



**Hellenic Republic**  
**Ministry of Finance**  
**Public Debt Division**

**Recent Developments**  
**in Public Debt Management**

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## 1. Introduction

### A brief overview of the greek economy

As of 1/1/2001 Greece is the twelfth member of the European Monetary Union (EMU) and euro is its legal currency. The greek economy, being part of the integrated european economy, operates currently in a completely different environment, where the monetary policy is designed by the European Central Bank and the exchange policy for the common currency reflects the prevailing economic conditions in the euro-zone.

The year 2001 is characterized by great uncertainties resulting in the slackening of economic growth for most countries. In addition to that, the consequences of the tragic events in the USA, though not yet fully evaluated, will have an adverse impact in the international economic activity.

Despite the adverse economic environment the greek economy maintains its momentum, achieving high growth rates for the third consecutive year. Though the growth rate of GDP is estimated to be confined to 4.5% (compared to an initial budget estimation of 5.0%), it is still 2% higher than the average growth rate of the euro-zone, resulting in a faster real convergence of the greek economy.

Table 1  
Main indicators of the greek economy

	2000	2001*	2002**
Growth of GDP	4.3%	4.5%	4.0%
General Government Deficit/GDP <sup>1</sup>	1.1%	-0.5%	-1.5%
General Government Debt/GDP	102.7%	99.0%	95.8%
Private consumption deflator	3.1%	2.9%	2.8%
Unemployment	11.3%	10.7%	10.0%

1. Deficit (-) = Surplus

\* Estimates

\*\* Forecasts

After Greece's participation in the EMU, the only means for the implementation of the macroeconomic policy is the fiscal policy, which however has to abide with the Stability and Growth Treaty that ensures the effectiveness of the economic policy for the stability of prices and growth within the euro-zone.

The fiscal targets of the "after EMU" era for the greek economy are summarised as follows:

- the maintenance of the macroeconomic stability through the achievement of general government primary surpluses.
- the reduction of the Debt to GDP ratio to 50% till the year 2010
- the completion and deepening of the structural reforms in order to increase the competitiveness of the greek economy
- the strengthening of the social cohesion

The faster growth, the reduction of unemployment and the higher quality of living are the great challenges of the economic and social policy for the coming decade. The 3<sup>rd</sup> Community Support Framework, amounting to 51.357,30 million euro, in conjunction with the increased private and public investment, is expected to contribute significantly towards this direction.

## **2. Central Government Debt**

In recent years the government's primary objective has been the reduction of the general government debt to GDP ratio. The fact that, as of 1/1/2001 the fiscal policy has taken over the primary role for the stabilisation and further growth of the economy, makes it obvious that the public debt becomes one of the most critical macroeconomic parameters for the formation of the other fiscal figures.

In addition to that, the reduction of debt will release financial resources that can be used for the financing of the "socially" sensitive sectors of the economy (education, health, social security etc.).

### **A. Policy Objectives**

The objectives set and pursued in the previous years were the following:

#### ***I. The reduction of debt as % of GDP***

To the fast reduction of debt (from 111,3% to 99,0% over the period 1996-2001) contributed the primary surpluses, the high growth rates of the GDP, the revenues of the privatisation program and the revenues from the securitisation of future profits of public organisations.

#### ***II. The weakening of the dynamics of the increase of debt***

This objective was pursued through the implementation of modern management techniques aiming at the restructuring of the outstanding debt in terms of currency and interest rates, the lengthening of its maturity, the smoothening of the maturities in the coming years, the reduction of guarantees granted by the Government etc.

#### ***III. The reduction of the servicing cost***

Being of high priority, this objective was pursued through the re-financing of debt with low cost issues, the increase of the average re-financing period, the diminishing of the currency and interest rate risks through the extensive use of derivatives, the systematic buy-backs and exchanges of previous issues etc.

#### *IV. The modernisation of the electronic primary and secondary market of Government securities*

Aiming at the increased transparency and effectiveness of the bond market.

#### *V. The establishment of benchmark issues*

Aiming at the improvement of the competitiveness and the attractiveness of the greek securities in the integrated eurobond market.

### **B. Structure of Central Government debt**

The outstanding Central Government Debt at the end of the year 2001, is estimated to reach EUR 145.238,43 million, compared to EUR 139.184,16 million of year-end 2000. For the first time the year-to-year increase in absolute numbers shows a declining trend (table 2), since the change over the period 2000-2001 is EUR 6.054,27 million, compared to a change of EUR 7.255,24 million over the period 1999-2000. The change for the period 2001-2002 is expected to be reduced even more to EUR 5.760,83 million. The declining trend shows the weakening of the dynamics of the increase of debt, resulting in the reduction of debt as % of GDP.

Table 2

<b>Composition and evolution of Public Debt (million euro)</b>					
	<b>2000</b>	<b>2001*</b>	<b>Change 2001-2000</b>	<b>2002**</b>	<b>Change 2002-2001</b>
	(1)	(2)	(3)=(2)-(1)	(4)	(5)=(4)-(2)
<b>External Debt</b>	33.622,90	30.260,01		28.663,24	
<b>Domestic Debt</b>	105.561,26	114.978,42		122.336,02	
<b>A. Central Government Debt as % of GDP</b>	139.184,16 114,5%	145.238,43 110,9%	6.054,27 -3,6%	150.999,26 107,7%	5.760,83 -3,2%
<b>B. Intergovernmental Debt (-)</b>	14.421,13	15.688,92		16.639,77	
<b>C. General Government Debt as % of GDP</b>	124.763,03 102,7%	129.549,51 99,0%	4.786,48 -3,7%	134.359,49 95,8%	4809,98 -3,2%

\* Estimates

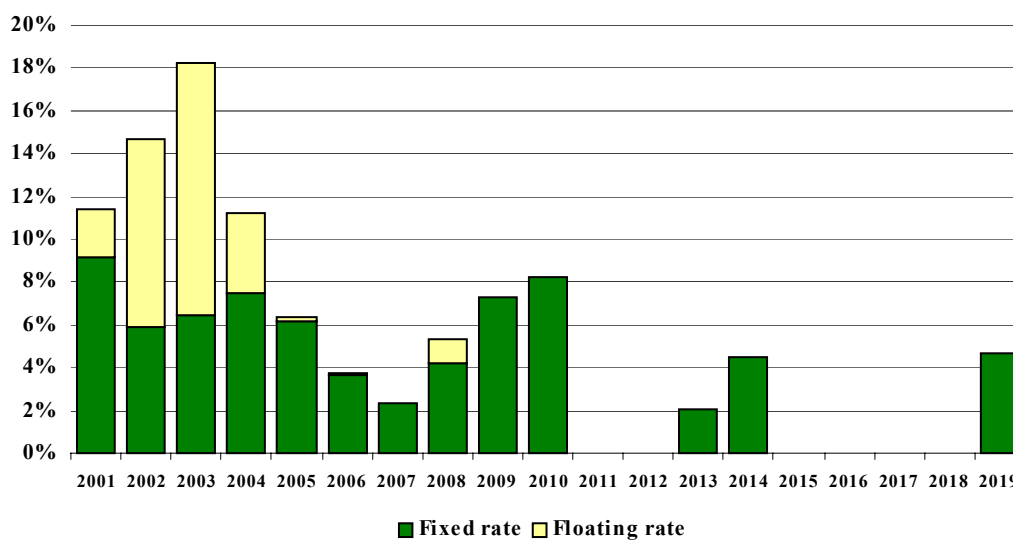
The significant reduction of the external debt in the year 2001 is due to the consolidation of the 10-year fungible bond of EUR 3 billion issued in

the eurobond market, with the domestic 10-year bond issue with the same terms.

### *I. Domestic Debt*

The continuous reduction of the participation of T-Bills (4,42%) and the increasing participation of Bonds (82,96%) in the total domestic debt during the year 2000, resulted in the significant restructuring of the redemption schedule of the domestic debt (chart 1).

Chart 1  
Redemption schedule of Greek Government Bonds and T-Bills on 31/12/2000



The result of the restructuring of the domestic debt is reflected in the average residual maturity of the tradable domestic debt shown in tables 3 and 4.

**Residual maturity of domestic tradable debt**  
**Table 3**

	<1 year	1-5 years	>5 years
<b>Domestic debt on 31/12/2000</b>	11.4%	50.5%	38.1%

**Table 4**

	31/12/1999	31/12/2000	30/6/2001
<b>Residual maturity in years</b>	4.5	5.3	5.6

The duration and modified duration of the drachma denominated government securities (domestic tradable debt) on 30/6/2001 have been increased to 4.0 years and 3.8 respectively, reaching the average duration and modified duration of the countries participating in the euro-zone.

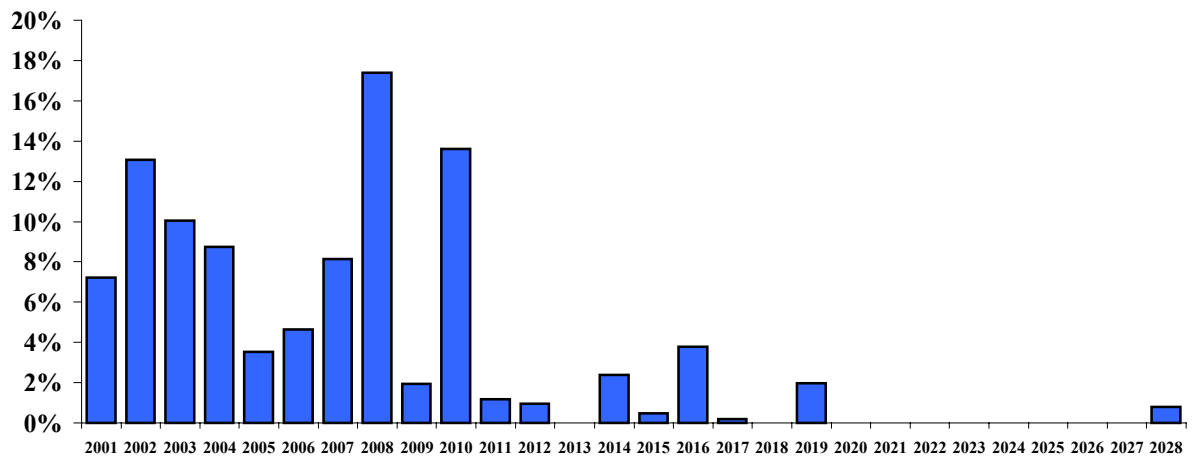
## II. External Debt

The external debt (as defined by the origin of borrowing) is estimated to decline to 20,8% of the total debt by the end of the year 2001 (compared to 24,2% in the year 2000).

In the year 2001, high priority was given to the hedging of the foreign exchange risk, that is the nominal stabilisation (in terms of euro) of the foreign currency debt, by converting a great part of the initial obligations in foreign currencies (JPY, USD, etc.) to obligations in euro, through swaps.

The restructuring of the tradable external debt (as defined by the origin of borrowing) in terms of maturity appears in chart 2 and table 5.

Chart 2  
Redemption schedule of tradable external debt on 31/12/2000\*



\*Not including external military debt

Table 5  
Residual maturity of tradable external debt

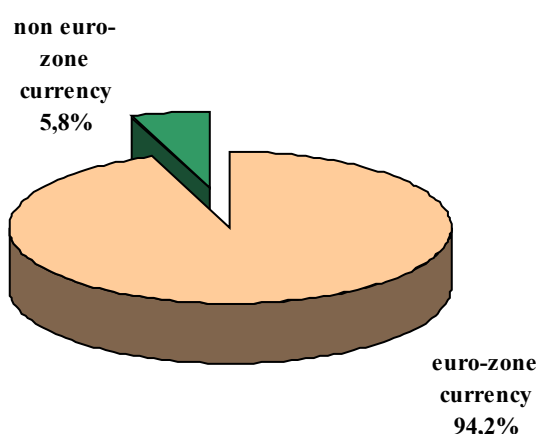
	<1 year	1-5 years	>5 years
External debt on 31/12/1999	7.2%	35.4%	57.4%

The duration and modified duration of the tradable external debt on 30/6/2001 have been increased to 3.4 years and 3.2, respectively.

### *III. Composition of Central Government Debt by currency*

After Greece's participation in the EMU and the adoption of euro as the national currency, another approach to measure the exposure of debt to foreign exchange risk is the composition of the total debt by euro-zone/non-euro-zone currency. Special efforts have been undertaken to convert the non-euro-zone currency obligations to euro obligations through currency swaps and other derivatives in order to minimize the impact of the strengthening of currencies other than euro to the nominal value of public debt. On 30/9/2001, only a small portion of the total central government debt (5,8%) was exposed to foreign exchange risk (chart 3).

Chart 3  
Composition of Central Government Debt by currency  
(after swaps) on 30/9/2001



### *IV. Interest payments*

As a result of the restructuring of the domestic and external debt, interest payments as % of GDP are declining year by year:

Table 6  
Interest Payments as % of GDP  
(million euro)

	1997	1998	1999	2000	2001*	2002**
Interest payments	9.438,0	9.490,8	9.693,3	9.913,9	9.713,9	9.053,6
as % of GDP	9.7%	9.0%	8.6%	8.2%	7.4%	6.5%

\* Estimates

\*\* Forecasts

The rapid decline of domestic interest rates during the year 2001, resulted in the significant reduction of the average cost of the new domestic borrowing.

The gradual substitution of the expensive "old" debt with low cost new borrowing, is already reflected in the reduction of the budget allocations for the servicing of debt, but the full effect is expected to be seen in the coming years.

### **3. The Greek Government Securities Markets**

The need for a fast adaptation of the greek government securities markets, was amplified by important events in the domestic and international environment, such as:

- the participation of Greece in the EMU and the elimination of the exchange risk in respect with the euro-zone currencies.
- the slackening of growth in the USA and in a lesser degree in Europe, resulting in expectations for the declining of interest rates, hence increasing the possibility for profits from the increase in prices of fixed income securities.
- the downfall in the international Stock Exchanges and in the Athens Stock Exchange, which led to a "flight to quality", that is, a turn to safer investments, and increased the demand for greek government securities bearing zero risk.

As a result, the average monthly volume of transactions on greek government securities (including the OTC market) during the first semester of 2001, increased dramatically to 198 billion euro, compared to 71 billion euro in the corresponding period of 2000.

#### **A. Primary Market**

The modernisation of the Primary Market, attempted with the recent revision of the Primary Dealership Regulation, was aiming at structural and qualitative reforms.

According to the new regulation, credit institutions not established in Greece are also allowed to be assigned the duties of Primary Dealership. As of 1/1/2001 the number of Primary Dealers increased to 15, 10 of which are international credit institutions. In addition, the role of the Committee of Primary Dealers' Supervision and Control was upgraded,

ensuring the effective control of the operation of the market and the transparency in transactions.

The qualitative reforms were aiming at:

- the establishment of benchmark issues.
- the promotion of greek government securities to a broader basis of end investors in the eurobond market.
- the improvement of the competitiveness and attractiveness of the greek government securities.

The first target was pursued with re-openings of selected old issues having the required residual maturity, in order to increase their liquidity. The greek benchmark issues are already tradable in the Euro-MTS platform, whereas by the end of the year 2001, the total volume of some of them will exceed the minimum required volume of EUR 5 billion.

The second target was pursued through the adoption of the syndication method for all new long-term issues. During the year 2001, the syndication method was confined to the new 10-year bond issue, covering 23% of the total borrowing of the year (The new 20-year bond, scheduled for mid-November, was postponed due to the recent events in the USA). Moreover, the number of auctions was reduced significantly (9 in 2001, compared to 26 in 2000 and 52 in 1999) with a simultaneous increase of the auctioned volume, inducing intense interest and increased competitiveness among the participants. The auction calendar is announced on a quarterly basis. From the current year on, the total yearly volume to be auctioned will also be pre-announced.

## **B. Secondary Market**

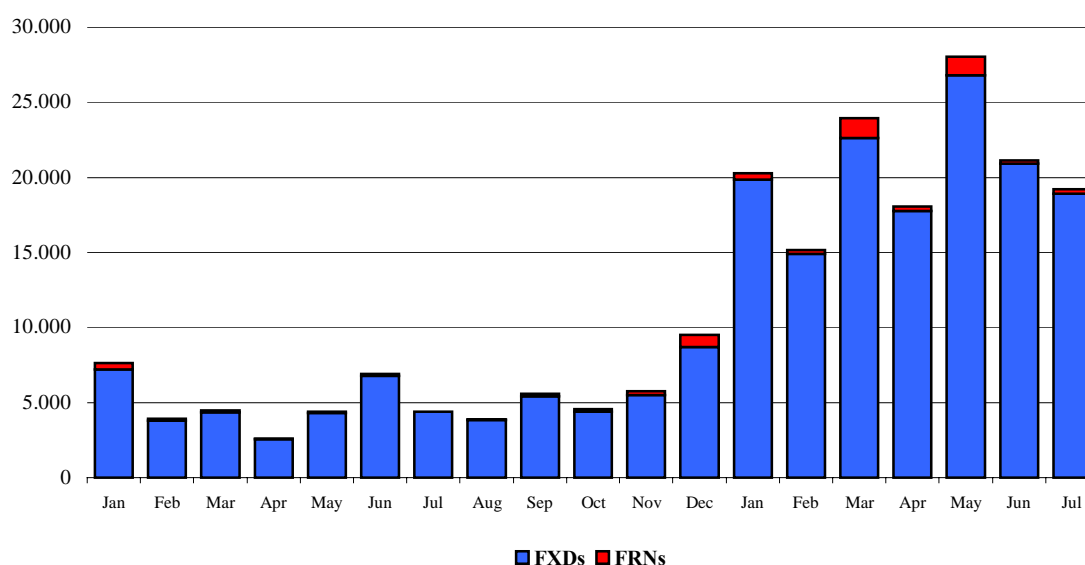
In 2001, significant measures were undertaken for the modernisation of the Electronic Secondary Market (HDAT):

- The international credit institutions participating in the Primary Dealership with no establishment in Greece, are now capable of participating in HDAT via a remote access system.
- In May 2001, the installment of new software was completed in HDAT, allowing the automatic quoting of prices. The system follows up the movements in the european bond markets and adapts automatically the prices quoted in HDAT. This system is expected to contribute to the attractiveness of greek bonds even more.
- As of 21/5/2001, a new scale of bid/ask spreads was introduced for the prices quoted in HDAT. The new scale of spreads is expected to

facilitate the trading of different positions along the yield curve, resulting in higher liquidity.

The above measures resulted in a significant surge of the trading volume in the Electronic Secondary Market in the current year (chart 4).

**Chart 4**  
**Monthly volume of transactions on greek government securities**  
**in the Electronic Secondary Market (HDAT) Jan.2000-July2001**  
**(million euro)**



Source: Bank of Greece, HDAT

Moreover, reverse auctions for specific pre-announced older issues, as well as buy-backs and exchanges of issues are organised in regular intervals, aiming at the retirement of such issues, the restructuring of the portfolio of major credit institutions, the refinancing of debt with lower cost and the reduction of interest payments and the debt itself. In the current year (Jan-Oct 2001) buy-backs reached the amount of EUR 3.562,1 million.

### **C. Repo Market**

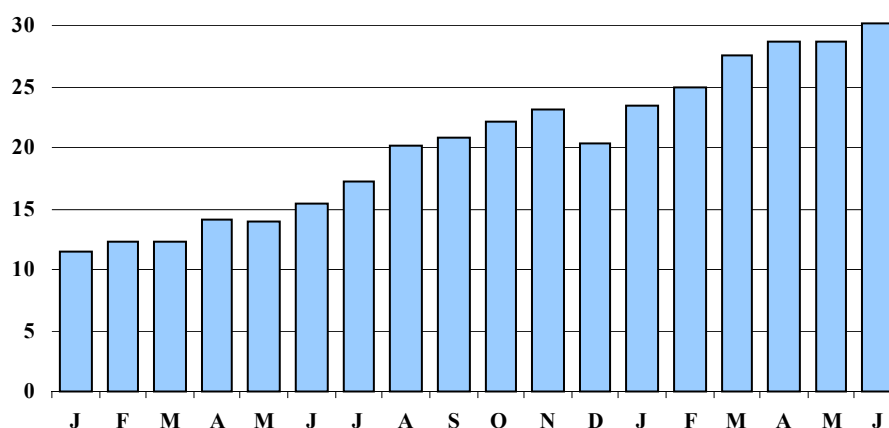
The establishment of an effective repo market is essential for the secondary bond market, since repo and reverse repo agreements are the main tools for hedging open positions (long and short) on bonds.

The repo market in Greece is very active, especially after the abolishment of taxation on repo agreements for domestic investors.

Apart from the classic repo market, an electronic buy/sell back repo market has been organised and operates as of 6/9/1999, supported by

HDAT. The volume of classic repo agreements (retail investors and public entities) has increased significantly in the year 2001 (chart 5).

Chart 5  
Monthly balance of open repo agreements (retail investors and public entities) Jan. 2000-June. 2001  
(billion euro)

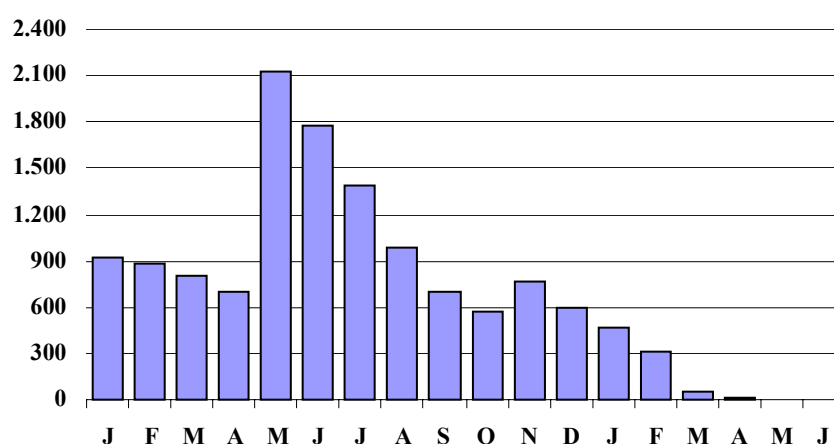


Source: Bank of Greece

## D. Bond futures market

The bond futures market was organised by the Athens Derivatives Exchange and started operating in January 2000, showing a significant volume of transactions, especially during the months May and June of the year 2000 (chart 6).

Chart 6  
Monthly number of future contracts on the 10-year government bond  
(Jan. 2000-June 2001)



Source: Athens Derivatives Exchange

However, the relatively low liquidity of the greek government securities market combined with the huge portfolios of the institutional investors (credit institutions) and the small number of market makers in the domestic market, resulted in a gradual transition of futures transactions to the german bond futures market.

The lack of interest for the greek bond futures market during the first months of the year 2001, forced the Athens Derivatives Exchange to suspend the operation of the specific market as of June 2001.

## **4. Debt Management Objectives**

During the last two years Greece proceeded with the implementation of a plan that aimed at reducing the vulnerability of the foreign exchange (fx) portion of Public Debt to fx movements when evaluating it each year-end. This policy was realized through cross currency swaps and other derivative instruments so that the impact of the strengthening of currencies other than drachma and eventually euro to the nominal value of Public Debt would be minimal. Therefore Budgetary targets for deficit and debt levels were free from the uncertainty deriving from the around 18% fx portion of debt that had piled from Greece's fund raising in fx during the last 20 years.

The last three years Greece raises funds in euro through Primary Dealers auctions and syndicated bond issues only in fixed rate sector. Maturities range from 3 to 20 years and the main target to be accomplished is the creation of large liquid issues along the curve. The current composition of debt by type of interest is 30% floating and 70% fixed. As FRNs mature within next 3 years (or are bought back to a limited extend) duration will eventually increase from the present level of 3.9. Greece will explore the flexibility provided by interest rate swaps that will enable it to issue on maturities that market demand and yield curve shape dictates, and at the same time maintaining its duration target between 3.6-4.4. Moreover Greece intends to use IRSs for interest payments expenditure savings taking into account the steepness of the yield curve, but the exact structure is under preparation and subject to approval.

## **5. Other Issues**

### **A. Issuance of Privatisation Certificates**

On August 3, 2001, Euro 800,000,000 Hellenic Tourist Properties Certificates were issued by the Hellenic Republic in the international market. The Certificates, were issued at discount, bearing no interest

(zero-coupon) and will be redeemed on August 3, 2004 at their nominal amount. They are in bearer form, in the denomination of one euro each and are listed on the Athens Stock Exchange.

The Hellenic Tourist Properties Certificates are exchangeable, at the option of the holders, for shares in Hellenic Tourist Properties S.A. or in any of its subsidiaries offered for sale by the Hellenic Republic or DEKA S.A. by way of privatisation, from the issue date to the redemption date.

The Hellenic Tourist Properties Certificates will be exchanged with shares at a 5% discount on the offered price of the share.

On October 4, 2001, Euro 1,700,000,000 Privatisation Certificates were issued by the Hellenic Republic in the international market. The Certificates, were issued at discount, bearing no interest (zero-coupon) and will be redeemed on October 4, 2004 at their nominal amount. They are in bearer form, in the denomination of one euro each and are listed on the Athens Stock Exchange.

The Privatisation Certificates are exchangeable, at the option of the holders, for shares in all companies offered for sale by the Hellenic Republic or DEKA S.A. by way of privatisation, excluding any shares in the Agricultural Bank of Greece or in the Hellenic Tourist Properties S.A. or in any of its subsidiaries, from the issue date to the redemption date.

The Privatisation Certificates will be exchanged with shares at a 5% discount on the offered price of the share.