercial banks to invest in Greek Treasury bills) as well as the liberalisation of capital movements and the abolition of monetary financing must all have strengthened the influence of market discipline on public finances, thus promoting fiscal consolidation in Greece. To that extent, domestic banking liberalisation must have prepared not only the monetary but also the fiscal authorities in Greece, the latter for the prudent fiscal behaviour which is necessary both in the run-up to, and after, entry to the Monetary Union.

Indeed, at some stage at the beginning of the 1990s, certain measures of domestic banking liberalisation

60 From the available unpublished translation of p. 86 in the Greek.
61 The converse holds too: *"Recourse to direct quantitative restrictions constitutes a monetary policy instrument which is going to lose potency* [presumably because the possibilities to circumvent the restrictions shall multiply] *the further liberalisation of international capital flows is promoted", Annual Report of the Governor for 1988*. The translation from p. 36 of the Greek is ours.
62 Of course, Greece had obtained a series of derogations from the liberalisation of international capital flows (see Table 5).
63 Besides financial liberalisation, to which we confine attention here, this phenomenon had many other causes traceable to the beneficial influence on economic activity of fiscal consolidation, of the reinforcement of policy credibility and of inflation costs reduction.

were set among the conditions[64] of the Community loan to Greece for balance of payments support. In any case, completion of domestic banking deregulation became, to some large degree, legally necessary in 1993, in view of the entry into force of the Stage II prohibition of privileged access (the then article 104a of the Maastricht Treaty, article 102 in the new numbering of the Treaty of Amsterdam).

Analogously, the liberalisation of international capital movements has contributed significantly to simulating conditions akin to monetary union, thus preparing in particular social partners in Greece for the advent of the euro. To the extent that capital inflows have maintained pressure on the exchange rate of the drachma to appreciate (see Section 3), the liberalisation of capital movements has created a mechanism for ensuring disciplined price behaviour on the part of producers and wage moderation on the part of workers, thus familiarising social partners in Greece with the principle that, as under monetary union, cost disadvantages cannot be offset by exchange rate depreciation, but are bound to have adverse implications for the international competitiveness of Greek products, and thus ultimately for the welfare of social partners.

ANNEX

Detailed history[65] of the adaptation of the monetary policy instruments of the Bank of Greece to the operational framework of the Eurosystem (which is presented in table 6).

*"Monetary policy exerts significant influence over short-term nominal market interest rates. By setting interest rates, monetary policy influences the economy, and ultimately the price level, in a number of ways... The strategy determines which money market interest rate level is required to maintain price stability over the medium term, whereas the **operational framework** determines how to achieve this interest rate level using the available **monetary policy instruments**.*

A central bank steers short-term money market rates by signalling its monetary policy stance and by managing the liquidity situation in the money market... By virtue of its monopoly, the central bank is able to manage the liquidity situation in the money market and influence money market interest rates.

As well as steering interest rates by managing liquidity, the central bank can also signal its monetary policy stance to the money market. This is usually done by changing the conditions under which the central bank is willing to enter into transactions with the money market.

...two groups of operations available to the Eurosystem for the conduct of the single monetary policy. The most important group of operations is open market operations ...which are executed on the initiative of the central bank, usually in the money market ... "Money market" refers to the market in which the maturity of transactions is generally less than one year. Through the main refinancing operations the Eurosystem lends funds to its

64 Council Decision of 4 March 1991, concerning a Community loan in favour of the Hellenic Republic: *"Whereas the Greek Government will take the necessary steps to achieve the targets and introduce the specific measures indicated in their programme over the three-year period from 1991 to 1993 agreed as follows:...The compulsory bank financing of the Government's budget by 40% of banks' deposits will be phased out... With respect to the system of compulsory financing of the handicrafts sector, at preferential interest rates, by up to 10% of bank deposits, the Greek Government will rationalise the system beginning in 1991 and will phase out the system by 30 June 1993".*

65 Dates given in this Annex (as well as elsewhere in most of this article) refer to the time of *announcement* of policy measures, which does not coincide necessarily with (but is usually in advance of) the time of the *implementation/coming into effect* of the measures.

counterparties [i.e., credit institutions] ... *normally... in the form of reverse transactions. Reverse transactions are operations where the central bank buys assets under a repurchase agreement or grants a loan against assets given as collateral... For the purpose of controlling short-term interest rates in the money market and, in particular, restricting their volatility, the Eurosystem also offers standing facilities to its counterparties... The marginal lending facility provides overnight loans from the central bank against collateral at a predetermined interest rate. The interest rate on these overnight loans is normally substantially higher than the corresponding market rate. As a result, credit institutions only use the marginal lending facility to obtain funds as a last resort... The deposit facility... allows banks to make overnight deposits with the central bank at a predetermined interest rate... Counterparties only make overnight deposits with the Eurosystem if they cannot use their funds in any other way",* European Central Bank, *The Monetary Policy of the ECB* (Frankfurt: European Central Bank, 2001), pp. 59-62.

I. Open Market Operations

"Open market operations play an important role in the Eurosystem's monetary policy, pursuing the aims of steering interest rates, managing the liquidity situation in the market and signalling the stance of monetary policy. With regard to their aim, regularity and procedures, Eurosystem open market operations can be divided into four categories: main refinancing operations, longer-term refinancing operations, fine-tuning operations and structural operations...The main refinancing operations are the most important open market operations conducted by the Eurosystem, playing a pivotal role in pursuing the aims of steering interest rates, managing the liquidity situation in the market and signalling the stance of monetary policy... [with regard to longer-term refinancing operations] *the Eurosystem does not, as a rule, intend to send signals to the market and therefore normally acts as a rate taker. Accordingly, longer-term refinancing operations are usually executed in the form of variable rate tenders ...Fine-tuning operations aim to manage the liquidity situation in the market and to steer interest rates, in particular in order to smooth the effects on interest rates caused by unexpected liquidity fluctuations in the market",* European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), pp. 14-15.

In the early years of the decade of the 1990s, the volume of transactions in the drachma interbank market in Greece is substantially lower than late 1994 onwards. The liquidity position of the Greek banking system alternates between deficit and surplus within the year, see Chart 7.

For example, the ratio of the annual volume of transactions in the interbank market (value of interbank lending orders) to Greek nominal GDP increases from roughly 150%, on average, in the period 1990-1991, to around 350% in 1994 and around 390%, on average, during the period 1995-1999.[66]

The Bank of Greece intervenes in the interbank market (besides offering standing facilities), infrequently in the beginning but regularly post-March 1992 and on a nearly day-by-day basis since July 1994. The interventions of the Bank of Greece, as well as deepening of the interbank market, contribute to limiting the variability of the overnight

66 According to the *Statistical Data* published annually by the Athens Clearing Office which is based in the Bank of Greece. This data source was pointed out to us by S. Kekatos.

interest rate starting from 1993 or somewhat earlier, as evident[67] in Chart 3A.

Bank of Greece interventions in the overnight interbank market take place on one in five working days during 1991, in four out of five working days during the second half of 1992, 90% of working days during the first half of 1993 and in over 95% of working days in the course of the second half of 1994.

The Bank of Greece intervenes by placing *overnight* deposits with credit institutions or by collecting *overnight* deposits from the interbank market. Such operations are authorised by an Act of the Governor of the Bank of Greece in March 1989.

Occasionally the Bank of Greece conducts repos (as early as in 1989) and reverse repos (e.g., in 1990) on Greek Treasury bills by interest rate tender, with credit institutions as counterparties. For Greek Treasury bills, purchases by the Bank of Greece on repo are authorised by an Act of the Governor in March 1989, while sales by the Bank of Greece on repo or outright are authorised by an Act of the Governor in March 1990. In September 1993, outright and reverse operations by the Bank of Greece are authorised for drachma government bonds too. In May 1995, Greek Government bonds indexed on foreign currencies also become eligible collateral.

In the beginning of the decade of the 1990s, these operations involving securities were viewed by the Bank of Greece as being of a structural nature as opposed to operations (collection or placement of deposits) in the market for interbank funds, which were viewed as fine tuning.

During the period mid-1994 to 1997, a liquidity surplus prevails almost continuously in the interbank market (see Chart 7), mainly due to international capital inflows into Greece, see Section 3. For illustration, according to the *Annual Reports of the Governor*, liquidity absorption by the Bank of Greece reached a daily outstanding amount of: 550 billion drachmas or €1.614 billion (1.8%) in the period January-May 1996 and 1,300 billion drachmas or €3.815 billion (3.9%) over the period January-March 1997. The liquidity surplus continues in the years which follow. The surplus stands at 750 billion drachmas or €2.201 billion (2.1%) on average in 1998, 1,500 billion drachmas or €4.402 billion (3.9%) in 1999 and 760 billion drachmas or €2.23 billion (1.8%) from January until mid-May 2000. (In parentheses, we give the percentage of Greek annual GDP represented by the daily outstanding amount of liquidity absorbed by the Bank of Greece.)

Consequently, the Bank of Greece undertakes collection of deposits from credit institutions:

Overnight deposit collection remains predominant. At times, the Bank of Greece collects fourteen-day and one-month deposits. Overnight deposit collection, conducted *at the initiative of the Bank of Greece*, ceases when the standing deposit facility, used *at the initiative of credit institutions*, is put in place (March 1997).

In late 1994 (since November) and throughout 1995, one-month deposits are collected by the

67 *"During 1992, the Bank of Greece intervened more strongly in the interbank market, thus drastically reducing the spread between bid and offer rates, as well as the fluctuation in the average interest rate", Annual Report of the Governor for 1992*, pp. 30-31.

Bank of Greece from credit institutions on a nearly regular weekly basis.

Specifically, in the course of 1995, liquidity absorption by collection of one-month deposits represents around 75%, on average, of net daily liquidity absorption by the Bank of Greece from the interbank market.

For a limited period (February-July 1997), fourteen-day deposits are collected by the Bank of Greece on a nearly regular weekly basis. In 1997 there are also few liquidity providing fourteen-day repos by the Bank of Greece.

In the period 1998-2000, gradual approximation to the **main refinancing operations** of the Eurosystem takes place in Greece. Operations with fourteen-day maturity are conducted almost regularly on a weekly basis and are relied upon by the Bank of Greece as the main form of intervention (through open market operations) in the interbank market.[68] In view of the chronic liquidity surplus in the money market, these operations usually take the form of collection of fourteen-day deposits by the Bank of Greece at a fixed interest rate (volume tender).[69]

For example, in Greece in the course of the first half of 1999, liquidity absorption through fourteen-day deposits represents on average around 45% of the total absorption of liquidity through open market operations and the standing deposit facility.

In the second half of 2000, a liquidity deficit emerges in the money market in Greece. Bank of Greece main operations now take the form of nearly regular, once a week, fourteen-day repos on Greek Government securities with credit institutions. The amount outstanding daily as liquidity *provision*, by the Bank of Greece to the interbank market, averages to 625 billion drachmas or €1.834 billion (1.5% of Greek nominal GDP in 2000), see *Annual Report of the Governor for 2000*, p. 120.

In **December 2000**, an Act of the Monetary Policy Council of the Bank of Greece puts in place the full legal framework enabling the Bank to conduct main refinancing operations as well as longer-term refinancing and fine tuning operations, completely harmonised to the Eurosystem.

Specifically for **longer-term refinancing operations**, under the conditions of the interbank liquidity surplus, the Bank of Greece views the collection of three-month deposits at a market-determined interest rate (interest rate tender) with a monthly frequency as the analogue to the Eurosystem's operations. Such operations are carried out by the Bank of Greece, from April 1999 to April 2000, with some regularity. According to the *Annual Report of the Governor for 1999* (p. 135) *"in the second half of 1999, the amount of liquidity absorbed through three-month interventions was about 1/3, on average, of total liquidity absorption"*.

As far as **operations** viewed by the Bank of Greece as analogous to the **fine tuning operations** of the Eurosystem are concerned, in the period **1997-2000** they take place occasionally:

68 Still, from a quantitative point of view, the absorption of liquidity from the interbank market through the standing deposit facility (used on the initiative of credit institutions) is almost equally important.

69 Provision was also made for interest rate tenders. They had been tried in early 1997.

1. Some of these interventions aim to provide liquidity by means of repos or even to absorb liquidity, *at times when regular weekly deposit collection operations are interrupted in Greece*. For example, between mid-July and end-October 1997, liquidity is provided by the Bank of Greece through repos with maturities ranging from overnight to fourteen days. In November 1999, liquidity is provided by repos with maturities of 2, 3, 5 and 7 days. In 1997 (November-December), the Bank of Greece collects overnight, 5-, 6-, 7- and 8-day deposits.

2. At times of pressure in the foreign exchange market, restoration of bank liquidity, at low cost, through foreign currency swaps[70] is the monetary policy instrument of choice for the Bank of Greece. For example, there take place overnight, fourteen-day, 2- and 3-month swaps in 1997 (November-December), when markets are perturbed by the international currency turmoil originating in South East Asia.

During these two months, around 85% of the daily gross liquidity provision to the Greek banking system is accomplished through foreign exchange swaps.

In 1998, there take place 1-, 2-, 3- and 4-month swaps in the run-up to entry of the drachma in the ERM. Again foreign exchange swaps are carried out by the Bank of Greece to provide liquidity during the August 1998 turbulence which spills over from the Russian debt moratorium.

Finally, there were frequent foreign exchange swaps during the second half of 2000 in order to enable counterparties (such as branches of foreign banks), lacking sufficient amounts of Greek Government securities, to refinance themselves from the Bank of Greece.[71]

3. Rarely, liquidity provision through repos or liquidity absorption by *(extra) deposit collection* (various maturities) occurs *interspersed with the regular fourteen-day deposit collection* of the Bank of Greece. For example, in 1998 we have frequent overnight repos. Again in 1998 (January-March), the Bank of Greece collects 3-, 6-, 7- and 9-day deposits. In May 2000, the Bank of Greece collects 5-day deposits.

II. Marginal Lending Facility

"Counterparties [i.e., credit institutions] *may use the marginal lending facility to obtain overnight liquidity from national central banks at a pre-specified interest rate against eligible assets... The facility is intended to satisfy counterparties' temporary liquidity needs. Under normal circumstances, the interest rate on the facility provides a ceiling for the overnight market interest rate",* European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), p. 22.

In **March 1993**, a "Lombard-type" standing facility is established at the Bank of Greece. This allows credit institutions to "temporarily" borrow, at a relatively high interest rate, against (pledged) collateral of Greek Government securities[72] up to

70 *"Foreign exchange swaps executed for monetary policy purposes refer to operations where the* [central bank] *buys (or sells)* [the domestic currency] *spot against a foreign currency and, at the same time, sells (or buys) it back forward at a specified repurchase date"*, European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), p. 18.
71 Director P. Kyriakopoulos gave us this information.
72 Credit not to exceed 80% of the face value of the securities pledged.

a global ceiling. Initially the global ceiling amounts to 150 billion drachmas or €440 million and is apportioned among credit institutions (i.e., credit institutions are each allocated a quota) on the basis of their own funds.

When, at the beginning of **1998**,[73] pressures on the exchange rate of the drachma intensify, the quota of each credit institution in the global ceiling of the "Lombard-type" facility of the Bank of Greece is halved, in order to prevent emergence of loose conditions in the money market. Thus, the global ceiling becomes 75 billion drachmas or €220 million in January 1998. It is restored to 150 billion drachmas or €440 million at end-March 1998.

Subsequently, the allocation of the global ceiling among credit institutions is rationalised and available finance generally expanded, in part to accommodate Primary Dealers[74] in Greek Government securities —appearing for the first time— and, ultimately, to harmonise with envisaged arrangements in the euro area which have taken shape. Thus, in July 1998, asset size is made the basis of allocation of the credit ceiling among credit institutions (i.e., as per the deposit facility), see below. The global ceiling is set at 200 billion drachmas or €587 million. Additionally to its share in the global ceiling, a credit institution is entitled to a further 10 billion drachmas or €29 million if acting as a Primary Dealer in Greek Government securities. Otherwise, in order to ensure that small institutions receive some finance, credit institutions are each entitled to a further 300 million drachmas or €880,000. All in all, total available financing from the Bank of Greece, against (pledged) collateral of Greek Government securities, rises to 310 billion drachmas or €910 million.

In **1999**, available finance from the "Lombard-type" facility of the Bank of Greece is increased again in order to harmonise with the Eurosystem[75] and in order to meet any extraordinary demand for funds stemming from concerns about the transition to the new millenium ("Y2K" problem). Thus, in May 1999, the amount to which a credit institution is entitled, additional to its share in the global ceiling, is increased to 15 billion drachmas or €44 million for Primary Dealers in Greek Government securities and to 700 million drachmas or €2 million otherwise. All in all, total available financing from the Bank of Greece, against (pledged) collateral of Greek Government securities, rises to 450 billion drachmas or €1.321 billion.

In September 1999, the global ceiling is increased from 200 billion drachmas (€587 million) to 480 billion drachmas (€1.409 billion). Additional to its share in the global ceiling, a credit institution is entitled to 25 billion drachmas or €73 million if acting as a Primary Dealer. Otherwise, a credit institution is entitled to a further 2 billion drachmas or €6 million – less in the case of co-operative banks. All in all, total available financing from the Bank of Greece, against (pledged) collateral of Greek Government securities, rises further to 900 billion drachmas or €2,641 million. The global ceiling (though not the requirement to collater-

73 An alternative refinancing mechanism for credit institutions, the rediscount facility of the Bank of Greece for private bills of exchange and promissory notes, at a relatively favourable interest rate, is abolished in April 1998. It had been established in 1993 afresh (a rediscount facility existed before then and had been used until 1983, see Filippides, Kyriakopoulos and Moschos, 1995), but had remained largely inactive and had no counterpart in the operational framework of the Eurosystem which had taken shape by 1998.

74 Primary Dealers in the market for Greek Government securities are first nominated in February 1998.

75 Where availability of eligible collateral is the only constraint on obtaining finance.

alise) is lifted for the period 15 November 1999-14 January 2000.

In **March 2000**, the evolution of the "Lombard-type" facility of the Bank of Greece into a marginal lending facility, fully harmonised with the Eurosystem, is completed: the global ceiling is abolished and the term of loans is changed from indefinite to overnight.

It is not surprising that, in practice, recourse to this standing facility of the Bank of Greece is infrequent after the second half of 1993. Total drawings on the facility approach the global ceiling only during the foreign exchange crisis of May 1994 (extending also into June 1994) as well as during the world financial turmoil in November 1997 (less so in January 1998). Nonetheless, recourse to the facility becomes much more frequent under conditions of liquidity deficit in the interbank market in Greece from mid-May to the end of 2000. Drawings on the facility become relatively very high in December 2000 (the monthly average of daily outstanding borrowing reaches approximately 100 billion drachmas or €293 million).

III. Deposit Facility

"Counterparties [i.e., credit institutions] *can use the deposit facility to make overnight deposits with national central banks. The deposits are remunerated at a pre-specified interest rate. Under normal circumstances, the interest rate on the facility provides a floor for the overnight market interest rate",* European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), p. 23.

In **March 1997**, a deposit facility is established at the Bank of Greece in order (i) to help with absorbing the chronic interbank liquidity surplus at a relatively low cost for the Bank, (ii) to discourage further capital inflows into Greece by making the interbank interest rate vary inversely (see above Section 3) with the volume of interbank liquidity, and, (iii) to prepare for the implementation of the operational framework of the Eurosystem domestically.

The deposit facility is overnight and contains two tiers: Deposits of credit institutions with the Bank of Greece are remunerated at a relatively high interest rate (first-tier deposits) up to a global ceiling of 300 billion drachmas or €880 million, and at a relatively lower interest rate for any remaining amounts, without limit (second-tier deposits). The global ceiling of 300 billion drachmas or €880 million is apportioned among credit institutions in proportion to their domestic assets, so that for each credit institution a limit is prescribed on its first-tier deposits.

From inception of the deposit facility, in March 1997, until the disappearance of the chronic liquidity surplus in mid-May 2000, on average 45% of the daily liquidity absorption by the Bank of Greece (considering only days in which the interbank market is actually in surplus) is carried out through the standing deposit facility.

In **June 2000**, the deposit facility at the Bank of Greece becomes fully harmonised with the Eurosystem's standing facility as the quantitative ceiling is abolished and the distinction between two tiers is no longer made.

This is made possible by the disappearance of the chronic interbank liquidity surplus from Greece. For a time before the "unification" of the two tiers, the difference between the respective interest rates is gradually reduced (from 185 basis points on 1 January 1999 to 50 basis points just before “unification”).[76]

IV. Reserve Requirement

“The Eurosystem’s minimum reserve system applies to credit institutions in the euro area and primarily pursues the aims of stabilising money market interest rates and creating (or enlarging) a structural liquidity shortage. The reserve requirement of each institution is determined in relation to elements of its balance sheet. In order to pursue the aim of stabilising interest rates, the Eurosystem’s minimum reserve system enables institutions to make use of averaging provisions. Compliance with the reserve requirement is determined on the basis of the institutions’ average daily reserve holdings over a one-month maintenance period. Institutions’ holdings of required reserves are remunerated at the rate of the Eurosystem’s main refinancing operations”, European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), p. 6.

In the period **1995-1999**, there take place increases in the reserve requirement imposed by the Bank of Greece on credit institutions:[77] a rise in the ratio from 9% to 12%, an expansion of the reserve base (e.g., to include all foreign exchange deposits not subject to the “redeposit” requirement, see the table in Box 1), an addition to the list of credit institutions which are subject to minimum reserves (mortgage and housing banks).

For these reasons, required reserves of credit institutions with the Bank of Greece increase from around 6% of M3 excluding currency (and from 4.5% of total bank deposits outside the Bank of Greece, including, in particular, foreign currency deposits, deposits of public enterprises and public entities as well as repos) in December 1994, to around 10.5% and 7%, respectively, in December 1998 as well as in December 1999.

Meanwhile, averaging (as opposed to observance of the reserve requirement every single day) is introduced in Greece. Its scope is limited, it only applies to a fraction of required reserves. At first, in March 1996, the possibility to average is confined to one-tenth of the reserve requirement[78] (considered to be part of the unremunerated half of required reserves). *On any one day* averaging behaviour must not cause reserve holdings to fall below 90% of the *monthly average* reserve requirement. Still, on any one day, a credit institution in Greece may choose to vary its reserve holdings between 90% and over 100% of the required monthly average. In turn, the level of reserves required on a monthly average basis is computed by multiplying the reserve ratio times the average (of daily observations on the) reserve base, recorded over the preceding month. Later, in December 1999, a lower percentage (85%) of the monthly average reserve requirement is required as a minimum to be held on any one day.

In June 2000, full harmonisation takes place of the reserve requirement of the Bank of Greece with the Eurosystem’s minimum reserve system. More specifically:

1. The reserve ratio is reduced from 12% (4% for mortgage banks) to 2%.

76 As noted by A. Filippides.
77 The commercial banks, the Agricultural Bank of Greece, the investment banks (October 1990), the mortgage and housing banks (June 1996).
78 Nonetheless, no averaging is allowed to mortgage and housing banks.

Reserves accumulated by credit institutions at the Bank of Greece under the 12% ratio, which became *excess reserves* when the ratio was reduced to 2%, are not released at once (apart from an amount of 3 billion drachmas or €9 million per credit institution). They are placed in term deposits with the Bank of Greece, with staggered maturities, remunerated at an interest rate which, from 2001 onwards, equals the Main Refinancing Operations ("MRO") rate of the Eurosystem.

Thus, one-tenth of the excess reserves (minus the aforementioned small amount) is released to credit institutions at the beginning of 2001. One-third of the remaining excess reserves is released at six-month intervals beginning in mid-2001 – so that the process is completed by mid-2002.

2. The scope of averaging extends to the whole of the reserve requirement.

3. Repos[79] and bank liabilities with maturity over two years are excluded from the reserve base. Foreign exchange claims of credit institutions against non-residents can no longer be netted[80] from the reserve base.

4. Foreign exchange deposits owned by "Greek seamen and emigrant workers/employees", 60% of each of which had, to that day, to be "redeposited" by credit institutions with the Bank of Greece, see below, are brought into the "standard" drachma reserve requirement. To retain at 60% the proportion of these deposits which remains blocked at the Bank of Greece, the percentage of the foreign exchange to be "redeposited" is reduced to 58%. Later "redeposits" are completely liberalised, i.e., the percentage of new foreign exchange deposits of "Greek seamen and emigrant workers/employees" to be "redeposited" is reduced to zero.

5. The Postal Savings Bank (hitherto exempted from minimum reserves) becomes subject to the reserve requirement.

6. The total (rather than only one-half) of required reserves is to receive remuneration.[81] The rate of remuneration is set initially at 5.5% and reduced to 5.25% in July 2000.

7. A lump sum allowance (€100,000 or 34 million drachmas) against reserve holdings is introduced. Banks' vault cash can no longer count towards fulfilment of the reserve requirement.

8. The maintenance period is harmonised. Previously it lasted from the 10th calendar day of a month to the 9th calendar day of the succeeding month. Henceforth it is to extend from the 24th calendar day of any month to the 23rd calendar day of the succeeding month. Specific transitional arrangements are made for end-2000.[82]

9. The reserve base is no longer computed as the *average* of daily observations on subject bank liabilities over the preceding month, but is rather to be taken as the level of subject bank liabilities on the *last day alone* of the preceding month. Balance sheet data on subject bank liabilities referring to the end of a given calendar month are used to determine the reserve base for the maintenance

79 Repos had been included in the reserve base in Greece in January 1992 after growing spectacularly (seven-fold in 1991), see Box 1. In that same year, repos were included in M3 too.
80 The right to net had been granted in July 1995.
81 Actually this was adopted in February, not June, 2000.
82 November 2000.

period starting (on the 24th day) during the following calendar month. This comes as a consequence of the adoption by the Bank of Greece of the reporting framework for Money and Banking Statistics for the Eurosystem.

V. Miscellaneous adaptations in monetary policy instruments and procedures at the Bank of Greece

1. In **March 2000**, the *day count convention* (for the calculation of interest) is changed from Actual/365 to Actual/360 in order to harmonise with the Eurosystem.

2. Using the Electronic Trading System for the Secondary Market for Government Securities (created in 1998 and operated by the Bank of Greece), *risk control measures* can now be harmonised with the Eurosystem. Greek Government securities, i.e., eligible collateral, can be marked-to-market and margins and haircuts related to maturities (of the operation and of the security respectively)[83] can be applied by the Bank of Greece.

83 *"Risk control measures are applied to the assets underlying Eurosystem monetary policy operations in order to protect the Eurosystem against the risk of financial loss if underlying assets have to be realised owing to the default of a counterparty* [i.e., credit institution]... *The Eurosystem applies initial margins, which correspond to a certain percentage of the amount of liquidity provided* [by the Eurosystem] *which is to be added to the requirement for the value of the underlying assets* [offered by credit institutions]. *Two different initial margins are applied, taking into account the exposure time for the Eurosystem...individual debt instruments are subject to specific "valuation haircuts". The haircuts are applied by deducting a certain percentage from the market value of the underlying asset. The haircuts are differentiated according to the residual maturity and coupon structure of the debt instruments"*, European Central Bank, *The Single Monetary Policy in Stage Three* (Frankfurt: European Central Bank, November 2000), pp. 42-43.

BOX 1

Reserve base, reserve ratio and remuneration of reserves, in the context of the drachma reserve requirement in Greece during the decade of the 1990s

I. Reserve base and reserve ratio in Greece

Pre-1995:

The reserve ratio is set at 8% in June **1988**. In July **1991** the reserve ratio is raised to 9%.

Subjected to the reserve requirement are the commercial banks (December 1976), the Agricultural Bank of Greece (September 1987) and the investment banks (October 1990, June 1991).

At the beginning of the nineties (July **1991**), the reserve base includes, in essence, private[1] drachma deposits plus those foreign exchange deposits which are compulsorily surrendered to the Bank of Greece in order to be exchanged with drachmas, see Box 2.

In January **1992** repos with the private sector are also included in the reserve base.

In July **1993** drachma bank deposits and repos owned by non-residents are included in the reserve base.

In May **1994** drachma bank deposits and repos owned by public organisations (public entities and public enterprises) are brought in the reserve requirement, while in July **1995** the reserve requirement is extended to all deposits held by the "public sector". This ensures equality of treatment between the private and the public sector and specifically limits the possibilities of "privileged" →

1 Credit institutions are not included in the "private sector".

→ terms on bank deposits being offered to the public sector.

Throughout the **decade of the 1990s**, some special categories of foreign exchange deposits (e.g., those owned by "Greek seamen and emigrant workers/employees") are subject to a *separate* regime of special high reserve requirements (see Box 2) ensuring that foreign exchange does not remain with commercial banks or authorised specialised credit institutions but is centralised, to some large extent, at the Bank of Greece.

Vault cash kept by a bank counts as part (of the unremunerated half) of required reserves, up to a maximum corresponding to 2% of the reserve base (since July 1995, of the drachma reserve base only).

The **Agricultural Bank of Greece** is subject to a reduced reserve ratio, set at 5.5% in July **1991**. Only a part of required reserves, corresponding to 1% of the reserve base, is remunerated. In **1990** the reserve ratio on the Agricultural Bank was even lower, at 4.5%. In May **1994** it is stipulated that the reserve ratio applicable to this bank is to be gradually equalised with the rest of banks (i.e., 9%, of which half is remunerated).

1995 (July):

A gradual increase in the reserve ratio is stipulated from 9% (set since July 1991) to 11%.

Moreover, the reserve base is broadened to encompass liabilities of banks to non-residents in foreign exchange (additionally to such liabilities in drachmas) and fund management agreements between banks and residents or non-residents.

1996 (June):

The reserve ratio is increased from 11% to 12%.

In addition, the reserve base is expanded to encompass bank liabilities to non-residents with original maturity over two years (relevant mainly to foreign exchange deposits) in order to limit circumvention of the reserve requirement.

The reserve base as a percentage of:

	Total bank deposits[1] (excluding deposits with the Bank of Greece) *plus* repos
November 1991	58
December 1992	57
November 1993	59
. . . .	. . .
December 1995	60
December 1996	63
December 1997	64
December 1998	66
December 1999	69

1 Including foreign exchange deposits and deposits of public enterprises and of public entities.

Level playing field considerations motivate expansion in the coverage of the reserve requirement to encompass mortgage and housing banks too (at a reduced ratio of 4%).

1997 (July):

Foreign exchange deposits of "domestic permanent residents/residents of Greece", subjected, to that day, to the "redeposit" requirement, are to be included in the reserve base for the "standard" drachma reserve requirement henceforth.

II. Remuneration of required reserves in Greece

Throughout the decade of the 1990s, remuneration is received by *one-half* of required reserves only. Exceptionally, during the first half of 1994, remuneration is offered by the Bank of Greece for the total of required reserves (i.e., an interest rate of 9% is applied to one-half of reserves, 12.5% to the other half). This aims at limiting the impact, on credit institutions' profits,[2] of →

2 *Annual Report of the Governor for 1994*, p. 14 *(in Greek)*.

➛ the period of extraordinarily high interbank interest rates in the context of the May 1994 foreign exchange crisis, see Section 2.

The rate of remuneration is reduced over the years in the course of the 1990s, as the interbank rate, which proxies the opportunity cost of holding reserves, and generally the level of drachma interest rates, decline in line with decelerating inflation in Greece. Thus, remuneration is reduced from 12.5% (set in July **1991**) to 11% in December **1996**. Required reserves of mortgage and housing banks at the Bank of Greece do not receive any remuneration (until harmonisation with the Eurosystem in 2000).

Another institutional peculiarity can be encountered in Greece already since the decade of the 1980s (November **1989**). Amounts corresponding to 1% of the reserve base (considered to form part of the remunerated half of required reserves) can be optionally placed by credit institutions in three-month Greek Treasury bills, instead of being held in interest-bearing deposit at the Bank of Greece. The percentage of the reserve base which can be optionally invested in Greek Treasury bills is increased to 3% in December **1993**. Exceptionally, in November 1992 this percentage had been raised to 4%. This option, seen as being in conflict with the prohibition of privileged access, is repealed in November **1994**.

Meanwhile, *pooling* of collateral is authorised (**April 2000**) by an appropriate amendment in the Bank of Greece Statute. This means that all collateral, set at the disposal of the Bank of Greece by a particular credit institution, is to be available for pledging in order to cover a number of monetary policy operations in which the particular credit institution may be involved.

3. With the coming into operation of the drachma RTGS system HERMES on **10 March 2000**, *settlement accounts* replace the current accounts of credit institutions with the Bank of Greece. Debit balances at end-of-day on these settlement accounts become automatically borrowing from the marginal lending facility. Thus, the *overdraft facility* of the Bank of Greece (providing in the past finance to credit institutions at penal rates, see Filippides, Kyriakopoulos and Moschos, 1995) becomes redundant.

VI. The system of "redeposits" of foreign exchange in Greece (1995 onwards) and its reform

Since the 1960s, a special high reserve requirement regime,[84] which we shall call *the "redeposit" requirement*, applies in Greece (instead of the "standard" drachma reserve requirement, which concerned mainly bank liabilities in drachmas) to special categories of foreign exchange deposit.

By the middle of the decade of the 1990s, these special categories of deposit contain foreign exchange deposits of only two types of holders, namely of "domestic permanent residents/residents of Greece" and of "Greek seamen and emigrant workers/employees".

A considerable part (around 85% in December 1996)[85] though not all foreign exchange deposits with Greek credit institutions belong to these cat-

84 For the sake of precision, until the year 1980 commercial banks and authorised specialised credit institutions compulsorily surrendered (to the Bank of Greece) foreign exchange proceeds from their deposit liabilities, in exchange for drachmas. Specialised credit institutions authorised to accept such foreign currency deposits and subject to the "redeposit" requirement comprised the Agricultural Bank of Greece, the Postal Savings Bank, the National Mortgage Bank of Greece (EKTE) and, later (1983), the National Housing Bank of Greece (ESTE) too.

85 By December 2000, credit institutions' deposit liabilities subject to the requirement to "redeposit" at the Bank of Greece represented approximately 30% of aggregate foreign currency deposits in Greece.

egories of deposit and are, therefore, subjected to the special high reserve requirement.

By contrast, some foreign exchange deposits (e.g., since July 1995, deposits of non-residents) are subject to the "standard" drachma reserve requirement. The category of foreign exchange deposits entitled "of domestic permanent residents/residents of Greece" does not cover all foreign exchange deposits held by residents of Greece (and especially by the legal persons among them), see Box 2. For example, there is a number of types of resident (e.g., ship-owners and shipping companies, construction companies) whose foreign exchange deposits in Greece are not subjected to the "redeposit" requirement. Interbank deposits in foreign exchange are exempt too.

A credit institution booking foreign currency deposits belonging to these special categories has to "redeposit" with the Bank of Greece a certain percentage of the foreign exchange. This percentage is set at 60% in June 1998 and reduced to 58% in June 2000 in preparation for the abolition of the system of "redeposits". Before June 1998, the percentage "redeposited" was 70%.

With effect from 1 July 1980, this percentage (70%) applied for deposits of "Greek seamen and emigrant workers/employees" denominated in US dollars, Canadian dollars or British pounds. By contrast, before April 1995, credit institutions had to *compulsorily surrender to the Bank of Greece in order to switch into drachmas* the deposits of "Greek seamen and emigrant workers/employees" which were denominated in *other* currencies (i.e., excluding US dollars, Canadian dollars and British pounds). The obligation to switch into drachmas had been imposed already as of September 1967. As far as foreign exchange deposits of "domestic permanent residents/residents of Greece" are concerned, the "redeposit" ratio stood at 100% from June 1983 to April 1995.

Credit institutions are also given the *option* to "redeposit" with the Bank of Greece the remaining "free" 40% (30% before June 1998) of their foreign exchange resources from the special categories of deposit.[86]

The "redeposit" of foreign exchange with the Bank of Greece is remunerated: it receives interest at a market-related rate. Credit institutions also receive (from the Bank of Greece) commission (in drachmas) expressed as a percentage of the value of the deposit. The annual rate of commission is set at 1% in June 1998. Before April 1995 the annual rate of commission was 2%, then adjusted to 1.8% in April 1995 and subsequently reduced in steps to 1.2% by November 1996. The corresponding rate of commission for optional "redeposits" is set at 0.8% p.a. in April 1995 and reduced to 0.7% in February 1996.

In turn, credit institutions pay interest to their depositors[87] – at a negotiable rate (below an adjustable ceiling) in the case of foreign exchange deposits of "Greek seamen and emigrant workers/employees" but at a rate prescribed by the Bank of Greece in the case of foreign exchange deposits by "domestic permanent residents/residents of Greece".

86 In January 1998, the possibility to place in deposit with the Bank of Greece, at terms agreed individually, is extended to all foreign exchange resources of credit institutions.
87 The deposits with credit institutions are denominated in, and not simply indexed on, foreign currencies and would normally be serviced and redeemed in foreign exchange.

If depositors of credit institutions agree to receive their interest earnings in drachmas rather than in foreign exchange, they become entitled to a bonus of 0.75 percentage point to be added to the rate of interest, which is financed by the Bank of Greece. This is the situation as of April 1995. Before then, the bonus stood at 1.5 percentage points. The bonus is reduced to 0.4 percentage point in November 1996 before abolition in July 1997.

Moreover, in July 1997 the foreign exchange deposits of "domestic permanent residents/residents of Greece" are exempted from the "redeposit" requirement and are instead brought under the "standard" drachma reserve requirement.

In December 2000, the "redeposit" requirement is removed completely. Foreign exchange deposits of "Greek seamen and emigrant workers/employees" are included[88] in the reserve base of the Eurosystem 2% reserve requirement henceforth.

For reasons analogous to those motivating the gradual release of *excess reserves* described above in connection with the "standard" drachma reserve requirement, transitional arrangements are put in place, whereby accumulated foreign exchange,[89] "redeposited" by credit institutions with the Bank of Greece, is released back to credit institutions gradually. In particular, "redeposits" with the Bank of Greece denominated in euro or in legacy currencies (i.e., in the "old" national currencies of the Member States of the euro area) are released in two equal instalments in the course of the first quarter of 2001. Meanwhile,[90] they are remunerated by the Bank of Greece, from the beginning of 2001, at the "MRO" rate of the Eurosystem.

"Redeposits" in non-Monetary Union EU currencies (e.g., British pounds) or in third currencies (e.g., US dollars) are released gradually within a time span of twelve months (ending in March 2002) *apart* from a fraction of one-tenth which is released immediately in the beginning of 2001. Meanwhile, they are remunerated by the Bank of Greece at a rate related to Libor.

88 To be precise, these foreign exchange deposits with credit institutions had been included in the reserve base of the "standard" drachma reserve requirement already in June 2000: so in the period July-December 2000, 2% of these deposits would be held in the form of "standard" drachma required reserves with the Bank of Greece, while 58% of the foreign exchange deposited with the banks would be "redeposited" with the Bank of Greece. *In toto*, therefore, 60% of these bank deposits would remain blocked at the Bank of Greece.

89 To be precise, from 1 January 2001 onwards "redeposits" in euro and in legacy currencies should not be considered as denominated in foreign currencies but, rather, as denominated in domestic currency.

90 As long as the euro, legacy currencies or foreign exchange remained in deposit with the credit institutions, they would be included in the reserve base for the 2% Eurosystem reserve requirement.

BOX 2

The system of redeposits in Greece from 1980 to April 1995:[1]

As of April 1995 all types of foreign exchange deposit which are subject to the special high reserve requirement regime begin to be treated uniformly by the Bank of Greece. By contrast, in earlier years, specifically as of June 1983,[2] the treatment of subject foreign exchange deposits is differentiated according to holder, i.e., the treatment of deposits of "Greek seamen and emigrant workers/employees" is different from the treatment of deposits of "domestic permanent residents/residents of Greece".

Foreign exchange deposits of "Greek seamen and emigrant workers/employees" are distinguished as a separate deposit category in September 1967 for the first time. According to the relevant decisions of the Currency Committee (April 1968), foreign exchange deposits of employees of shipping companies overseas may also be subsumed in this deposit category. Seamen and workers may include persons who are not Greek citizens (July 1968). Emigrant employees *"must necessarily reside overseas permanently" (Bank of Greece Order of the Day, 14 November 1969)*. Later (October 1976), it becomes possible to also subsume foreign exchange deposits of employees of Greek construction companies working in building projects abroad, in the deposit category of "Greek seamen and emigrant workers/employees".

Foreign exchange deposits of "domestic permanent residents/residents of Greece" are distinguished as a separate deposit category in August 1980 for the first time. "Domestic permanent residents/residents of Greece" include natural persons (who need not be Greek citizens, June 1983) as well as *non-profit making* legal persons in private law (June 1981) who *"lawfully acquire foreign exchange overseas (through dependent employment or other work) ...or by virtue of any other lawful cause (e.g., through inheritance or donation, etc.)....It is expedient to give the possibility to such persons ... to keep income earned abroad in a foreign exchange deposit in Greece", Decision of the Currency Committee No. 281/1 August 1980*. Moreover, in June 1983, it is stipulated that *"these bank accounts shall be credited with inflowing convertible foreign exchange... without requiring provision of any information as to its provenance", (Act of the Governor of the Bank of Greece, No. 232/17 June 1983)*. Further, a *Bank of Greece Administration Circular of 23 June 1983* stresses that *"the provision* [by commercial banks and authorised specialised credit institutions to their depositors] *of foreign exchange for repaying capital and servicing interest* [on foreign exchange deposits of "domestic permanent residents/residents of Greece"] *is guaranteed by the Bank of Greece as in the case of foreign exchange deposits of "Greek seamen and emigrant workers/employees".*

It becomes possible for "Greek seamen and emigrant workers/employees" (April 1968), as well as for "domestic permanent residents/residents of Greece" (August 1980) to open **joint bank accounts** together with other natural (or legal) persons who are not allowed to keep a foreign exchange deposit independently. Initially (until October 1970) these latter depositors are only allowed to make withdrawals in drachmas from the joint accounts. ➛

1 Dates given in this Annex refer to the time at which policy measures are *announced*. The time of announcement of a policy measure does not coincide necessarily with its time of *effect/implementation*, but normally announcement precedes in time the coming into effect/the implementation of the measure. The translation of quotations from Greek texts into English (italicised) is ours.

2 From August 1980 to June 1983, foreign exchange deposits of "domestic permanent residents/residents of Greece" are treated identically to foreign exchange deposits of "Greek seamen and emigrant workers/employees". As a consequence, the treatment of foreign exchange deposits of "domestic permanent residents/residents of Greece" is differentiated on the basis of their currency of denomination: 70% of deposits denominated in US dollars, Canadian dollars or British pounds is redeposited, while deposits in currencies other than US dollars, Canadian dollars and British pounds are compulsorily surrendered to be switched with drachmas at the Bank of Greece, see below.

➛ Beginning in 1980[3] (pre-announcement in April, effect as from 1 July), the treatment of foreign exchange deposits of "Greek seamen and emigrant workers/employees" becomes differentiated according to the currency of denomination of the deposit: The treatment of deposits in US dollars, Canadian dollars or British pounds is different from the treatment of deposits in other foreign currencies. Foreign currency deposits within the *"housing loan-deposit scheme of the National Mortgage Bank of Greece (EKTE)"* and (since June 1980) deposits of "Greek expatriates" in US dollars, Canadian dollars or British pounds receive analogous treatment with the foreign exchange deposits of "Greek seamen and emigrant workers/employees".

With effect from 1 July 1980, a fraction equal to 70% of any deposit of **"Greek seamen and emigrant workers/employees" in US dollars, Canadian dollars or British pounds** must be redeposited with the Bank of Greece.

Initially the requirement to redeposit is expressed as follows, e.g., in the *Bank of Greece Administration Circular, 27 June 1980*, referring to deposits of "Greek seamen and emigrant workers/employees" in US dollars, Canadian dollars or British pounds:

"*If the balance* [in a deposit in the abovementioned category] is *increased vis-à-vis the amount outstanding on 30 April 1980* [later this basic date was changed to 30 June 1980]... *70% of the increment has to be placed compulsorily with the Bank of Greece... If, by contrast, the level of such a deposit declines below the amount outstanding on 30 April 1980 and, subsequently, the level of the deposit is increased, in this case too* [70% of the increment in the deposit must be placed compulsorily with the Bank of Greece]."

The amount outstanding on 30 June 1980 in any deposit in the category of "Greek seamen and emigrant workers/employees" is to remain blocked. The foreign exchange had been compulsorily surrendered to the Bank of Greece in order to be switched with drachmas, in the context of the regime which prevailed for foreign currency deposits of "Greek seamen and emigrant workers/employees" from September 1967 till just before 1 July 1980. To the extent that it comprises US dollars, Canadian dollars or British pounds, the banks have to "reacquire" (from the Bank of Greece) foreign exchange which they had compulsorily surrendered and switched with drachmas. Credit institutions then have to redeposit 100% of such foreign exchange with the Bank of Greece. The Bank of Greece provides finance to commercial banks and authorised specialised credit institutions, so that they may "reacquire" the foreign exchange as described above. The Bank of Greece does this by placing an interest-bearing drachma deposit (the "mirroring/counterpart" deposit) with each of the credit institutions.

There is no requirement to redeposit with the Bank of Greece amounts in excess of $200,000 per foreign exchange deposit of "Greek seamen and emigrant workers/employees". This exemption is abolished in April 1995. From 1980 to April 1995, there exists the possibility to **optionally redeposit** such amounts in excess of $200,000 with the Bank of Greece. An option to redeposit with the Bank of Greece, at terms agreed individually, exists since 1980 in relation with other "free" categories of foreign exchange bank deposits (e.g., deposits of shipping companies).

With effect from 28 June 1983, there is a requirement to redeposit with the Bank of Greece 100% of any foreign exchange bank deposit owned by **"domestic permanent residents/residents of Greece" irrespective of currency of denomination**. Before that, from August 1980 to ➛

3 From September 1967 till just before 1 July 1980, the foreign exchange deposits of "Greek seamen and emigrant workers/employees" are compulsorily surrendered to the Bank of Greece in order to be switched with drachmas (see below) *irrespective of currency of denomination*. After 1 July 1980, the requirement to surrender to the Bank of Greece and switch with drachmas continues to apply only for foreign exchange deposits of "Greek seamen and emigrant workers/employees" denominated in currencies *other than US dollars, Canadian dollars and British pounds*, see below.

→ June 1983, the treatment (by the Bank of Greece) of foreign exchange deposited by "domestic permanent residents/residents of Greece" with commercial banks and authorised specialised credit institutions was identical to the treatment of foreign exchange deposits of "Greek seamen and emigrant workers/employees".[4]

As a consequence, since 1980 commercial banks and authorised specialised credit institutions maintain redeposit accounts at the Bank of Greece corresponding to their deposit liabilities towards "Greek seamen and emigrant workers/employees" in US dollars, Canadian dollars or British pounds as well as to their deposit liabilities towards "domestic permanent residents/residents of Greece", initially (August 1980-June 1983) in US dollars, Canadian dollars and British pounds only but, since June 1983, in remaining foreign currencies too.

Banks **receive from the Bank of Greece commission** (in drachmas) at 2% p.a. on outstanding redeposits at end-of-month. To be more precise, this percentage (2%) is applied to the outstanding total of redeposits *"minus the corresponding drachma 'mirroring/counterpart' deposit"* (July 1980).[5]

Before 1980, commission was paid by the Bank of Greece on the foreign exchange deposits of "Greek seamen and emigrant workers/employees"[6] which, at the time, were compulsorily surrendered to the Bank of Greece in order to be switched with drachmas irrespective of their currency of denomination. Commission was being paid by the Bank of Greece as early as from July 1972, though at a lower rate (equal to 0.5% for commercial banks and to 1.5% for authorised specialised credit institutions), see below.

Redeposits of foreign exchange[7] also generate interest income (in foreign exchange) for commercial banks and authorised specialised credit institutions, at a rate related to Libid.[8] The income of banks from receipts of interest on redeposits must be converted to drachmas compulsorily (after netting out payments in foreign exchange by banks to service interest on the corresponding deposits of their customers).

Additionally, banks are given (July 1980) the option to redeposit the remaining 30% of their liabilities from deposits of US dollars, Canadian dollars or British pounds by customers belonging to "Greek seamen and emigrant workers/employees" at terms equally favourable to those applying for compulsory redeposits. As already noted, as of April 1995 the commission for optional redeposits is set at a rate lower than for compulsory redeposits.

From August 1992 to April 1995, an option to redeposit with the Bank of Greece is offered to credit institutions in relation with some of their liabilities (denominated in US dollars, British pounds or German marks). These liabilities arise from deposits of **foreign banknotes the provenance of which is not checked ("undeclared banknotes")**. Formerly (in the period August 1980-August 1992) the treatment of such deposits was not differentiated[9] from that of the remaining foreign exchange deposits by "domestic permanent residents/residents of Greece". →

4 As a consequence, the treatment of foreign exchange deposits of "domestic permanent residents/residents of Greece" was differentiated according to their currency of denomination. 70% of deposits denominated in US dollars, Canadian dollars or British pounds was redeposited, while proceeds from deposits denominated in currencies other than US dollars, Canadian dollars and British pounds were compulsorily surrendered to the Bank of Greece in order to be switched with drachmas, see below.
5 The "mirroring/counterpart" deposit is discontinued in October 1985.
6 As well as on foreign currency deposits of "permanent non-residents" which were compulsorily surrendered to be switched with drachmas (commission at a rate of 0.5% since February 1971) or in the case foreign exchange bank liabilities against "permanent non-residents" were redeposited (commission at a rate of 0.125% since April 1971).
7 Strictly speaking, except from redeposits of foreign exchange of "domestic permanent residents/residents of Greece" since June 1983. In effect, however, the Bank of Greece pays to banks (by crediting their redeposit accounts) the interest due to banks' customers.
8 For a while during 1980, the interest rate payable on redeposits was linked to Libor.
9 "Undeclared" banknotes can be paid into deposits of "domestic permanent residents/residents of Greece" during the period June-September 1983 too.

➛ The treatment of deposits **of "Greek seamen and emigrant workers/employees" in foreign currencies other than US dollars, Canadian dollars and British pounds** is quite different. The regime applying since September 1967 (initially irrespective of currency denomination) continues up to April 1995. After booking these deposits from the prescribed holders (i.e., "Greek seamen and emigrant workers/employees"[10]), the commercial bank or authorised specialised credit institution compulsorily switches with the Bank of Greece the foreign currency collected, in return for drachma resources (the commercial bank's current account with the Bank of Greece is credited). Correspondingly, the commercial bank or specialised credit institution opens a (deposit) account in favour of the Bank of Greece.

The rate of exchange at which foreign currency provided by commercial banks or authorised specialised credit institutions is exchanged with drachmas supplied by the Bank of Greece is not related to the current market (i.e., fixing) rate but is a constant. For most currencies, the **administrative rate of exchange** has been adjusted for the last time to a level near the (official) market exchange rate prevailing in November 1975. With the passage of time, this administratively fixed rate of exchange begins implying a much higher external value for the drachma than its market exchange rate.

The commercial bank or authorised specialised credit institution purchases (at the same administrative exchange rate) foreign exchange to service interest and principal on the deposits of "Greek seamen and emigrant workers/employees" in foreign currencies other than US dollars, Canadian dollars and British pounds as well as, before June 1983, on the deposits of "domestic permanent residents/residents of Greece" in foreign currencies other than US dollars, Canadian dollars and British pounds.

From July 1972 to the year 1980 (in the case of authorised specialised credit institutions, till January 1989) credit institutions receive **commission** (at the rate of 0.5% for commercial banks but in the case of specialised credit institutions at a rate of 1.5%) from the Bank of Greece. The computation of the commission is based on the drachma value of the foreign exchange deposits which have been compulsorily surrendered to the Bank of Greece to be switched with drachmas.

The possibility existed to switch with drachmas at the Bank of Greece (February 1971) or to optionally redeposit (April 1971) yet **another category of foreign exchange deposits, that of "permanent non-residents".**

Legal and natural persons *"residing abroad permanently"* (May 1959, October 1969) are characterised as "permanent non-residents". Deposits of natural persons in this category can be *"joint accounts"* with other non-residents or with residents. Initially, there was a *requirement* to surrender to the Bank of Greece, in order to switch with drachmas, such joint deposits (October 1970, abolition in November 1971). In 1980 new deposits in this category are completely liberalised, though banks still retain the option to redeposit with the Bank of Greece at terms which are agreed individually. In April 1995, it is decided to release back to credit institutions foreign exchange deposits in this category, which had been compulsorily surrendered to the Bank of Greece to be switched with drachmas or had been redeposited with the Bank of Greece in the past.

As far as the customers of commercial banks and of authorised specialised credit institutions are concerned, the interest rate and remaining terms on foreign exchange deposits of "Greek seamen and emigrant workers/employees"[11] are in principle freely negotiable (nevertheless an adjustable ceiling is specified for the interest rate, e.g., in April 1980, in July 1980). Before ➛

10 From August 1980 to June 1983, foreign exchange deposits of "domestic permanent residents/residents of Greece" denominated in currencies other than US dollars, Canadian dollars and British pounds receive analogous treatment: they are compulsorily surrendered to the Bank of Greece in order to be switched with drachmas.
11 Before June 1983, this held for foreign exchange deposits of "domestic permanent residents/residents of Greece" too.

➛ 1980, the interest rate was set administratively (as, e.g., in April 1968, August 1969, December 1976).[12]

The interest rate on foreign exchange bank deposits of "domestic permanent residents/residents of Greece" is set administratively (in line, however, with the rates prevailing in the international market) since June 1983.

As early as from June 1978[13] and continuing until July 1997, the depositors of banks are offered an **interest rate bonus**,[14] on condition that they choose to receive interest payments in drachmas rather than in foreign exchange. Since 1980 the interest rate bonus is offered equally for deposits of "Greek seamen and emigrant workers/employees"[15] and for deposits of "domestic permanent residents/residents of Greece", irrespective of currency denomination, whether there is a requirement to redeposit or to compulsorily surrender the foreign exchange to the Bank of Greece in order to switch with drachmas. The interest rate bonus is set at a rate equal to 1.5% from the year 1980 to April 1995, when the percentage bonus is reduced to 0.75%. The payment of interest rate bonus is financed by the Bank of Greece.

12 In July 1979, the possibility is granted to banks to negotiate with the Bank of Greece so as to secure higher interest rates on certain foreign exchange deposit sub-categories.
13 From June 1978 to the year 1980, as a condition for obtaining the interest rate bonus (0.5%), it is required to transform the deposit which is denominated in foreign exchange into a deposit indexed on foreign currency (i.e., into a deposit with a *foreign currency clause*, characterised as "non-convertible foreign exchange").
14 For a while during 1980, a commission bonus to be added to the rate of commission received by banks was offered too.
15 For deposits in US dollars or Canadian dollars or British pounds in excess of (the equivalent of) $200,000, the interest rate bonus is offered to banks' customers provided they choose to receive interest payments in drachmas. Nevertheless, no commission is offered to the credit institutions on the amount by which a deposit, optionally redeposited with the Bank of Greece, exceeds $200,000 (or its equivalent).

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