III Greece: from 1833 to 1949

Sophia Lazaretou[1]
Bank of Greece

1 MAJOR MONETARY EVENTS

The story of Greece is rich in fiscal crises, debt defaults, multiple switches on and off fixed exchange-rate regimes and political and military events. The lessons drawn from historical experience are very important. Pre-WWII Greek governments tried repeatedly to end histories of macro-economic instability through participation in the prevailing international monetary system. This is because they understood that the participation of an 'emerging market economy' with a weak currency and a thin money market in a monetary group of powerful economies could enable it to develop sound monetary and fiscal institutions. This is what Caballero et al. (2004) have called 'country' and 'currency trust'.[2] Moreover, participation could improve that economy's international credit standing and imply important benefits in terms of exchange-rate and price stability, and long-term foreign borrowing.

The country's pre-WWII monetary history was marked by experiments with silver monometallism in the very early years of the Greek State, bimetallism in the middle 19th century, the classical gold standard in the last quarter of the century and the gold-exchange standard in the years between the two world wars. As an even stronger form of commitment, Greece joined the Latin Monetary Union (LMU) in 1867.[3]

In particular, between its independence in 1828, when a national monetary system based on silver was first introduced, and 1936, when the country entered the 'Sterling Area'[4], the Greek economy experienced eight episodes of suspension of metallic or foreign exchange convertibility (see Table 1). Budget deficit difficulties were the reason for the suspension of silver monometallism

in 1831. The government tried, though to no avail, to finance, with foreign borrowing, the increased expenditures required for the relief of the Greek refugees coming from regions that were still under Turkish occupation. Access to foreign borrowing was impossible; Greece's inability to repay the Independence Loans of 1824–25 (0.8 million pounds sterling at 5% and 1.1 million at 6%) destroyed its reputation as a borrower. Paper notes were thus issued (Gervinus 1863, Gennadios 1878 and Andreades 1904). Two years later, bimetallism was adopted, and the gold-silver drachma (δραχμή) replaced the silver phoenix (φοίνικας). The adoption of bimetallism was supported by a large foreign loan (60 million drachmas at 6%) under the aegis of the Great Powers (the UK, France and Russia). Ultimately, the loan was wasted in other uses and it was impossible to mint silver coinage, thus causing money scarcity in the domestic market. Nevertheless, the country's economic stagnation quickly caused new fiscal difficulties, which finally forced the government to unilaterally suspend loan repayment in 1843[5], while in April 1848 a short-lived suspension of metallic convertibility took place in response to a worldwide financial panic.

Greece always made hard efforts to adopt bimetallism and rebuild its creditworthiness: a debt compromise on past foreign loans was reached in 1864 (final settlement of the 1832 loan); in 1878–79 (final settlement of the 1824–25 loans); and again in 1898,[6] following the 1893 debt repudiation. Efforts were made to join the LMU system in 1868, 1870, 1880–84, 1885–86 and again in 1898. However, the episodes of inconvertibility lasted for many years. Fiat money standards came into existence in 1868, 1877, 1885 and 1914 as the result of excessive wartime emergencies; in 1932, as the ultimate result of the worldwide economic and monetary crisis of the early 1930s; and again in 1936 due to large deficits in the balance of payments. With the exception of the short-lived 1885 episode of adherence to gold, Greece pursued, for the first time, consistently a specie standard rule as late as 1910, and only four years before the collapse of the classical gold standard. Again, it joined gold in 1928. A key feature of all pre-war episodes was that specie flows were always resumed at the original parity, i.e. the par value of 1:1 against the French franc. The 1928 resumption, however, was an exception to that rule: the drachma, before joining, was devalued.

In 1927 the government implemented successfully a two-year stabilisation programme followed by fiscal consolidation, monetary stringency and a *de facto* devaluation of the drachma. The stabilisation effort was supported by a large foreign loan (9 million pounds sterling) that the country negotiated through the mediation of the League of Nations.[7] The severe deflation waves of the 1929 crash reached Greece with a lag of more than one year (Chouliarakis and Lazaretou 2014). The impact was primarily on the balance of payments and the drachma exchange rate. Greece, however, did not follow Britain out of gold in September 1931 and switched from pegging against the pound sterling to pegging against the US dollar, which remained on gold. The drachma soon came under heavy selling pressure. The central bank reacted by imposing exchange controls (see the Law on the Protection of the Domestic Currency, September 1931 and February 1932). Convertibility ultimately ended in April 1932; the drachma returned to a free float and started to depreciate heavily (by 66.9% in May compared to April; by 44.8% compared to the stabilisation rate). A month later, the government declared a unilateral moratorium on the servicing of its outstanding foreign debt. The dollar's devaluation in March 1933 allowed the increase of the country's foreign exchange reserves and thus in June the drachma joined the Gold Bloc, and started pegging against the Swiss

---

[5] In 1856, International Finance Control (IFC) was imposed for the first time; a final compromise was settled in 1864.

[6] For a second time, IFC was established by law. The IFC committee took full control and management of public finances in the context of a strict long-lived stabilisation programme followed by fiscal consolidation, money squeeze, persistent deflation and heavy currency appreciation up to the original parity. For an analysis of the 1898 IFC and an assessment of its impact on the country's economy, see Lazaretou (2013).

[7] Foreign creditors demanded two pre-conditions for lending to Greece: (i) the restoration of convertibility and (ii) the foundation of a central bank (i.e. the Bank of Greece).

franc. It was devalued again, though moderately, in September 1936 and eventually returned to a managed float, when it joined the 'Sterling Area' after the Bloc's dissolution. It remained fixed against the pound sterling, recording only slightly fluctuations. To a significant extent, this was the result of a generalised system of exchange controls imposed on capital and trade flows.[8]

Well up to now, in all international empirical studies Greece is systematically neglected or included only occasionally and sporadically in their cross-country samples. Therefore, the Greek monetary history is more or less *terra incognita*. In the national literature also there is not much more on this topic. Venezis (1953), Bank of Greece (1975), Freris (1986) and Mazower (1989, 1991, 1992) present the country's political economy in the interwar period. The two special editions of the Bank of Greece (2009b, 2011) try to shed light on the monetary policy pursued during the interwar crisis. More recently, Christodoulakis (2013) develops a currency peg model for interwar Greece and provides empirical evidence that the Greek failure to cope with the crisis was chiefly attributed to '…a number of specific mistakes and policy debacles'. Moreover, Chouliarakis and Lazaretou (2014) use the 1930s crisis as a useful testing ground to detect similarities and differences of the current and the interwar Greek crisis episodes.

Pre-WWII Greece was a typical example of a SEE 'emerging market economy'.[9] The country began that time gradually but steadily to move from a closed economy to an open economy and to build economic and political institutions. It was also at the 'periphery'[10] of the international monetary system. There were three typical features placing it among the peripheries. *First*, it had experienced an exceptionally large number of exchange rate regime switches. *Second*, the frequent alternations between metallic and paper currency standards and the short-lived adoption of the specie rule revealed the government's inability to maintain fixed rates. Thus, before joining, the country would have to implement major institutional reforms chiefly in the field of budget finances. *Third*, and notwithstanding the above, the periodic abandonment of and return to metallic standards revealed the government's strong desire for adherence to the specie convertibility rule.

It is evident that Greece always tried to follow international monetary developments. The evolution of the country's monetary system was affected both by developments in the international

---

[8] The imposition of dictatorship in August 1936 allowed for a widespread and rigorous enforcement of the exchange controls regime.

[9] Although the term was loosely defined, i.e. any economy with low to middle per capita income, it is used to denote a country which, irrespective of its size, has embarked upon economic development and reform programmes and has begun to open its markets and 'emerge' onto the global market economy. Until the outbreak of WWI, all SEE countries were trying to strike a balance between separation and convergence regarding the establishment of their national currency systems (Einaudi 2008). Mooslechner (2008) provides useful insights on a number of issues related to the choice of the exchange rate regime, placing emphasis on the recent challenges of SEE countries. A number of detailed studies of the experience of the European peripheries have recently emerged, shedding light on the intentions of their monetary authorities to participate in the international monetary arrangements designed by the core countries. See, for example, the work by Martín-Aceña and Reis (2000), Lazaretou (2005a), Ögren (2006), Esteves et al. (2007), Øksendal (2007), Morys (2008), Bernholz (2008) and Branco et al. (2010). The growing body of historical and empirical research on the national stories or comparisons among them provides rich evidence on the 'nominal' and the 'real' effects of the monetary regime for a peripheral economy (see Bordo and Kydland 1995, Bordo and Schwarz 1997 and Meissner 2002 on the 'nominal' effects; and Bordo et al. 1999, Flandreau and Sussman 2004, Bordo and Rockoff 1996, Eichengreen and Hausmann 1999, Eichengreen et al. 2003 and Flandreau and Maurel 2001 on the 'real' effects).

[10] Participating countries are divided into 'core' and 'peripheral' according to their faithfulness to specie rules. The core countries (the UK, the US, France and Germany) always adhered strictly to the specie rule. They were leading financial centres, capital and commodity exporters and world bankers, and their national currencies were used as the 'nominal anchor' for the other countries. See Eichengreen (2011). By contrast, the peripheral countries only temporarily maintained fixed rates. Peripheries were open economies, albeit economically and financially underdeveloped. They were capital and commodity importers, could not borrow in their own currency and often suffered from weak public finances. They could not therefore influence the international monetary regime and thus had to obey the rules set by the core countries. Whenever they faced pressing financial needs or imbalances in the external sector, they would abandon the specie rule. The country's size did not matter in the choice of nominal exchange rate regime. For example, small countries, like Belgium or Denmark, were among the core countries in the region, whereas large countries, like Russia or Austria-Hungary, were at the system's periphery.

environment and by domestic fiscal disturbances. In the course of a 100-year period, the country experienced important demographic and territorial changes, which raised consumption and aggregate demand but also put a burden on the budget. Sudden population increases were due to the country's territorial enlargements that were the outcome of its involvement in frequent hostilities with the Ottoman Empire, the Balkan Wars and WWI.[11]

In particular, the serial suspensions of money convertibility in Greece were due both to the occurrence of some sudden event, usually unexpected and unpredictable, such as war, threat of war and financial and banking panics[12], and to the government's failure to pursue fiscal and monetary policies compatible with its commitment to fixed exchange rates. Sudden events were accompanied by currency and debt crises.[13] Data and historical accounts confirm that the key determinants of the Greek crisis events were closely related to country-specific factors: all crisis events were preceded by periods of fiscal laxity, rapid monetary expansion and limited coverage of the domestic money.[14]

Equally, the country's financial system was weak and thin. Throughout the 19th century the process of financial intermediation went at a slow pace. From the turn of the century onwards, monetary stability and rapid economic growth boosted money transactions, bank deposits and the demand for money. In the early 1920s, the banking system expanded further, while in the interwar period the process of financial development slowed down. Key inefficiencies of the country's financial system were: banks' capital inadequacy, high leverage and poor asset-liability management; and the absence of a central bank and a regulatory framework for the supervision of commercial banking activities.[15]

The country's financial system took its first steps with the inception of the National Bank of Greece (NBG, *Εθνική Τράπεζα της Ελλάδος*) in 1842. This was the first commercial bank in modern Greece. It was created and functioned as a 'universal bank', that is a deposit and a discount bank as well as a provider of short- and long-term private credit (see the establishing Law of NBG, 30 March 1841).[16] At the same time, it was granted the monopoly of note issue (see the Amending Act of 19 August 1841). Soon, it became the biggest in resources and exerted dominance over the domestic money market.[17] The NBG's monopoly covered almost the entire territory except Crete, the

---

[11] Important territorial enlargements followed by large population increases occurred in 1864, 1881, 1905 and 1913 and again in 1922–23, which for the most part shaped the country's current borders.

[12] Lazaretou (1995) provides narrative and empirical evidence that Greece followed a fixed-rate regime with the accepted 'escape clause' for war emergencies. Once the war ceased, government authorities made efforts to return to the 'natural state', i.e. specie convertibility.

[13] For a detailed discussion of the types of financial instability, see the work by Kindlerbeger (1989), Bordo (2006, 2008), Bordo et al. (2001), Eichengreen and Lindert (1989) and more recently by Reinhart and Rogoff (2009, 2010) and Reinhart (2010).

[14] For the pattern of financial crises in Greece over a long time span and the key aggravating factors, see Lazaretou (2012).

[15] Over the pre-WWII period, financial development measured as the ratio of bank credit-to-GDP stood at levels lower than 40%. The data refer to bank gross loans to firms and households gathered by the balance sheets of 8 biggest domestic banks. The period from 1905 to 1913 was an exception: private credit grew by a factor of 1.5. That was the time when the country took efforts for adopting, eventually in 1910, the classical gold standard.

[16] On 31 November 1841, the General Meeting of Shareholders held for the first time. The bank began operations on 22 January 1842. It was a private limited company (société anonyme) located in Athens with initial capital of 5 million drachmas, divided into 5000 shares of 1000 drachmas (Valaoritis 1902, volume 2). The majority stake was held by the Rothschild bankers (55% or 2750 shares). Until 1870, the Greek State held 1000 shares and through its commissioner exerted control over the bank's activities.

[17] On the eve of 1929 crash, the NBG was by far the biggest among the top 8 largest banks. More than half of the private deposits were kept with it. It extended half of the loans to the domestic money market and held 54% of the total assets and 42% of the total equity capital. Therefore, it exerted a monopolistic power over the market. Bank competition was extremely weak and in conjunction with interest-inelastic demand for lending and supply of private deposits, the interest rate spread was high. The short-term market lending rate (4 biggest banks) fluctuated between 11–13% whereas the return on bank deposits was rather low (3.5 to 4.5% for deposits up to 3 months). For an analysis of the pre-war Greek financial system, see Lazaretou (2008, 2012). For the history of the NBG, see Valaoritis (1902), Kirkilitsis (1934, 1935), NBG (2001) and Kostis and Kostelenos (2003). For a recent overview of its history, see Bank of Greece (2014).

'new provinces' of Epirus and Thessaly and the Ionian islands. Three other smaller banks with both commercial and note-issuing activities had the exclusive privilege of note issue in these specific regions, namely the Bank of Epirus and Thessaly (1882–1899, *Προνομιούχος Τράπεζα Ηπειροθεσσαλίας*), the Bank of Crete (1899–1919, *Τράπεζα Κρήτης*) and the Ionian Bank (1839–1920, *Ιονική Τράπεζα*). Located in the country's provinces, they issued and circulated their own notes, although for a short time interval and/or in a very limited geographical area. They gradually waived their privilege in favour of the NBG.

Like several other countries in Europe, Greece lacked a central bank before 1927. A system of multiple issue banks was in effect until 1920. Afterwards and until mid-1927 there was only one note-issuing bank, namely the NBG, which also engaged in commercial activities. On 15 September 1927 the Bank of Greece (BoG, *Τράπεζα της Ελλάδος*) was established as the country's central bank with the monopoly of money issue and the primary objective of ensuring price and exchange rate stability. It started operations on 14 May 1928, the day that the country joined the interwar gold standard and the drachma was *de jure* stabilised.

TABLE 1 Chronology of monetary standards

Dates of Convertibility Resumption	Dates of Suspension	Reasons for Suspension	Change in the Exchange Rate
1. 1828 (silver monometallism)	June 1831 Fiat money	Government failure. Budget deficit difficulties. No access to foreign borrowing.	Paper notes were issued.
2. February 1833 (bimetallism)	April 1848 Fiat money	Response to a worldwide financial panic.	The silver drachma replaced the silver phoenix, silver-gold ratio: 15.5:1.
3. December 1848 (bimetallism)	December 1868 Fiat money	War: the Cretan Revolution.	The resumption was made at the original parity.
4. July 1870 (bimetallism)	June 1877 Fiat money	The Russo-Turkish War.	The resumption was made at the original parity.
5. January 1885 (LMU, gold standard)	September 1885 Fiat money	Commercial and economic crisis, government failure, war threat.	The resumption was made at the bimetallic LMU drachma/French franc parity (1:1).
6. March 1910 (Latin Monetary Union, gold-French franc standard)	August 1919 Free floating	Asia Minor Expedition. Printing money.	The resumption was made at the original parity (1:1).
7. May 1928 (gold-exchange standard)	April 1932 Free floating	Worldwide monetary instability, unilateral debt repudiation.	Drachma's devaluation.
8. June 1933 (Gold Bloc)	September 1936 Gold Bloc collapse	Gold Bloc dissolution, balance of payments deficits.	Drachma's devaluation.
9. September 1936 ('Sterling Area', i.e. managed float: a currency band. The drachma was tied to the sterling and floated freely against gold and other currencies).	April 1941 Free floating	World War II and Axis occupation.	The drachma lost the functions of money; successive devaluations.

Source: Author's compilation.

2 DEFINITION AND DESCRIPTION OF VARIABLES

We present a comprehensive long-term historical database on newly-developed key macroeconomic time series classified in six groups, namely: monetary variables; interest rates; exchange

rates; government finances; prices, production and labour; national accounts and population. The accompanying index table provides significant information on the list of variables, the series codes and the list of tables, the unit of account, the time span and the data frequency. Each group of variables contains certain components defined in detail and described in sub-sections. All series cover the period from 1870, or even earlier, to the eve of WWII and have annual and monthly frequencies. Three series, namely the index of the cost-of-living in Athens, the exchange rate and banknotes in circulation cover also the WWII period and its aftermath, 1940–1949. The currency area examined refers to the 'old state' up to 1881 and the 'new provinces' thereafter. The currency unit, *i.e.* legal tender, was the LMU drachma (*νέα δραχμή*).[18]

INDEX TABLE - Country: GREECE   *continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
1. MONETARY VARIABLES				**Table GR1**
Currency reserves (official)				
First period: 1842–1927 (all issuing banks)				
– *total reserves*	1842–1927	annual	in national currency (thousands), end-of-period	GR1A_A
	Jan.1865–Dec.1927	monthly		GR1A_M
– *metallic (gold plus silver)*	1842–1927	annual	in national currency (thousands), end-of-period	GR1B_A
	Jan.1872–Dec.1927	monthly		GR1B_M
– *foreign exchange holdings (in convertible foreign currencies)*	1869–1927	annual	in national currency (thousands), end-of-period	GR1C_A
	Jan. 1872–Dec.1927	monthly		GR1C_M
Second period:1928–1939 (BoG)				
– *total reserves*	1928–1939	annual	in national currency (thousands), end-of-period	GR1D_A
	May 1928–Dec.1939	monthly		GR1D_M
– *gold*	1928–1931	annual	in national currency (thousands), end-of-period	GR1E_A
	May 1928–April 1932	monthly		GR1E_M
– *foreign exchange holdings (in convertible foreign currencies)*	1928–1939	annual	in national currency (thousands), end-of-period	GR1F_A
	May 1928–Dec.1939	monthly		GR1F_M
– *securities (government bonds)*	1932–1939	annual	in national currency (thousands), end-of-period	GR1G_A
	March 1932–Dec.1939	monthly		GR1G_M
Monetary aggregates				
– *M3 (broad money)*	1842–1939	annual	in national currency (thousands), end-of-period	GR1H_A
	Dec.1928–Dec.1939	monthly		GR1H_M
– *M0 (narrow money)*	1842–1939	annual	in national currency (thousands), end-of-period	GR1I_A
	Dec.1928–Dec.1939	monthly		GR1I_M
– *money (M3) multiplier*	1842–1939	annual	ratio	GR1J_A
	May1928–Dec.1939	monthly	ratio	GR1J_M
– *reserve-banknote ratio*	1842–1939	annual	ratio	GR1K_A
	Jan.1865–Dec.1939	monthly	ratio	GR1K_M
banknotes in circulation (all issuing banks)	1842–1927	annual	in national currency (thousands), end-of-period	GR1L_A
	Jan.1865–April 1928	monthly		GR1L_M
Money balances (BoG)				
– *currency in circulation*	1928–1939	annual	in national currency (thousands), end-of-period	GR1M1_A
	May 1928–Dec.1939	monthly		GR1M1_M
– *vault cash*	1928–1939	annual	in national currency (thousands), end-of-period	GR1M2_A
	Dec.1928–Dec.1939	monthly		GR1M2_M
– *deposits with the central bank*	1928–1939	annual	in national currency (thousands), end-of-period	GR1M3_A
	Dec. 1928–Dec.1939	monthly		GR1M3_M
Bank deposits	1842–1939	annual	in national currency (thousands), end-of-period	GR1N_A
	Dec.1928–Dec.1939	monthly		GR1N_M

[18] See Section 2.3.

INDEX TABLE - Country: GREECE　　　　　　　　　　　　　　　　　　*continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
2. INTEREST RATES				**Table GR2**
Short-term interest rates				
– Official interest rates:	1841–1927	date of change	in per cent p.a.	GR2A_D
the NBG discount rate	March 1841–April 1927	monthly	in per cent p.a.	GR2A_M
the BoG discount rate	1928–1941	date of change	in per cent p.a.	GR2B_D
	May 1928–Nov.1941	monthly	in per cent p.a.	GR2B_M
– money market lending rates				
NBG collateralised loans	1843–1931	date of change	in per cent p.a.	GR2C_D
NBG collateralised credit line	1849–1931	date of change	in per cent p.a.	GR2D_D
short-term market lending rate	1928–1941	date of change	in per cent p.a.	GR2E_D
	Dec.1928–Nov.1941	monthly	in per cent p.a.	GR2E_M
– bank deposit rates	1842–1941	date of change	in per cent p.a.	GR2F_D
	Jan.1928–Nov.1941	monthly	in per cent p.a.	GR2F_M
Long-term interest rates				
– fixed-rate government bonds (10 foreign loans)				
market prices	1901–1940	annual	in FRF, in 1929 drachmas	GR2G(1...10)_A
	Jan.1929–Dec.1940	monthly	in FRF, in 1929 drachmas	GR2G(1...10)_M
current yields	1901–1940	annual	in per cent p.a.	GR2H(1…10)_A
	Jan.1929–Dec.1940	monthly	in per cent p.a.	GR2H(1…10)_M
– mortgage-backed loans	1849–1925	date of change	in per cent p.a.	GR2I_D
3. EXCHANGE RATES				**Table GR3**
Pound sterling	1881–1941	annual	in LMU drachmas	GR3A_A
	May 1877–Nov.1941	monthly		GR3A_M
FRF	1878–1941	annual	in LMU drachmas	GR3B_A
	Jan.1877–Nov.1941	monthly		GR3B_M
US dollar	1914–1941	annual	in LMU drachmas	GR3C_A
	Jan.1914–Nov.1941	monthly		GR3C_M
Gold drachma	1885–1903	annual	paper drachmas	GR3D_A
	1920–1940	annual		GR3D_A
4. GOVERNMENT FINANCES				**Table GR4**
Flows				
– total public revenue	1833–1939	annual	in national currency (thousands)	GR4A_A
– total taxes	1833–1939	annual	in national currency (thousands)	GR4B_A
– direct taxes	1833–1939	annual	in national currency (thousands)	GR4C_A
– indirect taxes	1833–1939	annual	in national currency (thousands)	GR4D_A
– government expenditure	1833–1939	annual	in national currency (thousands)	GR4E_A
– interest payments	1833–1939	annual	in national currency (thousands)	GR4F_A
– defence spending	1833–1939	annual	in national currency (thousands)	GR4G_A
Stocks: nominal domestic public debt				
– claims on the government	1842–1939	annual	in national currency (thousands)	GR4H_A
– claims on the government	1842–1939	annual	% in note-issuing or central bank's total assets	GR4I_A
5. PRICES, PRODUCTION AND LABOUR				**Table GR5**
Prices				
– consumer prices (2009=100)	1914–1941	annual	index	GR5A_A
	Jan.1923–Nov.1941	monthly	index	GR5A_M
– wholesale prices (1913−14=100)	1929–1941	annual	index	GR5B_A
	Jan.1931–March 1941	monthly	index	GR5B_M

INDEX TABLE - Country: GREECE

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
5. PRICES, PRODUCTION AND LABOUR				**Table GR5**
– export prices (1914=100)	1914–1932	annual	index	GR5C_A
	Jan.1923–April 1932	monthly	index	GR5C_M
– import prices (1914=100)	1914–1932	annual	index	GR5D_A
	Jan.1923–April 1932	monthly	index	GR5D_M
Production and Labour				
– industrial production (value)	1921–1938	annual	in national currency (thousands)	GR5E_A
– industrial production (1928=100)	1928–1939	annual	index	GR5F_A
	Jan. 1933–Dec.1939	monthly	index	GR5F_M
– economic activity (1928=100)	1928–1939	annual	composite index	GR5G_A
	Jan. 1933–Dec.1939	monthly	composite index	GR5G_M
– employment (1928=100)	1928–1939	annual	index	GR5H_A
– wages (1928=100)	1928–1939	annual	index	GR5I_A
6. NATIONAL ACCOUNTS AND POPULATION				**Table GR6**
GDP, nominal terms	1833–1939	annual	in national currency (thousands), at current prices	GR6A_A
GDP, real terms	1833–1938	annual	in national currency (thousands), at 1914 prices	GR6B_A
GDP deflator (1914=100)	1833–1938	annual	index	GR6C_A
Real GDP per capita	1833–1938	annual	LMU drachmas	GR6D_A
Imports (c.i.f)	1851–1944	annual	1929 paper drachmas (thousands)	GR6E_A
	Jan.1928–Dec.1944	monthly	1929 paper drachmas (thousands)	GR6E_M
Exports (f.o.b)	1851–1944	annual	1929 paper drachmas (thousands)	GR6F_A
	Jan.1928–Dec.1944	monthly	1929 paper drachmas (thousands)	GR6F_M
Population	1833–1939	annual	in million inhabitants	GR6G_A
7. WWII PERIOD 1939–1949				**Table GR7**
Money stock (M0)	1939–1949	annual	in national currency (thousands)	GR7A_A
	1939–1949	annual	index (1938.09–1939.08=100)	GR7A_A_I
	Jan.1939–Dec.1949	monthly	in national currency (thousands)	GR7A_M
	Jan.1939–Dec.1949		index (1938.09–1939.08=100)	GR7A_M_I
Cost-of-living (1938.09– 1939.08=100) until November 1944; afterwards 1938=100	1939–1949	annual	index	GR7B_A_I
	Jan.1939–Dec.1949	monthly	index	GR7B_M_I
Drachma/British gold sovereign	1939–1949	annual	in drachmas	GR7C_A
			index (1938.09–1939.08=100)	GR7C_A_I
	Jan.1939–Dec.1949	monthly	in drachmas	GR7C_M
			index (1938.09–1939.08=100)	GR7C_M_I

Notes: Entries of value terms are denominated in LMU (new) drachma. The code of each variable is generated by the country prefix (GR), the number of the variable group (1, 2, 3, 4, 5, 6 and 7) and a letter identifying the respective time series within the group (A, B, C…); at the end, A stands for annual data; M for monthly data, D for the date of change and I for an index (in variable group 7).

2.1 MONETARY VARIABLES

This group contains the newly-developed monetary aggregates M0 and M3, the banknotes in circulation, the currency reserves, the money multiplier and the reserve-banknote ratio.[19]

---

[19] The information on monetary aggregates draws heavily on my earlier work (see Lazaretou 2010). A part has already been published by the OeNB (2008) and the Bank of Greece (2009a).

2.1.1 Currency reserves

A first issue that should be stressed from the very beginning is the concept of currency reserves. In metallic regimes, reserves were meant to ensure banknote convertibility.[20] Nowadays, reserve data are built on two related concepts: international reserves and foreign currency liquidity (see IMF 2013). International reserves, which are often referred to as 'official reserve assets', refer to '…those assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing' (IMF, BPM6, 6.64).[21] This can be viewed as the 'official gross concept', which is based on the balance sheet framework. Foreign currency liquidity refers to '…foreign currency resources, both 'official' and other foreign currency assets at the disposal of the authorities[22] that readily can be mobilised to meet demands for foreign exchange resulting from short-term foreign currency liabilities and off-balance-sheet activities of the authorities' (IMF 2013, pp. 3–4). It becomes apparent that foreign currency liquidity is a broader notion which concerns on- and off-balance-sheet items of the authorities (monetary authorities and the government).

Herein, we rely on the concept of international reserve assets and present a data series which is based on the balance sheet activities (either gross or net) of the country's monetary authorities (i.e. all issuing banks until 1927 and the central bank onwards). Moreover, the reported data series is the sum of the amount of metallic reserves (silver and/or gold in bars and minted) and foreign exchange holdings abroad that could be used to settle international claims. In other words, it does not only concern the amount of the minimum reserve level (i.e. statutory limit) to which banknotes issue was tied.[23] Rather, it includes total ('official') reserve assets.[24] Up to 1927, foreign currency liabilities (e.g. bank deposits in foreign currency) have not been subtracted since a complete data series on deposits in foreign currency is not available; hence the series refers to gross total reserve assets. Afterwards, it refers to net assets.

A second issue is that of currency reserves valuation. The NBG used to report its reserves in the domestic monetary unit converted using the current exchange rate of the drachma at the day of reporting. Under the law establishing the NBG, all balance sheet items were valued at the current market rate of the drachma (see Article 11 of the 1841 establishing Law and Article 3 of the 1841 Amending Act). The same methodology was also followed by the other, smaller issuing banks. The BoG valued its assets at 1929 devalued drachmas (current paper drachmas).

Series GR1A_A of Table GR1.1_A displays the total currency reserves of all issuing banks for the period prior to 1928. GR1B_A and GR1C_A display metallic reserves (*μεταλλικόν, εις χρυσόν και άργυρον*) and foreign exchange holdings (*εξωτερικοί λογαριασμοί–αντίτιμον μεταλλικού εις εξωτερικόν*), respectively. For the Bank of Epirus and Thessaly, the only available series is metallic holdings in its vault (1882–1899)[25] and abroad (the 1882, 1883 and 1884 data points are

---

[20] For a discussion of the concept of currency reserves, see Chapter II.

[21] I.e. Balance of Payments and International Investment Position Manual.

[22] Both the central bank and the central government.

[23] Quantified reserve requirements were clearly set in the 1841 Banking Law, as well in the NBG's statute (25%). The same holds true for the BoG (40%).

[24] This practice is also justified by the fact that total banknote circulation (and not the statutory level alone) was entered on the liability side of the balance sheet.

[25] End-of-year data. The 1897 value is missing. The 1899 value corresponds to the end-June entry. The data are available upon request.

the only available values). For the Bank of Crete the yearly entries refer to both metallic in its vault (1899–1917) and abroad (1899–1917).[26]

Reserve holdings[27] by the NBG consisted of three components.[28] The first component included metallic reserves, namely reserves in precious metal, gold and silver, which the NBG used to hold in its vault either minted (coins) or in bars. Until 1876, 'metallic' consisted mainly of silver coins and bars, while from 1877 onwards the proportion of gold stock increased considerably. Specie came mainly from trade and a small proportion from direct investment in residential and commercial property as well as portfolio investment.[29] The second component included reserves in foreign exchange. As of 1869, the NBG started to hold interest-bearing deposits with foreign central banks or correspondent banks abroad denominated in foreign currencies, chiefly French francs and pounds sterling, and readily convertible into gold. The third component included the foreign exchange reserves that the NBG was obliged to hold according to the rules set by the 1910 gold-French franc exchange-rate based regime (see Section 2.3). It was stipulated by law that the NBG could hold, as official reserves, interest-bearing deposits denominated in FRF, while only 10% of its reserves could be held as gold stock (coins and/or bars).

GR1A_A is the sum of GR1B_A and GR1C_A mentioned above. The yearly observations refer to the end-of-year data points (on the last day of the year). From 1922 to 1926, total reserves – apart from the items shown in the table – also included metallic reserves held in the vault of the Bank of England (25 million drachmas). However, the 1927 value for the metallic item already included the above-mentioned amount.

Prior to 1865, the NBG did not publish monthly data on its total currency reserves. The only available entries concern the years 1843, 1844, 1845 and 1848; they refer to the last day of the month and are seasonally unadjusted. However, the end-June and the end-December entries were reported in the NBG's annual and semi-annual *Balance Sheet*, while the year averages were published in its *Annual Report*.[30] A complete time series for total currency reserves at monthly frequency is available from 1865 onwards, while monthly observations for the components of precious metal and coins and foreign exchange started to appear only from 1872.[31] As with the yearly data, from 1922 to 1926 total currency reserves also included metallic reserves held in the vault of the Bank of England. For the year 1927, these holdings had been already included in the NBG's metallic holdings. For the months January 1928 to April 1928, data do not exist.

For the period 1928 to 1939, currency reserves at annual frequency (end-of-year) (see Table GR1.1_A) refer to the total reserves[32] (GR1D_A) held by the BoG and their main components. Specifically, total reserves include the gold stock (gold coins and bars) held in the BoG's vault (χρυσός εν τοις ταμείοις, GR1E_A, for which data are available only up to 1931; from then onwards,

---

[26] End-of-year data. The entries for the years 1918 and 1919 are missing. The data are available upon request.

[27] I.e. gross currency reserves. Metallic and foreign exchange liabilities are not taken into account. All note-issuing banks accepted deposits, albeit not sizeable, in specie and in foreign currencies both by private customers and the government. Government deposits were reported separately.

[28] Money credits pledged but not eventually released by the Entente for the years 1918, 1919 and 1920 were included in total reserves. The data series on the various components are available upon request.

[29] The country's modernisation and the implementation of many large public works in the last quarter of the 19th century attracted foreign investment capital usually from rich Greek emigrants, who chiefly invested in residential and commercial properties or put their money in portfolio investments. See Valaoritis (1902) and the Annual Report of the NBG (various issues).

[30] According to its founding legislation, the NBG should draw annual and semi-annual balance sheets and publish them in the daily press to inform shareholders. Its first balance sheet was in French and hand-written. From 1843 onwards, balance sheets were bilingual, both in Greek and French.

[31] Missing values have been calculated using the method of linear interpolation. See footnote 49.

[32] Net currency reserves; gold and foreign exchange liabilities are not included.

the BoG did not report data on metallic reserves), the foreign exchange reserves, mainly in pounds sterling and US dollars (*εξωτερικόν συνάλλαγμα εις χρυσόν*, GR1F_A) as well as the government bonds readily convertible into specie (*δάνεια δημοσίου εις χρυσόν*, GR1G_A).[33] Until 1933, the BoG included the government bonds in gold into its total reserves. From 1934 to 1939 total reserves included only metallic and foreign exchange holdings.

Concerning the monthly data points (see the volume's CD Table GR1.1_M), total reserves (GR1D_M) are available from May 1928 to December 1939. The 'metallic' component (GR1E_M) was reported only from May 1928 to April 1932. Foreign exchange (GR1F_M) is available throughout the period, while government bonds in gold (GR1G_M) are available from March 1932 to December 1939. However, from January 1934, the published data for total reserves refer to foreign exchange holdings only; government bonds convertible in gold were not included. Precisely, when the drachma joined the Gold Bloc in June 1933 total reserves consisted mainly of foreign exchange readily convertible into gold. The data points refer to the last day of the month and are not seasonally adjusted. Until December 1933, total reserves consisted of metallic reserves, foreign exchange and government bonds in gold (until April 1933). However, total reserves are not the direct sum of the main components, since they also included gold coins and bars and foreign exchange convertible into gold.[34] On the day of the BoG's inception (14 May 1928), gold stock was 876.3 million drachmas, foreign exchange was 3,087.7 million drachmas and total currency reserves were 3,964 million drachmas.

2.1.2 Monetary aggregates

For Greece, definitions of money primarily referred to the liabilities of private financial institutions, namely deposits and currency. Therefore, banks' Balance Sheets and their Annual Reports are the primary sources of historical monetary aggregates data. However, definitions of money as a means of payment such as M1 or M2 or even a liquidity index as M3 appeared nowhere. In particular, for the pre-1928 period, data on banknotes circulated by the NBG were reported for the first time in 1842. Again, the reported data did not refer to a consistent time series of narrow or broad money definition but to data points of money in circulation and private bank deposits, at monthly and yearly frequencies.

An outline of the data inflows reported and used in the construction process is of paramount importance, since many changes had been made in distinct sub-periods both in data collection process and/or publication practices. Explicitly, 1842 is the starting point of our sample. It was the year when the NBG first issued and circulated banknotes 'payable to the bearer on demand' that were readily and fully convertible into specie.[35] Pre-1880, banknotes were circulated in a limited amount. During that period, financial development went at a very slow pace. Bank deposits were negligible, and exchange was largely based on barter. However, in the period 1880–1911 the picture changed markedly. The gradual urbanisation and the fast emergence of a strong creditor-urban class dominated the country's economic and financial environment. The expansion of the NBG branch network across the country played a crucial role in the increasing circulation of banknotes and their use by the public as a means of payment and a store of value. Moreover, the gradual territorial enlargement of the country during that time led to the establishment and operation of other issuing banks that circulated their own notes in the new provinces. Fortunately, such banks fol-

---

[33] I.e. gilt-edged government debt securities purchased by the BoG.
[34] See Law 5422.
[35] The founding law of March 1841 and the Amending Act of August 1841 provided that the NBG had the right to issue banknotes of a nominal value less than or equal to 2/5 of its equity.

lowed the same data reporting practices as the NBG, i.e. they reported the stock of the banknotes in circulation on the last day of every year or month. However, data on the banknotes issued and circulated by the Ionian Bank do not exist, since only the consolidated financial statement of the parent bank in London was published.

Data on total bank private deposits started to be officially reported on an annual basis as late as 1912. Until then, the series for bank money deposits refers chiefly to the private deposits only kept with the note-issuing banks.[36]

During the last distinct sub-period under study, i.e. from 1928 to 1939, major institutional reforms took place concerning central and commercial banking. Strict rules of prudential banking supervision and regulation were put in place by legislation enacted in 1931.[37] The BoG became the regulatory authority. Among other rules, all commercial banks were obliged to hold reserves with the central bank to meet shocks to liquidity demand. Thus, from that year onwards, data on reserve requirements were also officially reported. Until then, smaller banks used to hold deposits with the biggest bank, i.e. the NBG. The latter, however, saw fit to act as an 'implicit' or 'unofficial' central bank or a banks' bank. Data on these deposits do not exist, since the NBG used to report only the sum of all (non-government) deposits kept with it.

Two monetary aggregates have been built: (i) a broad definition of money (M3), which serves as an index of liquidity in the domestic economy and includes less close substitutes of money; and (ii) a narrow definition of money referred to as the monetary base (M0), which has been measured using the note-issuing and central banks' liabilities, i.e. the uses side of the base (currency and deposits with the central bank). The sample period is 1842–1939. The values are shown at annual (end-of-year) frequency and are not seasonally adjusted.[38]

As early as 1842, the Greek monetary authorities, in accordance with the monetary policy rules applying in the context of a metallic regime, tried to measure the stock of money in the domestic economy by simply reporting the stock of banknotes in circulation. Furthermore, the metallic monetary regimes required each country's central bank or note-issuing bank to maintain a minimum ratio of reserves-to-banknotes in circulation. This was because excess uncovered note issue was thought to strengthen inflationary pressures in the domestic economy and to cause capital outflows and reserve losses. In other words, the reserve-banknote ratio determined the relationship between domestic money supply and metallic and foreign exchange holdings. Obviously, banknote circulation was a key monetary variable, since the central or note-issuing bank was obliged to announce and preserve a statutory minimum proportion of the banknotes in circulation that should be gold- and/or foreign exchange-backed. Therefore, the precise knowl-

---

[36] Nevertheless, the largest part of the private deposits was kept within these banks. From the turn of the century, however, financial intermediation proceeded at a quick pace and numerous deposit banks were created.

[37] See the laws of 30 June and 7 July 1931.

[38] For the years 1928–1939, the values are shown at both annual (end-of-year) and monthly (end-of-month) frequencies. As a breakdown of commercial bank deposits between sight, savings and time deposits becomes accurate at first solely for the biggest banks and only from 1928 onwards for all banks, we can only construct a broad definition of money over a considerable number of years. Narrow definitions such as M1 or M2 cannot be built. In addition, since the call dates for many key series refer to the end of the year, monetary aggregates can only be shown at annual frequency. The series were based on the respective bank's financial statement, which was regularly published on the last day of every month or year. We follow the monetarist approach (Friedman and Schwartz 1970) to measuring money. This is an empirical rather than an *a priori* definition. Explicitly, we assume that (i) the best way to define money is to rely on the statistical correlation between money supply and national output; (ii) money supply is equal to the aggregate value of several items treated as money (e.g. notes, deposits, bonds); and (iii) an 'optimal monetary aggregate' is that with the highest correlation with either current or lagged values of real income. Lazaretou (2010) gives full details of the definitions used and the method of construction followed in building those aggregates.

edge of the stock of banknotes in circulation was of paramount importance if banknote's convertibility was to be secured.[39]

Specifically, according to the statute of the note-issuing NBG (Article 36), no less than 25% of its banknotes in circulation (outside the NBG) should be covered by metallic and/or foreign exchange reserves and the rest (75%) should be covered with mortgage loans worth twice the amount (see the 1841 Amending Act, Articles 6 and 19). Similarly, the BoG's statute (Article 61) strictly stated that no less than 25% of 'actual' or 'effective' money in circulation (i.e. coins and banknotes in circulation) should be convertible into specie or foreign exchange. The same article also specified that a lower bound of 40% of 'potential' money in circulation should be covered. 'Potential' money circulation, as opposed to 'actual' or 'effective' circulation, was defined as the sum of coins and notes in the hands of the non-bank public plus reserves and commercial balances with the central bank, namely what today we call 'monetary base'.[40]

Broad (M3) money aggregate (Table GR1.2_A; GR1H_A) has been computed as the sum of the following items: (i) total private deposits (sight, time and savings deposits and bank bonds) only kept with all note-issuing banks until 1911 and with all purely commercial banks from 1912 to 1939; (ii) coins in circulation held by the non-bank public, i.e. low denomination fractional banknotes of 1, 2 and 0.5 drachmas; and (iii) banknotes in circulation held by the non-bank pubic. Vault cash held by banks has been subtracted. Due to lack of data, until 1927 vault cash was held solely by the note-issuing banks[41] among their notes and all deposit institutions from 1928 to 1939. From 1928 onwards, vault cash referred to money balances held by all commercial banks.

Monetary base (M0) aggregate (Table GR1.2_A; GR1I_A) is the sum of the following items: (i) banknotes in circulation (plus fractional notes) held by the non-bank public; (ii) vault cash held both by note-issuing and commercial banks; and (iii) commercial bank deposits with the central bank (sight deposits and deposits with a maturity up to 35 days).[42] Until 1931, no commercial bank was required to hold reserves with the central bank, and only the NBG was obliged to keep money balances with the BoG.[43]

Fortunately, in the 19th and the early 20th centuries the money stock could be well measured by simply adding up money in circulation and private bank deposits.[44] Figure 1 plots the growth rates of broad money and the monetary base over time. As seen, changes in the monetary base largely

---

[39] Apparently, the advocates of the 'currency school' of the 19th century could not consider other items – apart from banknotes – such as bank deposits as money substitutes. Therefore, even though reserves (i.e. metallic and foreign exchange) were endogenously determined, the statutory reserve-banknote ratio was regarded as a key policy variable, i.e. an exogenous variable. This might explain why monetary authorities of that time were not concerned with monetary aggregates.

[40] See the note in Figure 2. The BoG started to measure the quantity of money and build aggregates by using the standard money definitions as late as the early 1950s.

[41] As the series 'banknotes in circulation' is derived from the note-issuing bank's balance sheet, it does not include its vault cash in its own notes but it does include its notes held by the other note-issuing banks and/or deposit institutions in their vaults. We should recall that in the case of Greece the note-issuing banks also engaged in commercial activities. Therefore, they held vault cash in their notes and in the notes issued by the other issuing banks. Vault cash in the notes of the other note-issuing banks should be thus deducted to derive note circulation outside the banking system but vault cash in its own notes should be taken into account in assessing the monetary base.

[42] Government deposits are excluded. However, due to a lack of data we cannot include the deposits held with the BoG by public enterprises or public entities. Besides, they are meaningless.

[43] According to the new 1931 Banking Law, the required reserve ratio was initially set at 7% of the total bank savings and demand deposits in domestic currency held with the central bank or 12% of the total bank deposits held in the form of required reserves as vault cash by the commercial banks. The imposition of the required reserve ratio was the most important institutional change, as a new tool for monetary control was thus introduced. Using that tool, the BoG could control more effectively bank lending activities and check their liquidity conditions.

[44] Unlike the past, nowadays the possibility of substituting across a wide variety of financial assets, given the involved low cost makes it more difficult to measure and control money.

dominated changes in money balances. It has been found (Lazaretou 2008) that more than 86% of the changes in money supply could be explained by monetary base variations, while the money multiplier had a minor impact (14%). This implied that, for most of the time under study, the convertibility rule was suspended and money creation primarily determined the money stock.[45]

Two other monetary statistics have been compiled. GR1J_A shows the money multiplier. This is defined as the ratio of broad money (M3) to monetary base (M0). It is a metric of public confidence in the domestic banking and monetary system and reflects the lending activity of the banks. GR1K_A depicts the reserve-banknote ratio, computed as total reserves over banknotes in circulation (see Figure 2). For both metrics, the values are shown at annual frequency for the years 1842–1939, while for the years 1928–1939 both annual and monthly values are reported (GR1J_M; GR1K_M).

Banknotes in circulation

Up to 1927, the data on banknotes in circulation (*τραπεζικά γραμμάτια εις κυκλοφορίαν*, Table GR1.3_A; GR1L_A) refer to the notes issued and circulated by all issuing banks, i.e. the NBG (1842–1927), the Bank of Crete (1901–1917)[46] and the Bank of Epirus and Thessaly (1882–1899),[47] and held by the non-bank public. Consequently, vault cash (*ταμείον*), i.e. cash held by the note-issuing banks in their own notes, is not included in the series, as banknote circulation is based on data from the issuing banks' balance sheets. However, the vault cash held in the notes of the other note-issuing banks with commercial activities too, is included and should thus be subtracted.[48] The circulation of fractional notes of 1, 2 and 0.5 drachmas (*κερματικά γραμμάτια δίδραχμα και μονόδραχμα*) is also included. Data on the vault cash of the other purely commercial banks do not exist. Similarly, data on the notes circulated by the Ionian Bank do not exist. However, data on the notes issued and circulated by the Ionian Bank which were held in the vaults of the other issuing banks do exist and have been taken into account. The data are shown at annual frequency (as at the last day of the year) and are not seasonally adjusted. For the same period, the monthly values refer only to the NBG's notes in circulation (i.e. outside the NBG), since monthly data for the other two issuing banks were not reported at regular intervals. Further, monthly data for the NBG's notes which were held in the vaults of the other note-issuing or commercial banks do not exist. Similarly, monthly data for banknotes of low value money in circulation do not exist either.

Therefore, the monthly data (end-of-month, seasonally unadjusted) concern the banknotes solely issued and circulated by the NBG and are displayed in the volume's CD (Table GR1.3_M; GR1L_M). Moreover, a complete time series at monthly frequency is available only from 1865. Prior to that year, the NBG did not regularly report monthly data on its note circulation. Sporadic monthly data appeared only for the years 1842, 1843, 1844, 1845 and 1848. However, the end-June and the end-December entries appeared in the NBG's *Balance Sheet*, while the year averages data were reported regularly in its *Annual Report*.[49]

[45] This was a common feature of all peripheral countries. See, for example, Fratianni and Spinelli (2001) on Italy and Martín-Aceña (2007) on Spain and Portugal.
[46] The Bank of Crete began operations on 21 October 1899. It first issued and circulated notes in 1901.
[47] The Bank of Epirus and Thessaly began operations on 19 June 1882. Because of the 1897 Greco-Turkish War the bank did not publish a balance sheet for that year. Thus, the 1897 value is missing.
[48] However, the cash kept by one note-issuing bank with another is not sizeable. Besides, until the end of the 19th century, strong banking institutions, other than the NBG, did not exist; bureaux of exchange and short-lived local deposit and credit institutions were the only to operate. Therefore, we can safely consider that the series named 'banknotes in circulation' in the NBG's balance sheet refers to the money balances held outside the banking system.
[49] Missing values for the years 1846, 1847, 1849–1864 have been calculated using the method of linear interpolation, i.e. x1= {[(t2-t1)/(t2-t0)]*x0} + {[(t1-t0)/(t2-t0)]*x2} based on the year average values and the end-June and the end-December data points.

FIGURE 1 Monetary Aggregates, 1846–1939
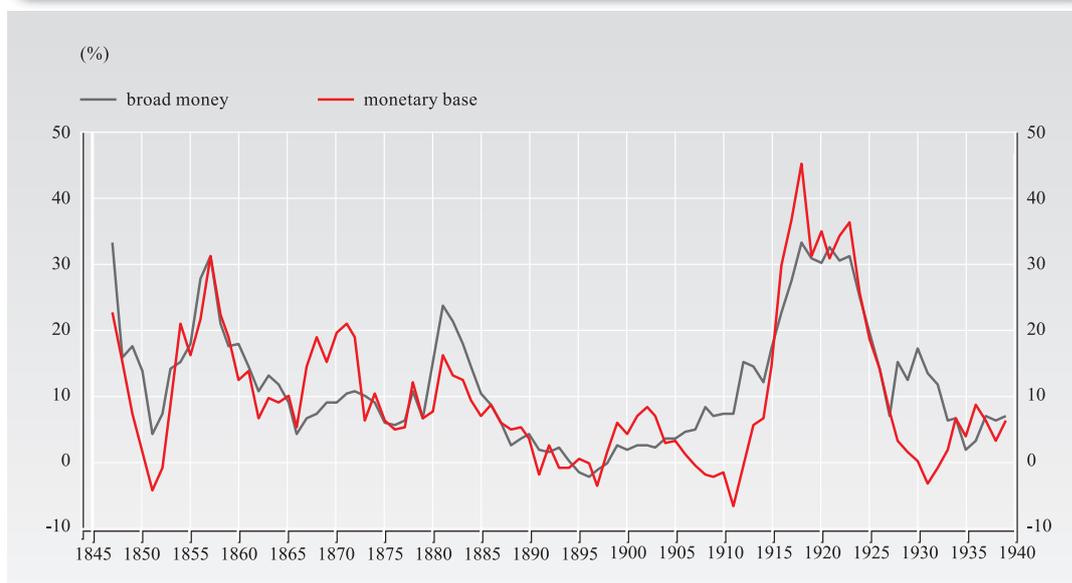
Note: Annual percentage changes in averages based on a 5-year rolling time span.

The first banknotes were placed in circulation on the same day of start of the NBG's operations (January 1842). They were printed in Paris and were of very high denominations (25, 50, 100 and 500 drachmas). A note of smaller denomination (10 drachmas) was first placed in circulation seven years later, in 1849. Since 1852, all subsequent issues (10, 25 and 100 drachmas) were printed in the UK. They were signed by the Royal Commissioner.

Until 1909, the NBG's note circulation consisted of two main components: the government's floating debt to the NBG and the 'uncovered' note circulation, i.e. unbacked paper money outside the NBG, held either by the public or other note-issuing and purely commercial banks. The latter refers to the 'effective' note circulation and not to an upper statutory limit. By the law of 26 February 1898, the use of money creation as a financing instrument was strictly prohibited. That law set a statutory limit of 66 million drachmas in notes (Article 30), meaning that the NBG was no longer allowed to increase 'uncovered' note circulation over and above this limit. The same article specified that, starting from 1900, the government should amortise its floating debt to the NBG by 2 million drachmas annually and the note circulation should therefore be reduced by the same amount every year.[50] Yearly (end-of-year) observations for both components are available from 1877 to 1927. Monthly observations (end-of-month) are available only from 1897. From September 1910 onwards, banknote circulation consisted of three components, namely 'uncovered' paper money outside the NBG, 'uncovered' paper money held by the government and 'covered' notes outside the NBG that were fully convertible into gold or foreign exchange at par (1:1) according to the new monetary law of 19 March 1910 (*Νόμος ΓΧΜΒ*) by which the drachma joined gold. The component named 'covered' is shown at annual and monthly frequencies (end-of-year and end-of-month call dates) for the years 1910–1927. A last component named 'buy foreign exchange' (May 1923–December 1926) denotes the notes used to buy foreign exchange.[51]

---

[50] That simply meant that the NBG destroyed the excess money stock. For that purpose, it bought a furnace for burning excess notes.

[51] The data series at yearly intervals up to 1914 have already been published in OeNB (2008) and at monthly intervals over the same period in Bank of Greece (2009a). The values from 1915 to 1927 are available upon request.

FIGURE 2 Reserve-Banknote Ratio, 1842–1939
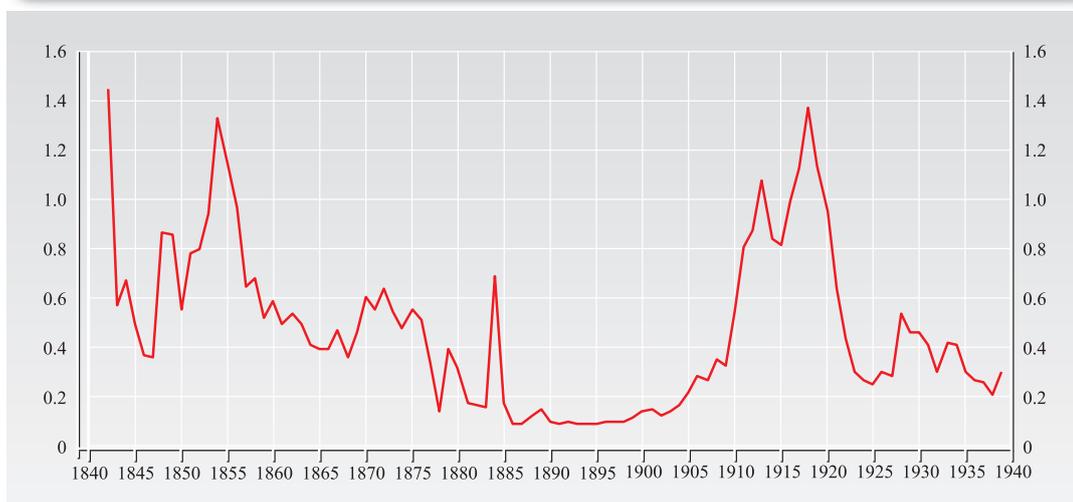
Notes: 'Effective' note circulation by the NBG till 1927 and 'potential' by the BoG from 1928 onwards. Total reserves were held by the NBG (1842–1927) and the BoG (1928–1939). For 1842–1927, total reserves (in gold and foreign exchange) were held by the NBG. Money credits pledged by the Entente are also included. For 1928–1939, total reserves were held by the BoG; gold and foreign exchange liabilities are not included. 'Potential' note circulation, as opposed to 'effective' (i.e. money in the hands of the non-bank public), is defined as the sum of the coins and banknotes circulated (vault cash is included) plus demand liabilities at sight (i.e. reserves and commercial bank balances within the BoG, current accounts of the government with the BoG, notes and bills of exchange in domestic currency and other liabilities at sight), while the balances of the International Economic Aid are not included. In its own calculation, the BoG includes international economic aid and many other liabilities such as amortisation and interest payments on public debt, private deposits, dividends to shareholders, BoG inter-branch transfers. We have thought it better to reach a simple and clear-cut definition of M0 which should be comparable to the post-war definition used by the BoG, i.e. the sum total of commercial banks' vault cash, notes and coins in circulation outside the monetary system, all commercial bank deposits with the BoG and deposits of public enterprises and entities.

During the period 1928–1939, money was solely issued and circulated by the BoG. Money balances in the hands of the non-bank public are calculated as the difference between currency (notes and coins) circulated by the BoG and commercial banks' vault cash (Table GR1.4_A; GR1M1_A, GR1M2_A). Currency circulation in the hands of the non-bank public, i.e. money balances is shown at monthly (GR1M1_M; on the last day of the month) and annual (GR1M1_A; on the last day of the year) intervals from May 1928 to December 1939 and is not seasonally adjusted.[52] Vault cash (GR1M2_A; GR1M2_M) and reserves kept with the BoG (GR1M3_A; GR1M3_M) refer to all commercial banks;[53] foreign-owned banks that operated in Greece are also taken into account. The data series are shown at yearly and monthly intervals for the period starting in December 1928 and ending in December 1939 and are not seasonally adjusted. Data do not exist for the period from May to December 1928. For the year 1929, the reported values are only quarterly (March, June, September and December).[54]

Bank deposits

GR1N_A in Table GR1 displays end-of-year data points[55] of total private deposits (*τραπεζικαί κατα-θέσεις*) kept with only note-issuing banks[56] until 1911 and with all commercial banks from 1912

---

[52] On the day of its start, i.e. 14 May 1928, currency circulation was 4,863.3 million drachmas.
[53] A total number of 38 banks. Prior to 1931, only the NBG was required to hold reserves with the BoG.
[54] The 1929 monthly values presented in the volume's CD Table GR1.4_M have been computed using the method of linear interpolation.
[55] For the year 1927, the data points refer to the end-of-April value.
[56] I.e., the NBG (1842–1939), the Bank of Epirus and Thessaly (1882–1896, 1898–1899) and the Bank of Crete (1899–1917). Almost half of the deposits were kept with the NBG.

to 1939.[57] Total private deposits with commercial banks include sight (*όψεως ή άνευ τόκου*), time (*προθεσμίας*), and savings deposits (*ταμιευτηρίου*) and bank bonds (*τραπεζικαί ομολογίαι*)[58] and are denominated in specie, foreign exchange and drachmas.[59] Government deposits are not taken into account. A breakdown becomes accurate first only for the biggest banks and only from 1928 for all banks. The data refer to private deposits kept with 15 commercial banks and the NBG for the years 1912–1926, with 43 banks and the NBG for the year 1927 and with 38 banks from 1928 to 1939. Monthly observations (shown on the last day of the month) are available for all commercial banks (38 banks; sight, time and savings deposits and bank bonds denominated in drachmas and foreign exchange) from December 1928 onwards (see the volume's CD Table GR1.5_M; GR1N_M). Data do not exist for the period May-November 1928. For the year 1929, quarterly data are the only available. Prior to 1928, monthly data values are available only for private deposits kept with the NBG (1911–1939, end-of-month data points).[60]

2.2 INTEREST RATES

This section deals with the short-term and long-term lending and deposit interest rates. Special emphasis is placed on the note-issuing bank's (i.e. the NBG's) and the central bank's (i.e. the BoG's) discount rate.

2.2.1 Short-term interest rates

Official interest rates: the discount rate

In metallic monetary regimes, the control of the stock of money in the domestic economy was pursued by means of a 'bank rate policy'. Specifically, the short-term rate (i.e. the discount rate or the Lombard rate or the bank rate) that was imposed on discounts and advances provided by the note-issuing or the central bank to the commercial banks to meet temporary shortages of liquidity, was the operating target of monetary policy. The monetary rule was simple and clear-cut. The higher the discount rate, the lower the amount of money that banks would decide to borrow and vice versa. In other words, manipulation of the discount window could influence the short-term rates in the domestic money market.[61]

Concerning the Greek case, until 1927, the discount rate charged by the NBG can be roughly considered a monetary policy instrument. It was imposed on very short-term advances to traders, i.e. bills of exchange with a 3-month maturity (called *προεξοφλήσεις συναλλαγματικών και γραμματίων*). It was therefore a short-term bank lending rate. At the same time, the NBG used it in its lending to other smaller commercial banks and the government. According to the law of 1836, the lending rate on trade advances could not exceed 12%. However, non-bank money

---

[57] From 1848 onwards, the data refer to both head offices and branches.

[58] For time deposits, exceeding 3,000 drachmas, a bank bond was issued with a maturity of up to 6 months (certificate of deposit). The minimum acceptable deposit was 1 drachma. Bank bonds were not reported separately but were included in the sum total of the time deposits. From 1859 onwards, bank bonds referred to mortgage-backed bonds issued by the NBG.

[59] Deposits in specie and/or foreign currencies were not sizeable. However, a breakdown is not possible for the whole sample period since the banks typically reported the sum of their deposits denominated either in domestic or in foreign currency. The inclusion of deposits in foreign currencies is justified by the absence of capital or exchange controls. Controls on capital and trade flows were imposed on the eve of WWI and in the interwar turbulent period.

[60] From 1927 to 1939, the only available values refer to the end-June and the end-December call dates. From June 1927, when a new specialised bank on mortgage credit was founded with the decomposition of the respective department from the NBG, a part of the NBG deposits appeared on the side of the liabilities of the new bank.

[61] In the euro area, the ECB uses a similar rate, the rate on the marginal lending facility and chiefly the rate on main refinancing operations.

lenders charged usurious interest rates at more than 20% in urban centres and even higher in the provinces.[62] The excessively high cost of borrowing was an obstacle to the development of trade and to domestic economic activity in general. At the time of the NBG's inception in March 1841 (Article 23), the discount rate was set at a much lower rate (8%), thus borrowing became much cheaper. In the 1880s, the discount rate was cut to 7%. That was a time when the country was making efforts to join the LMU and enjoyed long-term foreign borrowing on favourable terms. In 1890, the discount rate was slightly reduced to 6.5%. Throughout the 1890s, the rate remained stable at high levels; in the provinces, however, it was even higher (by 0.5 percentage point). In the 1890–97 period Greece's creditworthiness tottered, especially after the 1893 debt default.

Post-1898, borrowing from abroad became much cheaper (4%) as the country's creditworthiness improved thanks to the 1898 debt compromise and the successful implementation of a long-term stabilisation programme. However, the domestic short-term lending rate continued to stand at high levels. The intense anti-inflationary policy implemented throughout the 1900s caused excess money demand and thus kept the discount rate stuck at the high level of 6.5–7%. On the eve of the country's entry into the gold standard in 1910, the rate was cut by one percentage point, but later, with the outbreak of WWI, it increased sharply to 8%. Six months later, in November, it was again reduced to a level close to 6%. In wartime, it fluctuated between 5.5% and 6%. In May 1920 it rose to 6.5%, while in the underground credit market the rates were three times as high, 18–20%. The period from 1923 to 1926 was marked by successive increases in that rate, against the background of strong inflationary pressures and selling attacks on the drachma.

Series GR2A_D of Table GR2.1_D lists the dates of change in the NBG's discount rate (*προεξο-φλητικός τόκος*), while Figure 3 traces the evolution of the rate over time. As seen, changes were infrequent. Profit motives and the priority of safeguarding the convertibility of its banknote prevented the NBG from operating as a 'banker to banks' and a 'lender of last resort' in times of crisis. It usually appeared reluctant to take part in rescue operations through rediscounts; therefore, it did not use its rate as an instrument for effective money control.

Further, the NBG extended short-term advances to the government at the same high rate as the one applied on advances to traders. Before the 1878–79 foreign debt compromise, Greece was unable to have access to international capital markets due to its bad reputation as a borrower. Foreign markets were closed to Greek bonds after the debt repudiation in 1826 and again in 1843. The only option for the government to meet pressing finance requirements was short-term domestic debt issues at a very high rate. The sole purchaser of these bonds was the NBG. However, the NBG charged the government with punitively high risk premiums: it lent at 7–8%, compared with the much lower rates prevailing abroad, 2.5–4.5%.

According to the BoG's statute (1928, Part I, Part II, Articles 4, 5, 61) which provided the framework for monetary policy implementation under the gold-exchange standard, the main task of the newly established central bank was to maintain the currency's convertibility and price stability. The rules of its credit policy were also rigorously specified by its statute: it was allowed to provide only short-term lending facilities to commercial banks via discounted trade bills. Therefore,

---

[62] The law of 1836 was never implemented and was eventually abolished in 1841. Details concerning the lending rate in the first half of the 1830s were scarce. Money transactions with a maturity of less than 30 days were not allowed. Orders to pay wages and retirement benefits in advance at a monthly rate of 3% (36% annually) and 3-month trade advances at a usurious interest rate of 18–20% annually were the only credit options.

the BoG used to change its 'discount window'[63] taking into account inflation trends and liquidity conditions in the domestic money market so as to keep foreign exchange reserves intact and preserve the stability of the international price of the national currency. GR2B_D of Table GR2.1_D lists the dates of change in the BoG's official discount rate ($\alpha\nu\alpha\pi\rho o\varepsilon\xi o\phi\lambda\eta\tau\iota\kappa\acute{o}\varsigma\ \tau\acute{o}\kappa o\varsigma$) from May 1928 to November 1941 and Figure 4 shows its evolution along with the short-term market lending rate. As seen, borrowing was very expensive. The market lending rate was almost always far higher than the official rate.

The BoG was quite active in terms of the number of its discount rate changes, adjusting its rate twelve times over almost one and a half decade and four times in a single year, 1932. However, its discount rate policy proved unsuccessful (see BoG 2009b, Lazaretou 2008, 2012). At its very beginning, in May 1928, the bank's credit policy aimed, albeit unsuccessfully, at easing private borrowing by lowering the high lending rates charged by commercial banks. Two years later, in the wake of the 1929 crisis, the BoG failed to respond to the crisis by bailing out the commercial banks in distress or lowering its discount rate. Instead, its misjudged response, in the aftermath of the 1931 pound sterling crisis, was to increase its rate, thereby causing a credit squeeze in the economy. Not until April 1932, when the country abandoned the golden fetter and reverted to flexible rates, did the stance of the monetary policy pursued change considerably, allowing the discount rate to gradually decline from 12% to 9%. Actually, by the second half of 1933, foreign capital flowed again into the country and the money balances hoarded in the years of the crisis reappeared. Bank reserves thus increased, and the BoG was able to gradually reduce its discount rate. Ultimately, it managed to lower the market lending rate charged by the commercial banks and made capital cheaper, without however altering its anti-inflationary monetary policy stance. The discount rate fell from 10% in May 1928 to 6% in January 1937.

FIGURE 3 The Discount Rate of the National Bank of Greece, 1841–1928
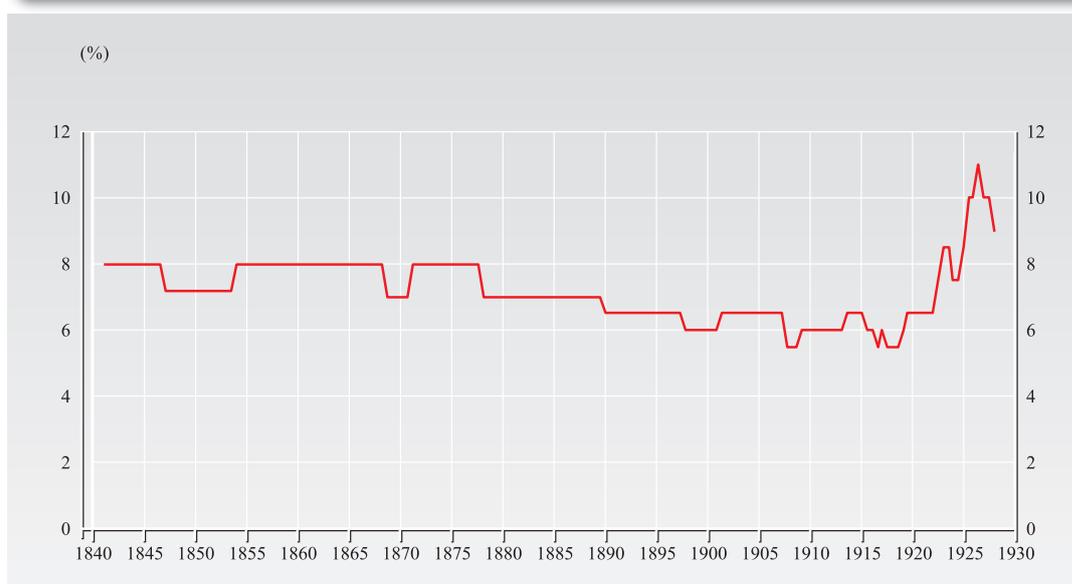
Note: Based on the dates of change, in percentages per annum, end-of-month data.

---

[63] Therefore, the BoG's policy rate was the discount window and not the Lombard rate. As known, the latter is the rate charged by a central bank for very short-term loans to commercial banks against eligible collateral of securities.

Money market lending rates and deposit rates

Table GR2.1_D also lists the dates of change in the short-term bank lending rate imposed on collateralised loans. GR2C_D and GR2D_D of the Table report the dates of change in the NBG's rate on loans and credit lines using securities as collateral, with maturities from 4 to 12 months. The period covered is 1842–1939.[64] The value of the collateral should cover no less than 75% of the total lending amount. GR2E_D lists the dates of change in the short-term market lending rate from 1928 to 1941. It was imposed by the 4 largest domestic commercial banks on commercial bills (re-discounts) and was more than 3 percentage points above the bank deposit rate.

A complete time series at monthly frequency is available from March 1841 to April 1928 for the NBG's discount rate, from May 1928 to November 1941 for the BoG's discount rate and from January 1928 to November 1941 for the short-term market lending rate (see Table GR2.1_M in the volume's CD).

FIGURE 4 The Discount Rate of the Bank of Greece and the Market Lending Rate,
          May 1928–November 1941

Note: Based on the dates of change, in percentages per annum, end-of-month data. Short-term market lending rate: 4 largest commercial banks, maximum rates.
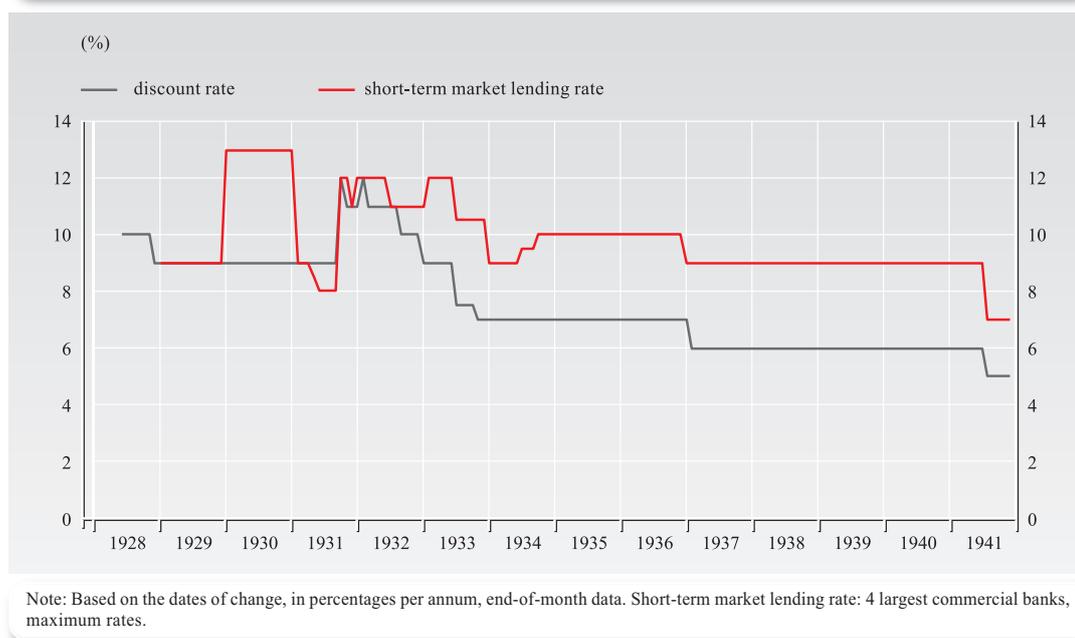
Table GR2.1_D (GR2F1_D to GR2F6_D) lists the dates of change in the bank deposit rates. They refer to yearly rates on sight, time and savings deposits in drachmas and in foreign exchange. For the 19th century, the rates are predominantly those applied by the NBG, while for the period from 1928 to 1941 they are those applied by all domestic commercial banks and specialised credit institutions operating in the country. A complete time series at monthly frequency is available only from January 1928 to November 1941 and only for the rate on sight deposits in drachmas (see Table GR2.1_M in the volume's CD; GR2F_M).

---

[64] The NBG was not only the biggest deposit bank during the 19th and the 20th centuries, but also the country's sole credit institution for the best part of the 19th century. Therefore, its rate can be safely considered as in some sense reflecting the domestic money market lending rate.

2.2.2 Long-term interest rates

Fixed-rate government bonds: market prices and current yields

Table GR2.2_A and Table GR2.3_A display the market price data (GR2G1_A to GR2G10_A) and the current yield data (GR2H1_A to GR2H10_A) respectively, on foreign Greek government bonds of long maturities. In view of data availability, the loans reported are: the 'old' foreign loans of 1881, 1884, 1887, 1889 and 1890 contracted before the 1893 debt default and traded in Paris, Berlin, Frankfurt, London and Athens; and the 'new' foreign loans of 1902, 1907, 1910, 1914 and 1928, contracted after the 1898 debt compromise and the establishment of the International Finance Control in February 1898, which imposed fiscal and monetary discipline. Table 2 presents key information about the loans contracted.[65] Suffering from the so-called 'original sin', Greek governments were able to issue loans only in gold or in gold-based foreign currency such as the French franc and the pound sterling. The bonds always included 'gold clauses': interest and principle were payable in gold or in a gold-based foreign currency regardless of the *regime du jour*, since they entailed a high risk of default.

TABLE 2 Greek foreign bond loans (fixed-rate bonds)

Year of issue	Loan amount (millions FRF)	Coupon rate, coupon price, maturity	Comment
1. 1881	120	5%, 500 FRF, 40 years	Asset-backed loan: tax revenues were used to to back the loan. The issue price was 75.6%.
2. 1884	170	5%, 500 FRF, 37.5 years	The loan was contracted to restore gold convertibility. The issue price was 68.5%. The bonds were traded in Athens, Paris, London, Berlin and Frankfurt.
3. 1887	135	4%, 500 FRF, 75 years	Monopoly bond loan (*Δάνειο των Μονοπωλίων*). It was partially covered (91mn). The issue price was 78.5%. The bonds were issued and traded in Athens, Paris, London, Berlin and Frankfurt.
4. 1889	155 (30+125)	4%, 500 FRF	Perpetual loan (*Πάγιον*). The bonds of the 30 mn loan were sold at discount: 68 ⅛%. The bonds of the 125 mn loan were also sold at discount (72 ¾%) and was partially covered (100 mn). The bonds were traded in Athens, London, Berlin and Frankfurt.
5. 1890	90	5%, 500 FRF, 99 years	Railway Network bond loan (*Δάνειο των Ελληνικών Σιδηροδρόμων*). The loan was partially covered (53 mn) The price of the two issues was 89% and 86%, respectively. The bonds were traded in Athens, London, Berlin and Frankfurt.
6. 1902	56.3	4%, 500 FRF, 98 years	Railway Network bond loan (*Δάνειο των Ελληνικών Σιδηροδρόμων*). The price of issue was 84%. The bonds were issued and traded in Athens, Paris and London.
7. 1907	20	5%, 100 FRF, 36 years	National Defence loan (*Εθνικής Αμύνης*). The price of issue was 97%. The bonds were issued and traded in Athens and London.
8. 1910	110	4%, 500 FRF, 50 years	The issue price was 86.5%. The bonds were issued and traded in Athens, Paris and London.
9. 1914	335	5%, 500 FRF, 50 years	The bonds were issued in three parts almost at par: 92 ¼%, 100% and 87 ¾% and traded in Athens, Paris and London.
10. 1928	£9 mn	6%, £20, 40 years	The tripartite loan (*Τριμερές Δάνειο ή Δάνειο της Σταθεροποιήσεως*) was issued under the aegis of the League of Nations and was used for currency stabilisation and refugee relief.

Source: Author's compilation.

[65] The table displays prices and yields for bonds traded only in Athens. The Rothchilds, Credit Mobilier and the Deutsche Reichsbank of Berlin were acting as under writers.

Until 1928, the annual data on the market price of the bond (GR2G1_A to GR2G10_A) refer only to the maximum and minimum bond price in a year quoted at the Athens Stock Exchange. Hence, (max+min/2) is used as a proxy for the mean market bond price (annual observations).[66] From 1929 onwards, however, data refer to year averages derived from monthly averages. Table GR2.2_M in the volume's CD tables presents the monthly data (GR2G1_M to GR2G10_M) based on the mean value of the daily entries. Until 1921, the data entries for both the face value and the market price are in gold French francs; from 1922 onwards, both the face value and the market value are in 1929 paper drachmas. The conversion rate of the gold drachma to 'new' 1929 devalued paper drachmas was 14.87 new paper drachmas= 0.29032/0.01952.[67] The Athens Stock Exchange remained closed from mid-September 1931 to mid-December 1932. However, unofficial data for some loans were published by the BoG, concerning the period from March 1932 to November 1932. Similarly, the Athens Stock Exchange was closed again from 28 October 1940 to 19 December 1940.

Current yield (GR2H1_A to GR2H10_A) is typically measured by the ratio of the annual interest payment to the bond's current market price[68], namely

$$\text{current yield} = (\text{face value} \times \text{coupon interest rate}) / \text{market price}) \times 100$$

where the face value and the market price are in French francs until 1921; from 1922 onwards are both in 1929 paper drachmas. The coupon rate is in decimal form. The multiplication by 100 converts the decimal into percentage return.

Current yield varies with the market price of the bond, as opposed to its face value, and represents the true return an investor would receive if he purchased the bond and held it for a year. However, it is not an accurate assessment of the true return since the latter depends on the bond's price when the investor sells it. Nor does it refer to the total return over the life of the bond that an investor would receive if he held the bond to maturity.[69]

Figures 5a and 5b plot the current yield and the market price of two government bond loans, the 1887 Monopoly (4%) loan and the 1889 Perpetual (4%) loan over the period 1901–1940. We notice that in almost every year until 1920, the current yield was two or even three times higher than the coupon nominal interest rate, indicating that the bonds were sold at a significant discount. The picture changes dramatically post-1922. In 1920–21, market bond prices sharply increased and yields fell amid a short-lived euphoria that accompanied the Asia Minor expedition. However, bond prices collapsed in the aftermath of the Great Defeat and the Smyrna Disaster in September 1922. The yields increased enormously. At the same time, the 1920s was a period of massive paper money creation. Inflation erodes the purchasing power of a bond's future cash flows. The higher the current rate of inflation and the higher the expected future inflation, the higher the yields will turn out across the yield curve as investors will demand higher yields to compensate for inflation risk.

---

[66] Since the Athens Stock Exchange in its *Yearbook* used to publish two separate tables, one for the accrued interest and the other for the market price of the bond, we believe that the market price as retrieved from the second table refers to the 'clean' price.

[67] To express the face value in paper drachmas we use the exchange rate of the gold drachma against the 1929 paper drachma. The pre-1929 old paper drachma contained 0.29032246 grams of fine gold. The 1929 new devalued paper drachma was equal to 0.01952634 grams of fine gold.

[68] In other words, the current yield simply reflects the percentage return that the annual coupon payment (i.e. the product of the coupon rate and the bond's face value) provides to the investor. If the current yield is higher than the coupon rate, then the bond is trading at a discount to its face value.

[69] Thus, it is not the yield to maturity, i.e. the interest rate at which the present value of all the future cash flows is equal to the bond's price. Nor does it capture any capital gains or losses the investor would make if the bond were sold at a discount or premium. To correct for this, the current yield calculation can be modified by adding the gain or loss that the price gives to the investor, i.e. the ratio of the difference between the bond's face value and the market price and the years to maturity.

FIGURE 5a The 1887 Monopoly 4% Loan, Bond prices and Yields, 1901–1940

1929 paper drachmas   (%)

—— market price   —— current yield (%)
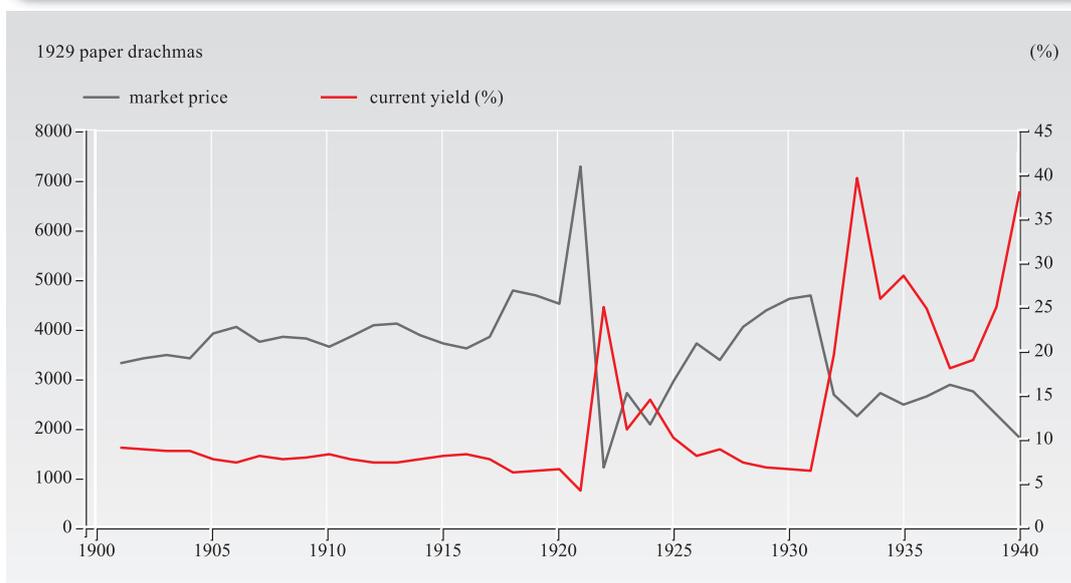
Source: BoG and own calculations.

FIGURE 5b The 1889 Perpetual 4% Loan, Bond Prices and Yields, 1901–1940

1929 paper drachmas   (%)

—— market price   —— current yield (%)
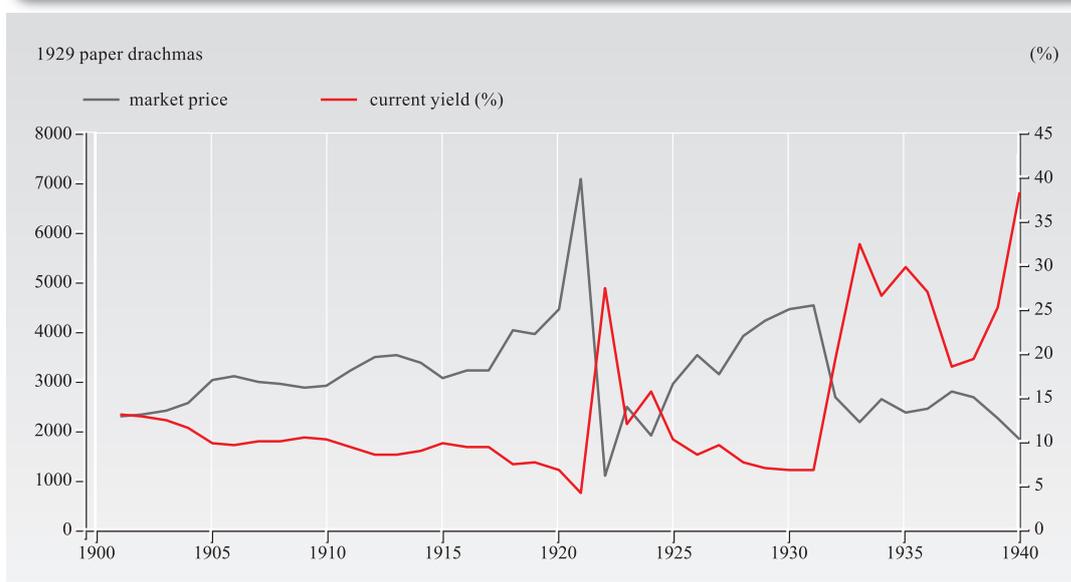
Source: BoG and own calculations.

As stabilisation efforts started in 1927, market prices began to rise again and yields began to fall. Figure 6 plots the current yields for the loans of 1887, 1889 and 1928 over the period 1929 to 1940. We can observe that bond yields rose sharply after the country's debt default in May 1932 and remained at these high levels for the rest of the period. Yields jumped to a two-year high and were 4 to 6 times or even 7 times higher than the nominal interest rate.

Mortgages

Series GR2I_D of Table GR2.1_D lists the dates of change in the rate applied by the NBG on mortgage-backed loans,[70] which can be considered a proxy for the long-term bank lending rate. In the very early years of the NBG's operation, the rate on mortgage-backed loans fluctuated between a minimum of 12% per annum that was the official rate prevailing in the cities, and a maximum of 20% prevailing in the provinces, as opposed to the exorbitant rates of 20–30% charged by non-bank (underground) lenders. In 1849, the NBG lowered its rate by two percentage points. In 1871, a maximum limit for mortgage loans was set by law at 8%, while in 1911 it was raised to 9%. In 1925, the official bank rate was set at 8%; however, non-bank money lenders charged more than 2.5 times higher.[71]

2.3 EXCHANGE RATES

Exchange rate data concern exchange market transactions relied on bills of exchange rather than on specie. Complete time series are available for the spot exchange rate, which is usually at or close to the current market rate. In particular, the reported exchange rate data concern the rate of a foreign exchange contract for immediate delivery (i.e. on the spot) in the Athens market (i.e. the NBG's headquarters until 1927 and afterwards the BoG). Forward exchange rate data on 3-month bills of exchange are only available for a limited number of years and thus are not reported.[72]

Exchange rate data include the nominal exchange rate of the drachma vis-à-vis three international currencies, i.e. the pound sterling (London), the French franc (FRF, Paris) and the US dollar (New York).[73] The FRF was defined as the common monetary unit in the LMU countries. Under the Law on Monetary System (*Νόμος Περί Νομισματικού Συστήματος*, 10 April 1867) and the accession declaration (26 September 1868), Greece signed the LMU agreement, accepting the principle of bimetallism and the equivalence of the gold drachma to the gold FRF (mint parity 1:1).[74] The minting of the new (LMU) drachma was permitted immediately after the publication of the law (Article 23). The new system was to become effective from the 1st January 1869. The law provided for the issue of gold coins worth 5, 10, 20 and 100 drachmas and silver 5-drachmas coins. It also provided for the issue of fractional silver coins of 2, 1 and 0.5 drachmas that could be used in payments of up to 100 drachmas.

---

[70] Agricultural land and residential property.

[71] It ranged between 18–22% on mortgage-backed loans in drachmas and 12–16% on mortgage-backed loans denominated in foreign exchange.

[72] The annual and monthly series on forward exchange rates are available upon request.

[73] A national monetary system based on silver was established for the first time in 1829. Until then, money transactions were carried out in Turkish coins. The silver phoenix became legal tender. Although it was defined as equal to 1/6 of the Spanish distilo (i.e. 4.074 grams of pure silver), it only weighed 3.747 grams. Bimetallism was introduced by the Royal Decree of 8 February 1833 on *Monetary System* to substitute the underweight silver phoenix with the silver drachma, which was heavier. The new legal tender was also linked to the Spanish distilo; it was equal to 1/6 of the distilo. It weighed 4.029 grams being clearly heavier than the phoenix, but still lighter than the distilo. Had the phoenix or the drachma not been underweight, the adulterated distilos would quickly have substituted the Greek coins, crowding them out of circulation.

[74] Money scarcity was the main reason for joining the LMU. The loan of 60 million drachmas which was granted to the newly founded Greek state in 1832 for the introduction of bimetallism was wasted in unproductive expenditures (Adreades 1904). Coins were only minted from precious metal in 1833–34 in Paris and Munich, gold in an extremely small amount and silver in a larger amount. The country's economic stagnation and inadequate public revenue made coin minting from precious metal impossible. Only bronze coins were minted almost every year. In order to facilitate money transactions, given the limited amount of silver drachmas in circulation, foreign currencies (29 silver and 16 gold coins) were allowed to circulate freely in the domestic money market (see the decree of 8 February 1883). Even the Turkish coins were accepted again in money transactions with the State (see the law of 1856). The majority of these were adulterated, with a face value much higher than their market value. Soon, Greek silver coins flowed out of the market and the drachma began a 'ghost currency' (Kehayias 1875). Holders of foreign debased coins exchanged them for silver drachmas, which they melted to obtain the precious metal. The need to reform the monetary system became urgent in the mid-1860s when Spain abandoned the monetary system that was based on the distilo.

Although the country signed the agreement, it did not participate as a full member. The adjustment process to the new monetary standard was rather slow and delayed. Wartime emergencies in 1868 postponed the adoption of the LMU system. Convertibility was resumed in July 1870. However, as late as 1873–74, the first Greek LMU coins were minted in Paris and placed into circulation; these were fractional coins of small denominations (2, 1, and 0.5 drachmas). In 1875, the silver 5-drachma coins were placed in circulation; they were also minted in Paris and in the agreed quantity of 6 drachmas per inhabitant. Gold coins were not minted. In the meantime, international monetary conditions changed with the collapse of bimetallism. Following the other LMU countries, in 1875 the NBG devalued silver against gold and a year later it prohibited silver minting in an attempt to restrain high inflationary pressures due to silver discoveries in Nevada.[75] Nevertheless, the country did not join the gold standard as did the other LMU countries. New wartime emergencies in 1877–78, on the one hand, and the insufficient issuance of the new drachma, on the other, prevented Greece from introducing gold and forced it to a more permanent suspension of the drachma's convertibility.

However, in 1880–81 Greece tried anew to join the LMU and thus in 1882 the government devalued the drachma. The silver drachma was fixed as equal to 4.029 grams of pure silver and the gold 20-drachma as equal to $0.25994 \times 20 = 5.199$ grams of pure gold. In other words, the silver drachma contained 15.5 times as many grams of silver as of gold, implying a legal ratio of 1:15.5. However, according to the LMU agreement, the members' currencies should be equal to one another. The gold FRF (20 FRF) was fixed as equal to $0.2903 \times 20 = 5.806$ grams of pure gold, while one Greek gold drachma (20 drachmas) was equal to only 5.199 grams of pure gold. Thus, the par exchange rate was 1 FRF = 1.1168 drachmas. To achieve the 1:1 parity, the new (i.e. LMU) drachma was ultimately minted in November 1882 in Paris and was introduced as the new monetary unit. It was fixed as equal to 0.29 grams of pure gold and the new-to-old drachma equivalence was 0.8954 new drachmas per 1 old drachma.

Until the end of the 1890s, the drachma came under strong depreciation pressures due to loose fiscal policy, accommodated by monetary policy. As a result, the drachma was heavily depreciated reaching an all-time peak of 1.875 drachmas per FRF in January 1895; it showed the highest ever depreciation rate (επικαταλλαγή) of 87.5% against the parity rate (άρτιο). Accordingly, the bilateral rate of the pound sterling also doubled, rising to 47.203 drachmas. However, from the turn of the century onwards, depreciation pressures were reversed by a strong appreciation thanks to restrictive fiscal and monetary policies pursued in the context of the 1898 international agreement on foreign public debt compromise. Appreciation pressures revived markedly post-1905. In order to prevent deflationary pressures while at the same time ensuring the maintenance of the fixed drachma/FRF parity, the NBG was given by law the right to buy gold at the official parity of 1:1 and foreign exchange (FRF) at the price of 1.0050 drachmas and sell gold at 1.001 drachmas and FRF at 1.0055 drachmas (gold points: ±0.005 drachmas).[76] Through this measure, the NBG was able to create gold reserves so as to curb any appreciation pressures on the domestic economy.

From mid-1909 onwards, the drachma exhibited greater stability against the FRF and the pound sterling and continued to stay close to the mint parity (1 drachma per 1 FRF; 25.25 drachmas per

---

[75] In early 1870s, the large silver discoveries along with the massive silver sales by Germany caused an increasing depreciation of silver against gold. In Greece, the falling price of silver was reflected in the rise of the cost-of-living by 25%, while the purchasing power of wages was reduced by more than 50% (see Kordatos 1957, vol. 4, p. 459). In the country's regions where money transactions were made in silver Russian coins (e.g. the port of Syros island), silver depreciation effects were heavier and a civil unrest broke out, provoked by popular anger and discontent. It culminated in the first general strike in 1879, with several people dead.

[76] See Law 3642 of 19 March 1910.

FIGURE 6 Current yields of 1887 (4%), 1889 (4%) and 1928 (6%) foreign government bond loans, 1929–1940
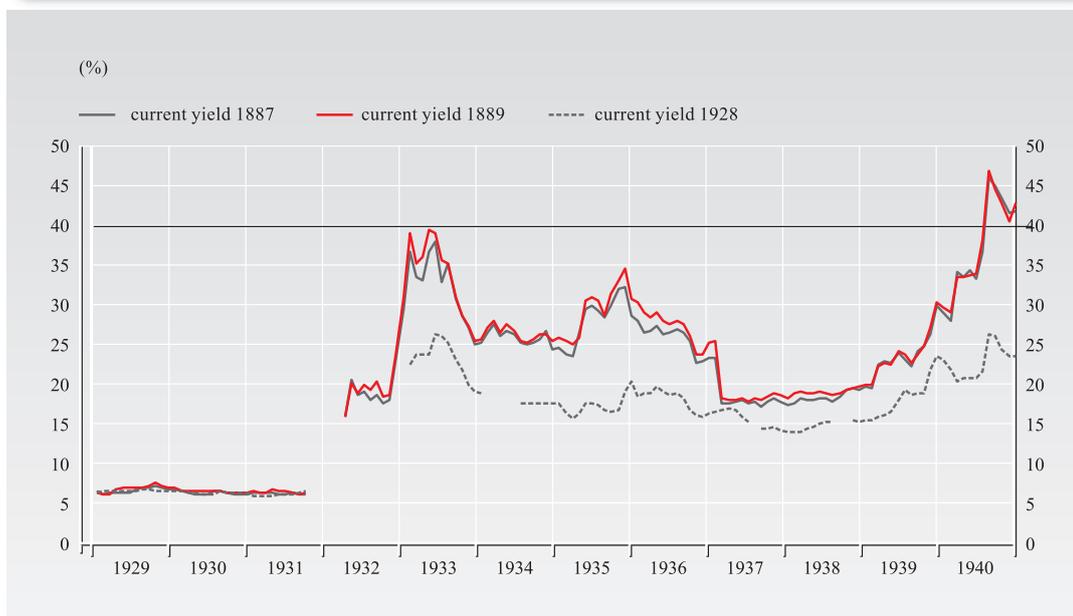
Source: Own calculations.

1 pound sterling). Ultimately, by Law 3642 (*Νόμος ΓΧΜΒ*) the drachma entered the classical gold standard, establishing within the country a form of a gold-exchange based regime with the French franc as the monetary anchor. Figure 7 plots the exchange rate developments. However, the drachma's 'golden era' lasted four years only, from 1910 to 1914, even though Greece kept *de jure* fixed rates until August 1919.[77] On 16 June 1915 the drachma adopted a peg to the pound sterling before switching to a peg to the US dollar a year later, in June 1916, thus keeping fixed exchange rates in wartime.

The interwar free float (1919–1927) was a period of sharp inflation and wide fluctuations of the drachma exchange rates. From 1927, the government implemented successfully a two-year sta-bilisation programme. On 14 May 1928, the country joined the interwar gold-exchange standard. Contrary to what had happened in 1910, that time the resumption was not made at the original parity. The drachma was first devalued and then pegged to the pound sterling (375, ±2.5 drach-mas). According to the Decree of 12 May 1928, the new gold content of the devalued drachma was explicitly defined: one 1929 new drachma contained 0.01952634 grams of pure gold, namely 51212.87 drachmas per 1,000 grams of pure gold. Compared with the pre-war parity, the 1929 devalued drachma was equal to 1/15 of the pre-war drachma.

In the wake of the 1929 Great Crash and the subsequent collapse of the gold-exchange standard on 21 September 1931, Greece did not follow Britain off gold. The government immediately switched from pegging against the pound sterling to pegging against the US dollar. The new exchange rate was set to 77.05 drachmas per dollar (gold points: ±0.95 drachmas). However, a

---

[77] However, the drachma's convertibility was *de facto* suspended by the imposition of controls on specie flows in July 1914 and on foreign exchange in November 1917. See the Decree of 21 July 1914 and the Law of 20 November 1917.

few days later, on 28 September 1931, the imposition of strict exchange controls marked the beginning of a *de facto* suspension of foreign exchange convertibility. Ultimately, *de jure* convertibility ended on 26 April 1932, when the drachma was devalued and reverted to flexible rates (Law 5422). After an experiment with the Gold Bloc (June 1933-September 1936)[78], the country eventually returned to a managed float when it joined the Sterling Area (September 1936-April 1941). The drachma exchange rate against the pound sterling was managed by the central bank. It was allowed to fluctuate within a currency band of 545 (buying) – 550 (selling) drachmas per sterling.[79] The drachma was allowed to float against gold and all other currencies that were not tied with the pound sterling.

Table GR3_A displays the year averages of the nominal (spot) exchange rate of the drachma against the pound sterling (1877–1941; GR3A_A), the FRF (1877–1941; GR3B_A) and the US dollar (1914–1941; GR3C_A). The yearly data points are based on the monthly averages data entries (see the volume's CD Table GR3_M; GR3A_M, GR3B_M, GR3C_M).[80] The monthly averages entries were based on the daily (end-of-day) or weekly (end-of-week) fixing rates of the NBG (until 1927) and the BoG (1928–1939). The fixing value is the average of the 'buying' and the 'selling' prices.[81,82] For the year 1940 the data refer only to the 'selling' price by the BoG; the December figure is missing. However, the year average is the average of all months, January-December. For 1941, May, June and December figures are missing and the annual figure is the 9-month average.

Series GR3D_A of Table GR3_A also presents the parity between gold and the paper drachma. The data figures concern the year averages covering the period from 1885 to 1903 and from 1920 to 1940. From 1904 to 1919 data are not available; however, after the establishment of a fixed-rate gold-based regime in 1910 the parity between gold and the paper drachma was equal to one or just above one.

---

[78] Commonwealth members and the Scandinavian countries followed Britain off gold in September 1931. Few countries remained on gold until 1935–1936, rallying around France. These countries were the Netherlands, Belgium, Switzerland, Poland and Greece. Pre-existing trade networks determined a country's choice for joining the Gold Bloc. In the case of Greece, however, key factors that prevailed in the country's selection into this bloc was the strong desire of the government to remain on gold considering it a vehicle to stabilise inflation expectations, as well as the traditional coupling with the French franc. With the franc's devaluation on 26 September 1936 and the Gold Bloc dissolution, Greece reverted to managed floats and joined the Sterling Area.

[79] See the statement of the BoG's Governor on 27 September 1936.

[80] The slight discrepancy observed in some yearly rates published in OeNB (2008) is attributed to the fact that for those years – chiefly concerning the start of the period – the reported annual rate was based on averaging end-of-month entries and not on the monthly averages. From 1877 to 1884 the year average of the drachma/pound exchange rate was based on a limited number of available monthly observations. Explicitly, the annual 1877 figure is the 3-month average; the 1878 figure is the 4-month average; the 1879 figure is the 2-month average; the 1880 figure is the 6-month average; the 1881 figure is the 10-month average; the 1882 figure is 11-month average; the 1883 is the 8-month average; and the 1884 annual figure is the 10-month average.

[81] The real exchange rate has also been constructed. It has been calculated as the ratio of British wholesale prices (Sauerbeck index) to prices for basic foodstuffs in Greece, using the bilateral nominal exchange rate as the conversion rate. A food price index (1866–77=100) has been constructed as a simple geometric average of the relative prices of five traded food products. Since data on quantities consumed are not available, a Laspeyres index cannot be calculated. The simple geometric average has the advantage of smoothing the time series of prices with regard to extreme values. This is very important in the case of food products, because their prices exhibit high volatility. For the period 1915–1931 the same definition has been used. The only difference is that the wholesale price index has been used instead of food prices. The data (monthly averages, spot rates) are available upon request.

[82] The data series refer to the official (legal or free) market exchange rates. However, in May 1921 the government, in an attempt to control the heavy depreciation pressures on the drachma, established by law a syndicate of 25 commercial banks and gave it the monopoly power to buy and sell foreign exchange. The four-member committee of the syndicate met every afternoon and set the exchange rate for the next day's transactions at a devaluation rate lower by 30–35% compared to the true (black) market rates (Zolotas 1928, p. 192). In September 1922 the syndicate was abolished. Therefore, the official data figures from June 1921 to September 1922 were underestimated by that rate. The 'black' free market exchange rates are missing.

2.4 GOVERNMENT FINANCES

2.4.1 Flows: revenue and expenditure

Greece was in financial difficulties throughout the period under study, marked by weak government finances, namely persistent budgetary deficits and a high debt-to-GDP ratio. More importantly, substantial domestic fiscal disturbances, often due to military conflicts, led to monetary destabilisation, which in turn caused economic instability.[83] Public expenditures (overwhelmingly government consumption and military spending) were financed by excess domestic and foreign borrowing contracted on poor terms, resulting in an excessive burdening of the budget. No government dared to undertake a budget reform, namely to improve the tax collection system and raise revenue from income taxes. Well until 1919[84], taxation was not imposed on personal income; instead, citizens were taxed according to objective criteria set by the government, and not according to their taxpaying capacity. The principle of progressive taxation was not applied, and the tax system was characterised by a lack of uniformity and generality (Andreades 1916, Angelopoulos 1933). The resulting great inequalities in income taxation often caused social unrest. Furthermore, the lack of tax harmonisation across Greek regions and the low tax rates caused collection costs and revenue losses. The tax collection inefficiency necessitated reliance primarily on indirect taxation. In particular, indirect taxes amounted to more than 60% of the total tax revenues.

FIGURE 7 The Drachma Exchange Rates, 1877–1941 (in LMU drachmas)

Notes: LHS = drachma/pound sterling, drachma/US dollar; RHS = drachma/FRF. GS = gold standard, FLX = flexible rates, GES = gold-exchange standard, GB = gold bloc, SLA = sterling area.
Sources: NBG and BoG.

---
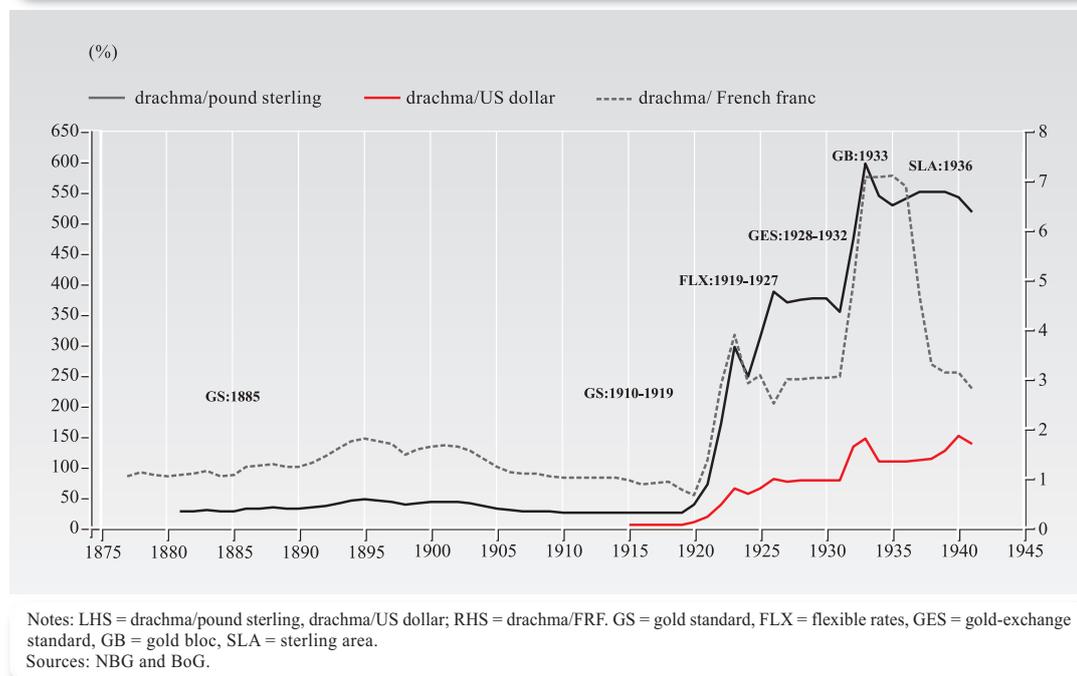
[83] It has been shown empirically (see Lazaretou 1996) that in the case of Greece the effect of wartime emergencies does not differ across monetary regimes. This simply means that under fixed rates excess government spending and its financing through money creation perturbed the currency's convertibility.

[84] In 1919 a systematic attempt to reform the tax system was made when, for the first time, personal income taxation was introduced. Until then, taxes were imposed on income from agriculture, building, property and business profits. Labour incomes were not taxed.

Table GR4_A presents six key fiscal variables series covering the period 1833–1939 and referring to realised values. For the first four fiscal variables, the data series are from Prontzas et al. (2012), which is the only existing and well-compiled data base on Greek public revenue. Important details on the series' definition, the data sources and the methods of construction followed are reported therein (see, in particular, chapters 6–10). Specifically, series GR4A_A of the table displays total public revenue, i.e. central government total (tax and non-tax, regular and extraordinary, debt issue is also included) realised revenues in nominal terms. Series GR4B_A refers to the tax burden, i.e. realised total tax revenues in nominal terms. According to Prontzas et al. (2012, Table 6.1, pp. 110–113), the tax burden series is derived from the public revenue series excluding revenues coming from concession fees (mint, post and telegraph offices); renting of state entitlements and state-owned land; selling of state-owned land; church-related revenue, and other non-regular revenue (loans and charges) coming from domestic and foreign public borrowing and money credits from the Great Powers.

Figure 8a plots the evolution of the tax burden-to-GDP ratio over time together with the gross public revenue-to-GDP ratio. As seen, the tax burden was relatively stable and low throughout the period under study: from 10% of GDP at the beginning of the period it moderately increased to less than 20% by the end of the period. Public revenue was also low, albeit excessively volatile; the peaks are associated with the years of major increases in revenue due to foreign borrowing. The mean rate was around 20% for the whole sample period.

Series GR4C_A and GR4D_A display data entries for direct and indirect tax revenues respectively (realised values, in nominal terms). Direct taxes entail taxes on the agricultural and livestock production, buildings and property and business profits. Indirect taxes entail taxes on consumption, custom tariffs and duties, consular dues, stamp duties, and taxes on the consumption of the goods of the state monopoly such as tobacco, matches, playing cards and lamp oil. See Prontzas et al. (2012, Tables 6.3, 6.4, 7.3, 7.4, 8.3, 8.4, 9.5, 9.6, 10.5 and 10.6). Figure 8b highlights a striking feature of Greek tax policies. There was an inverse relation between direct (i.e. income tax) and indirect taxes. Income taxes were falling, while indirect taxes were rising in a symmetric manner during and after periods of excess spending.[85]

Well until the interwar period, the fiscal year was longer than the calendar year of 12 months. The use of the extended fiscal year was first introduced by law in 1918 and covered a 12-month period plus 4 months for the government to submit the budget to the Parliament for voting, starting on 1 April and ending on 31 March (12 months) or on 31 July (12 plus 4 months). In 1934, a 12-month duration of the fiscal year was defined by law, i.e. 1 April-31 March. (For details, see Prontzas et al. 2012, Table 2.2) Further, until 1929, public revenue reports were not submitted to Parliament for discussion and approval. Instead, they used to be subject to administrative and judicial review by the Greek Court of Auditors. The review procedure usually took one or two and in some cases even 10 years.[86]

Prontzas et al. (2012, p. 202) allocated public revenue to six distinct periods as follows: (i) 1828–1832, public revenue depended on donations and contributions; (ii) 1833–1897, the public revenue management framework developed along with a formal structural basis for the *Budget* and

---

[85] It has been found empirically that the Greek governments engaged in tax smoothing but not in seigniorage smoothing. This might mean that the 'pure' theory of optimal seigniorage (Barro 1979, 1987) cannot be validated by the Greek data. For details, see Lazaretou (1995).

[86] The values for 1860 and 1936 are still missing, since for those two fiscal years the Public Revenue Reports were not approved by the Parliament. They were not reviewed by the Court of Auditors either. Thus, they were never published.

FIGURE 8a Public Revenue and Taxes, 1833–1939

(%)

— total public revenue/GDP   — total taxes/GDP
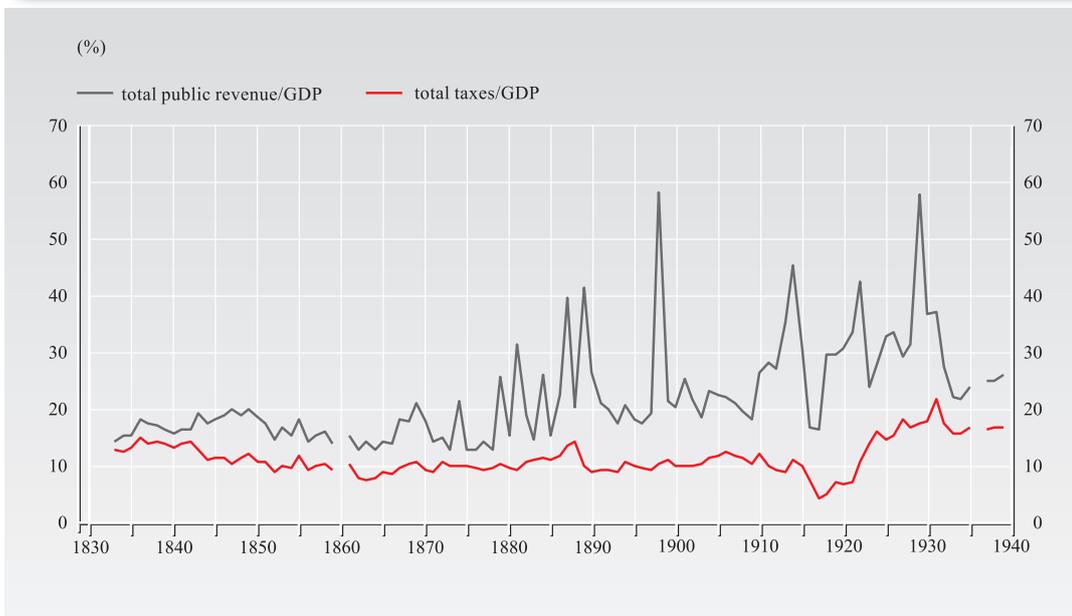
Source: Own calculations based on data provided by Prontzas et al. (2012) and Kostelenos et al. (2007).

FIGURE 8b Indirect Taxes, 1833–1939

(%)
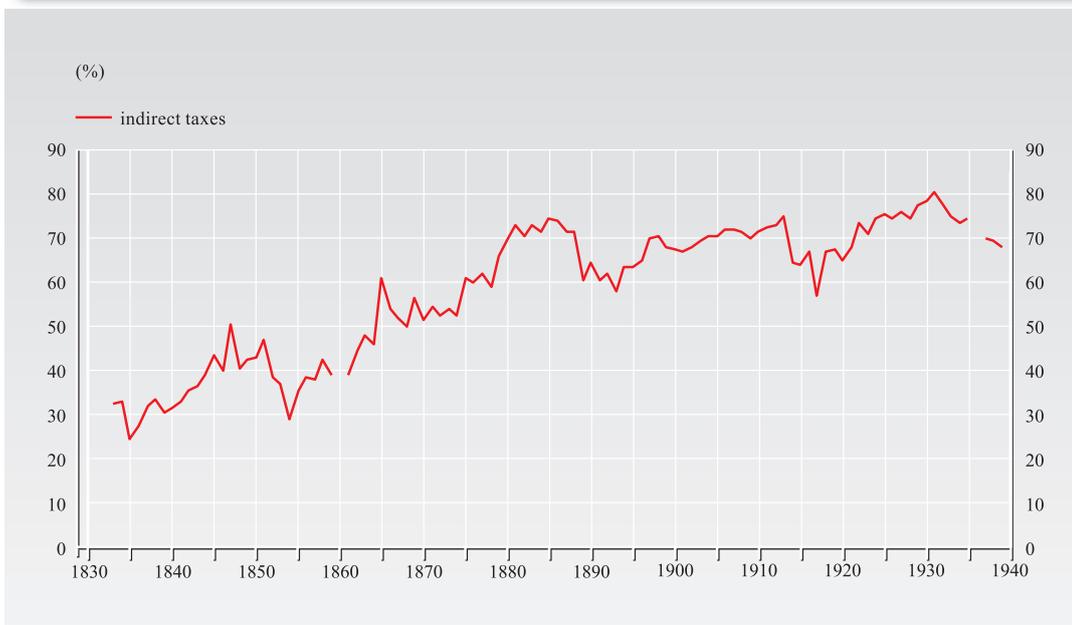
— indirect taxes

Note: Indirect taxes as a percentage of total tax revenue.
Source: Own calculations based on data provided by Prontzas et al. (2012).

the *Report*; (iii) 1898–1900, fiscal policy underwent rapid changes and restructuring mainly after the 1898 compromise on foreign debt following the 1893 default; (iv) 1901–1913, a formal struc-

ture was adopted for the *Budget* and the *Report*; (v) 1914–1932, there was a need for geographic adjustments to the structural framework of public revenue, reflecting the new territories' integration process and cost; and (vi) 1933–1939, the *Budget* and the *Report* were largely restructured after the debt default in 1932, according to the recommendations of the League of Nations' Financial Committee on Greek Public Finances.

GR4E_A reports realised figures on central government expenditure inclusive of interest payments on domestic and foreign debt (in nominal terms). Amortisation is excluded. GR4F_A shows interest payments on total debt. A peak is recorded in 1834 (interest and fees for the 1832 foreign loan were paid in advance); in 1864 (debt compromise on the 1832 loan); in 1879 (debt compromise on the loans of independence); in 1898 (debt compromise on all past loans and interest and fees on the loan for the 1898 huge war indemnity were paid in advance); and again in 1914–15 and in 1918 (interest and fees on high foreign and domestic loans). A trough is recorded in 1843 (unilateral debt default on the 1832 loan); in 1893 (unilateral debt default on domestic and foreign loans); and again in 1932 (unilateral debt default on foreign loans) and in 1933 (one-year moratorium on interest payments). Finally, GR4G_A reports realised figures on defence spending. Defence spending data as retrieved by the *Government Annual Reports* include expenses on equipment, on civilian and military personnel, such as wages, salaries, pensions and veteran benefits, education projects and camps maintenance.

2.4.2 Stocks: nominal domestic public debt

GR4H_A contains the claims on the government; it can be considered a proxy for domestic public debt stock. Specifically, it refers to total liabilities of the Greek State (i.e. central government) including interest payments and amortisation to the NBG until 1927 (in gold, foreign exchange and banknotes, end-of-year data).[87] Before 1848, the State owed nothing to the NBG, as was also the case in 1849, 1853–55 and 1857–60. When the Bank of Greece was established in 1928, government debt securities were transferred to the new central bank and thus the State's debt to the NBG was reduced to less than half the original figure. The respective figures are shown in parentheses. From 1928 to 1939, the series refers to the net claims of the BoG on central government (stock, inclusive of amortisation and interest payments, end-of-year data). From 1928 to 1935, claims consist of loans to the government in banknotes and gold. From 1936 to 1939, government debt as it is retrieved from the BoG's balance sheet includes only the loans in banknotes, since according to the League of Nations 1932 decision the loans in gold should appear in a separate item in the bank's balance sheet along with government bonds covered by gold. The latter was a part of the 'cover'.

In other words, following Reinhart and Rogoff's (2010) debt glossary, the respective series covers all debt liabilities of the central government to the NBG and the BoG that were issued under national jurisdiction, regardless of the nationality of the creditor and/or currency of denomination of the debt.

GR4I_A presents debt liabilities as a percentage of the NBG's total assets until 1927 and the BoG's assets from 1928 onwards. It is worth noting that at the beginning of the 1880s, the claims on the government started to dominate the asset side of the NBG's balance sheet. The same was also true

---

[87] Loans with concession of state monopoly rights, government bonds, temporary bond loans, Treasury bills, compulsory loans in fiat money, payment orders, national road construction loans, loans in notes of low denomination (one and two paper drachmas) and national defence bonds.

of the BoG at least for the first years of its inception.[88] This might reveal strong dependence of the NBG and the BoG on the government.[89]

2.5 PRICES, PRODUCTION AND LABOUR

This group contains data on consumer and wholesale prices, import and export prices, industrial production and economic activity, employment and wages.

2.5.1 Prices

Consumer prices

In Greece, a version of the Consumer Price Index (CPI) was first compiled by the General Statistical Service of Greece (GSSG) in 1923.[90] It was a cost-of-living index that captured price changes in terms of a basket of 24 basic (tradable and non-tradable) items[91] across seven big cities including Athens. The yearly data based on monthly averages covered the period beginning in 1914 (1914=100). In 1929, the BoG started to measure inflation using an index of the cost-of-living in Athens (1928=100). The series was regularly released at yearly and monthly frequencies from 1929 to 1958. It captured the changes in the cost of a more comprehensive basket of both tradable and non-tradable goods and services[92] that the average consumer of that time used to purchase in the extended region of the country's capital, Athens.

GR5A_A of Table GR5.1_A displays the data entries for that composite index (2009=100). The entries are shown at yearly intervals from 1914 to 1941 (monthly averages). The monthly data points (1923–1941, not seasonally adjusted) are shown in the volume's CD Table GR5.1_M (GR5A_M). For the years 1914–1928, the series refers to the cost-of-living index (1914=100) compiled by the GSSG; from 1929 to 1941[93] refers to the index of the cost-of-living in Athens compiled by the BoG. Figure 9 depicts the development over time of the inflation process. As shown, the domestic economy suffered from strong inflationary pressures in the early 1920s. In 1915 inflation was 25%; it climbed to 45.4% in 1918 reaching a peak of 94.2% in 1922, and 57.3% in 1923. High inflation was the immediate result of the excess war spending (WWI and the Greco-Turkish War of 1919–1923) that was entirely covered by money creation. Inflation fell to moderate levels in 1924–1927 and eventually stabilised in 1928 at a level close to 1% on the eve of the coun-

---

[88] The NBG's dependence was widely discussed in the 1927 League of Nations' report on the necessity to establish a politically independent pure central bank. The BoG's dependence on the government explains why the central bank was not effective in preserving financial stability during the years of the interwar crisis since by the time of its inception more than 40% of its assets were immobilised in the form of government debt.

[89] This feature, however, was incompatible with the viability of a fixed-rate regime. Specifically, the classical gold standard period was characterised by a high degree of economic globalisation. Adherence to gold was sufficient to enhance market credibility. By contrast, in the interwar gold-exchange standard, economic globalisation was terminated after the Great Crash, and public debt levels were now a crucial determinant of the country's creditworthiness. To ensure, therefore, fiscal consolidation and debt repayment, foreign creditors (i.e. the League of Nations) now wanted to see the 'books'. They thus set a clear-cut rule: spending should not exceed a statutory limit of 9 billion drachmas in 1929 and 1930, and the budget should be in balance thereafter.

[90] The GSSG of the Ministry of the National Economy was the predecessor of the post-war National Statistical Service of Greece (NSSG, now re-organised and renamed Hellenic Statistical Authority – ELSTAT). In 1959 the NSSG started to compile the national consumer price index, which up to 2000 covered urban areas only. For details on inflation measurements in Greece, see Karabalis and Kondelis (2007).

[91] I.e., foodstuff (19 items); cleaning, heating and electricity (5 items).

[92] That basket included foodstuff (52 items); clothing (16 items); rent (then subject to rent controls); heating, electricity and another 5 variable items.

[93] The 1941 value is the average of the monthly observations from January to November. The BoG stopped reporting data in December 1941 and resumed its official data reporting in January 1945.

try's entry into the interwar gold-exchange standard. The severe deflation waves of the 1929 Great Crash reached Greece in 1930 and 1931. However, from 1932, prices began to rise again. From the mid-1930s, when the drachma returned to a managed float, until the eve of WWII inflation was kept at bay.

Wholesale prices

A wholesale price index (1913–1914=100) was constructed for the first time in 1933 and was published in 1934 in the GSSG's *Statistical Yearbook of Greece*. Since then, it was reported regularly until 1940. It was constructed as a simple geometric average of the wholesale prices in Athens and Piraeus and captured the changes in the prices of six product categories, i.e., domestically produced goods (25 items); imported goods (35); agricultural products (50); livestock (8); industrial goods (27); and fuels (5 items). It was based on information released by the *Supreme Economic Council* (AOS). The time span of the annual data series is from 1929 to 1941.[94] The yearly entries are the averages of the monthly figures (Table GR5.1_A; GR5B_A). The monthly data points were released in 1931 (1913–1914=100) and covered the period from January 1931 to March 1941 (see the volume's CD Table GR5.1_M; GR5B_M). The monthly (not seasonally adjusted) prices were computed as the monthly simple average of the daily prices.[95]

FIGURE 9 The Inflation Rate, 1914–1941 (annual percentage changes)
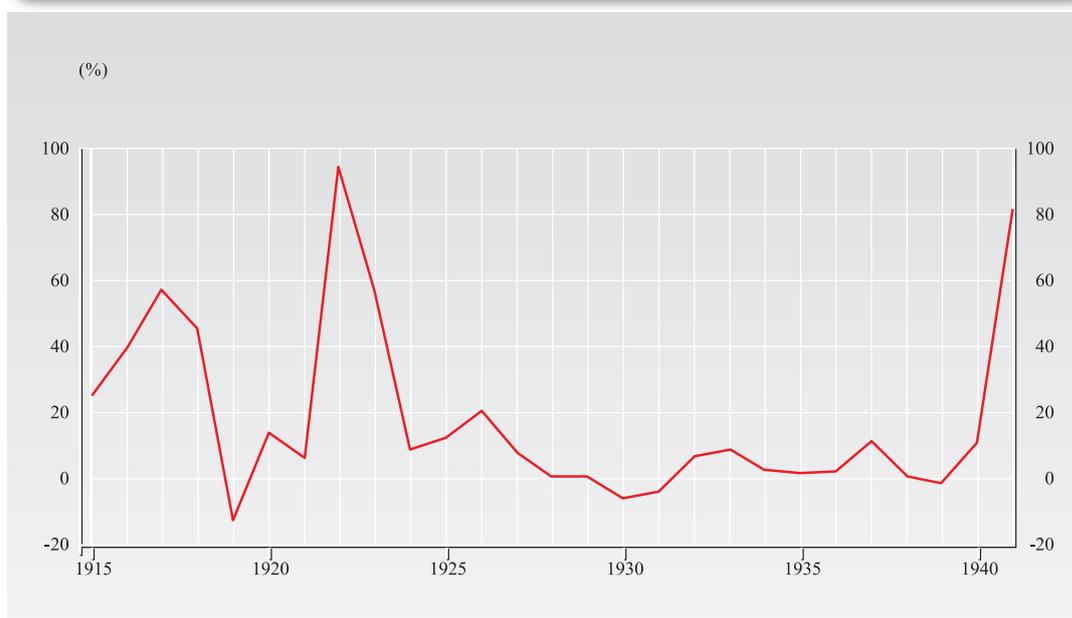
Source: BoG.

---

[94] The 1941 value is the average value of the first three months of the year, January to March, i.e. the period preceding the Axis occupation. From April onwards, the GSSG stopped reporting data.

[95] For the period prior to 1929, a proxy for the wholesale price index has been constructed by the author as the weighted geometric average of the import and export price indices. As weights, we use the year-average share of imports to total trade for the period 1914–1932. The time series data on imports and exports (in value terms) are taken from the *Monthly Statistical Bulletin* of the GSSG. The data on import and export price indices (1914=100) (monthly averages) are also from GSSG. Missing values for the monthly data for the period 1915 to 1922 are computed as the product of the seasonality factor and the year average. The data are available upon request.

Export and import prices

Export and import price indices (1914=100) were first compiled and reported by the GSSG in 1930. The yearly data figures are monthly averages and cover the period from 1914 to 1932 (Table GR5.1_A; GR5C_A, GR5D_A). They captured the price changes of 80 tradable goods (59 imported goods and 21 exported goods). The monthly price indices (not seasonally adjusted) are available only from January 1923 to April 1932 (see the volume's CD Table GR5.1_M; GR5C_M, GR5D_M). In 1933, the GSSG stopped reporting those indices.

2.5.2 Production

Annual data on the unweighted sum of the value of the industrial production at current prices (12 sectors) are available from 1921 to 1938 (Table GR5.2_A; GR5E_A). Monthly data do not exist. A weighted index of the volume of the industrial production (1928=100), covering the same 12 sectors (77% of the total production) was compiled in 1930. It was regularly reported until 1940. The yearly data entries (monthly averages) are shown in Table GR5.2_A (GR5F_A) and cover the period from 1929 to 1939. The monthly figures (not seasonally adjusted) were first reported in 1934 and cover the period from January 1933 to December 1939 (see the volume's CD Table GR5.2_M; GR5F_M).[96] In 1934, a composite index of economic activity was compiled by the BoG. It was a seasonally adjusted weighted arithmetic index (1928=100) aggregating six component indices. It reflects the fluctuations in the volume of the domestic economic activity thus isolating the price effects.[97] The data are shown both at annual (Table GR5.2_A; GR5G_A) and at monthly frequency (see the volume's CD Table GR5.2_M; GR5G_M) covering the period from January 1928 to December 1939. After the Axis occupation in April 1941, the BoG stopped to compile and report that index.

2.5.3 Employment and wages

A complete data series on employment is available only from 1928 to 1939 on an annual basis. It refers to a weighted index of the number of workers (male and female) in manufacture. The index was constructed by the AOS (see Table GR5.2_A; GR5H_A). The evolution of wages over time can be shown by a wage index, which was also constructed by the AOS and refers to the wages paid to the blue collar workers in five sectors (machinery, food, textiles, paper and chemicals). The yearly data figures cover the period from 1928 to 1939 (series GR5I_A). Monthly data do not exist.

2.6 NATIONAL ACCOUNTS AND POPULATION

This group contains data on Gross Domestic Product at current and constant prices, GDP deflator, real GDP per capita, imports and exports, and population.

Gross domestic product

Table GR6_A reports the data series on the aggregate level of the value of Gross Domestic Product (GDP) both at current prices and at constant 1914 prices (series GR6A_A and series GR6B_A).

---

[96] The GSSG *Statistical Yearbook* for 1937 reference year mistakenly reported the data figures on the index of the production of electricity as the data figures on the general index of industrial production. Here, we reported the true 1937 data entry on the general index of industrial production, which has been taken from the AOS publications.

[97] Exports of agricultural products, industrial production, imports of iron and machinery, freight moved (railway and water), bank clearings.

The sample period is 1833–1939 and the data are shown at annual frequency only. The time series on GDP was constructed and reported by Kostelenos et al. (2007, Table 6–III, columns 8 and 9, pp. 137–141). To quote the authors, GDP was computed 'based on estimates made directly using the production (value added) method, the most notable exception being the analysis of the tertiary sector, where a combination of the income method and of an indirect approach has been used' (p. 251). GDP at constant 1914 prices was assessed using the GDP deflator (1914=100) (GR6C_A). The latter is a Paasche type index of the prices of 10 products from the primary and the secondary sector and covers over 23% of the total value of the GDP. The data on the GDP deflator are also taken from Kostelenos et al. (2007, Diagram 7A1, p. 167). GR6D_A depicts the real GDP per capita entries, which are also retrieved by Kostelenos et al. (2007, Table 9–I, pp. 217–219).

Figures 10a and 10b show the evolution of the real per capita output over time and its main components. Despite the significant increase in the population owing to the gradual territorial enlargement of the country, real per capita output exhibits a strong upward long-run trend, mainly as the result of the output increase.[98]

During the gold standard period 1870–1913, Greece enjoyed an annual average per capita GDP growth rate of 0.66% based on a 5-year rolling time span, which was 0.85 percentage points less the combined average (1.5%) of the most advanced countries (namely, the US, the UK, France and Germany).[99] In the interwar years (1918–1938) the difference was reversed; 2.6% for Greece compared with 1.2% for the advanced countries (see Morys 2006).[100] However, throughout the sample period, Greek real per capita output levels were less than half the combined average of the most advanced economies.

Imports and exports

Table GR6_A (GR6E_A, GR6F_A) depicts the data series on the value of the imported (c.i.f) and the exported (f.o.b) commodities (services are not included).[101] The sample period is from 1851 to 1944 for the annual data entries and from January 1928 to December 1944 for the monthly (not seasonally adjusted) figures (see the volume's CD Table GR6_M; GR6E_M, GR6F_M).[102] The data entries are at current 1929 paper drachmas. Explicitly, until 1919 when the country reverted to a free float, trade was denominated in gold drachmas.[103] Even though gold convertibility was in effect only for a very short-time period, the conversion rate of a gold drachma to a paper drachma was roughly 1:1. From 1920 onwards, the officially reported figures on trade were reported in 1929 paper drachmas. After the 1928 drachma devaluation and

[98] See Lazaretou (2004, 2006).

[99] This positive performance of the country is easily explained by the 'convergence hypothesis': a poor country, *ceteris paribus*, tends to grow faster than a rich country, and hence the per capita income level of the former will catch up with the latter (see Barro and Sala-i-Martin 1992, 2003).

[100] Morys (2006, Table 2) based on Maddison's (2004) estimates calculated the interwar years by taking the 1913 value for 1918 '…to avoid artificially high growth rates for the interwar period' (p. 34). Based on Kostelenos et al. (2007) estimates and taking the 1910 value for 1918, we found that the difference for Greece was much lower, 0.35 of a percentage point (1.55% versus 1.2%). Taking the 1910 value seems more reasonable for the Greek case since in 1912–13 the country was in war (i.e., the First and the Second Balkan War) and the 1911 value was excessively high.

[101] Trade included all imported commodities on which a tariff was imposed and paid, and all exported products that were either domestically produced or were first imported as intermediate products and then exported as final products. Until 1920, the value, i.e. the product of the quantity *times* the price, was mandated by a government special committee. From 1921 onwards, exports were defined in f.o.b and imports in c.i.f prices.

[102] For the period 1928 onwards for which a complete monthly data series is available, the annual figures are the unweighted sum of monthly figures. In the annual series reported by the GSSG, several mistakes were made in the summation of the monthly figures which we corrected here. The post-war data start in 1951.

[103] The data in gold drachmas are available upon request.

FIGURE 10a Real Per Capita GDP, 1833–1938 (in LMU drachmas at 1914 constant prices)
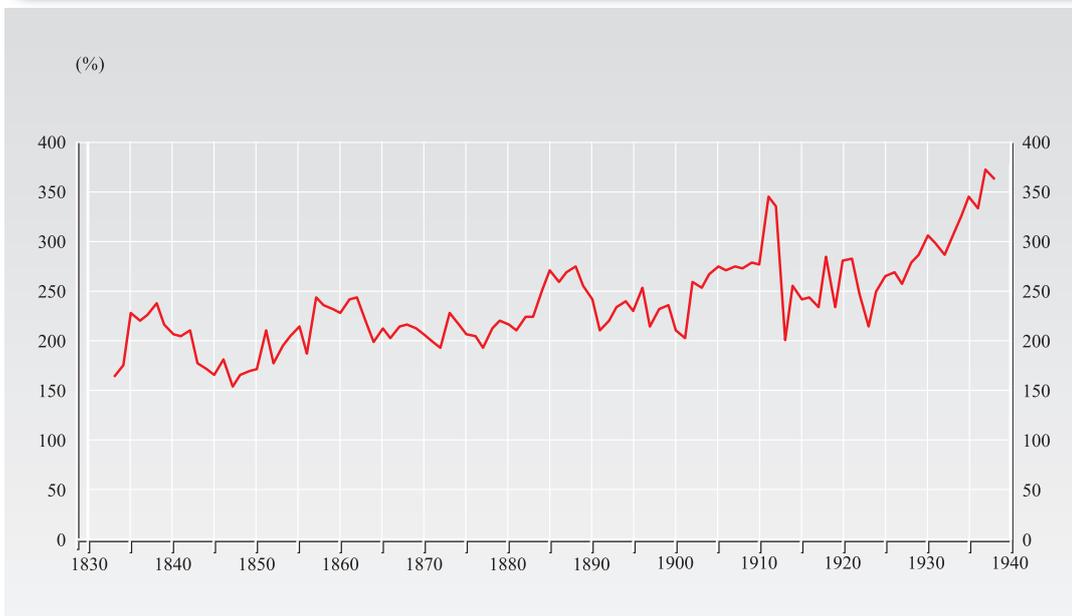
Source: Kostelenos et al. (2007).

FIGURE 10b GDP and Population, 1833–1938
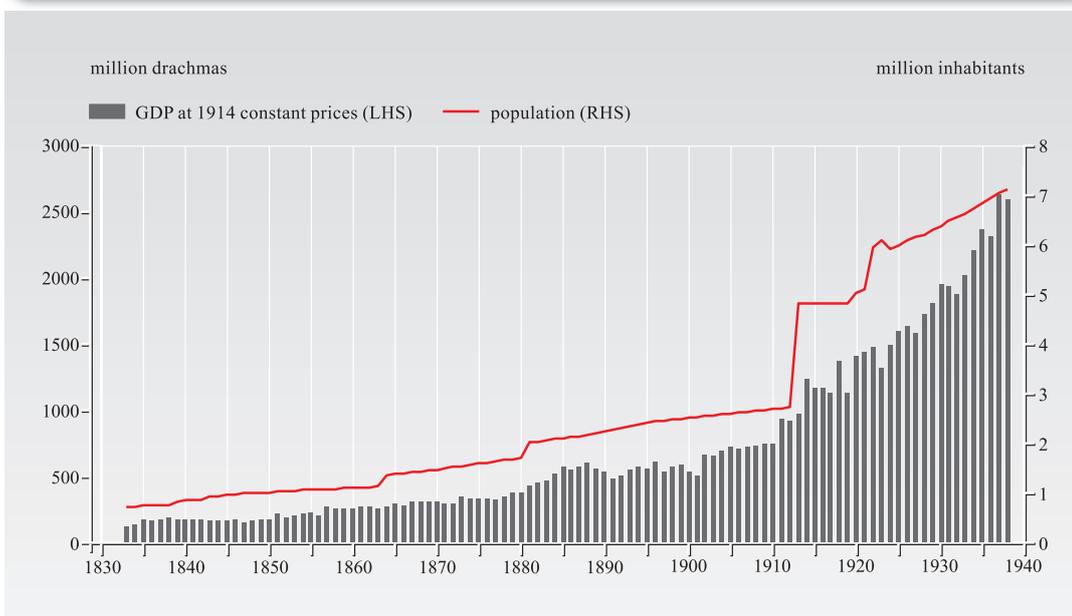
Sources: Kostelenos et al. (2007) and ELSTAT.

stabilisation, one gold drachma was equal to 14.87 paper drachmas. Using this rate, we expressed the data entries for the years prior to 1920, which were denominated in gold drachmas, in 1929 paper drachmas.

We should mention that interested researchers should use these data series with caution. First, the only available data series refer to trade values and not to trade volumes;[104] thus price fluctuations strongly affect the time series properties of the variables. Second, the official data on imports under-estimate the country's foreign trade, given the high rates of smuggling (almost 30% of total imports[105]) associated with the high tariffs applying at the time. Third, since exports chiefly included agricultural products (around 70% of total exports), strong seasonal factors played a role in deter-mining not only trade flows but also the drachma's exchange rate. Consequently, the BoG in order to keep the rate of the drachma fixed, had to intervene very frequently in the open market off-setting the seasonal factor. Fourth, imports did not include public sector procurement and defence equipment, which accounted for a large proportion of the country's total imports.[106]

Population

Population shown at annual intervals (1833–1939) is measured in million of inhabitants (Table GR6_A; GR6G_A). The yearly entries (mid-year estimates, *de facto* population) were based upon the census of the years 1821, 1828, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1848, 1853, 1856, 1861, 1870, 1879, 1881, 1889, 1896, 1907, 1913, 1920, 1923 and 1928. 1928 was the last census year during the pre-WWII period.

2.7 WARTIME: 1940 TO 1949

The 10-year period from 1940 to 1949 can be separated into three different sub-periods: wartime from October 1940 to April 1941; the Axis occupation from May 1941 to October 1944; and the stabilisation period from November 1944 until the end of the decade. Greece was caught in WWII at a time when it had consolidated fiscal and monetary stability. Due to strict exchange and cap-ital controls, the exchange rate of the drachma was kept fixed. Further, wartime spending during the Greco-Italian War was fully covered thanks to direct financial support from the UK in the form of money credits, which were held in a special account from which the Greek government drew on demand. As seen in Table 3, which shows the developments in the inflation rate, money stock and the exchange rate, inflationary pressures in wartime were moderate and the situation remained under control. The observed sharp increase in the growth rate of money stock was temporary and attributed to the two short-lived banking panics and mass bank deposit withdrawals that took place first in August-September 1939[107] and again in April-May 1940, coming to a peak in October 1940.[108] Soon, money balances returned to banks. However, the situation got out of hand during the Axis occupation and most importantly in its second phase, from November 1943 to October 1944, when the phenomenon of hyperinflation was in full swing.

During the Axis occupation, the monetary and real sectors of the domestic economy collapsed and the drachma, even though it remained legal tender, lost all its functions as money. The budget-ary deficits and the Axis military expenditures were exclusively financed by massive domestic paper money creation. The Greek goods market experienced a stifling shortage of products, which contributed to an explosion of inflationary expectations and eventually to the emergence of hyper-

---

[104] Data on a weighted volume index of imported final industrial products (10 sectors) and of exported final industrial products (6 sectors) are available only from 1929 to 1939 on an annual basis, and on a monthly basis from 1933 to 1939 (1928=100). The data are available upon request.

[105] See Zolotas (1928, p. 151).

[106] Also, they did not include gold bullion and gold coins. They did, however, include silver bullion and coins, ships and stores and bunkers for foreign ships.

[107] The BoG responded effectively and averted a generalised bank panic by increasing credit to commercial banks.

[108] The BoG responded this time by imposing a moratorium on banking transactions.

inflation towards the end of the occupation period. According to the *ad hoc* definition by Cagan (1956), hyperinflation starts the month when the rate of prices increase on a monthly basis is over 50% against the previous month, and ends the month before it falls below 50% and remains at this lower level at least for a year. Following Cagan's definition, Greek hyperinflation started in November 1943 and ended in November 1944 (see Table 3 and Figure 11).[109] It triggered a run on the drachma and a switch to gold, establishing a *sui generis* gold standard. As the public had no confidence in the future purchasing power of the paper drachma, it turned on a mass scale to hoarding of the British gold sovereign ('gold pull'), substituting all drachma banknotes.

Figure 12 plots seigniorage revenues (index, 1938.09–1939.08=1). These are measured as the product of the rate of change of the monetary base in period *t* and real money balances in period *t-1*. As seen, seigniorage started to fall rapidly in the second Axis occupation phase. The circulation of British sovereigns decreased the demand for money balances in drachmas, thus reducing the inflation tax base. As Axis occupation powers began increasing enormously the monetary base, seigniorage fell rapidly.[110]

TABLE 3 Prices, Money Stock and Exchange Rate Developments, 1939–1948

(monthly rates of change)

Sample periods	Inflation (%)	Money balances (%)	Drachma/British gold sovereign (depreciation rate, %)
Pre-war period *1939.01–1940.09*	0.59	2.13	0.48
War period *1940.10–1941.04*	1.93	8.95	c
Axis Occupation *1941.05–1944.10a*	59.84	47.27b	56.81
First Axis occupation phase *1941.05–1943.10*	19.21	15.77	21.92
Second Axis occupation phase *1943.11–1944.10*	153.61	116.17	137.32
Stabilisation period *1944.11–1948.12*	8.69	18.71	12.15

Notes: The table refers to the mean monthly rate of change (first differences of the natural logarithms) of the index of the cost-of-living in Athens, the money balances and the drachma/British gold sovereign (spot). Indices (1938.09–1939.08 = 1). a. until 10 November 1944. b. Data do not exist for the months April and May 1941. c. Throughout the war period, the exchange rate of the drachma remained fixed at 1,063 drachmas.

From the aftermath of WWII to January 1946, three schemes for monetary reform and economic stabilisation were implemented. Key features of all schemes were a currency reform plan based on devaluation, wage and price controls and the re-structuring of public finances by curbing spending and raising taxes.

Table GR7_A presents the available data series for the war period and its aftermath (1939–1949). GR7A_A displays money stock, namely banknotes and coins in circulation in the hands of the non-bank public (end-of-month and end-of-year data points) plus commercial banks' vault cash. Com-

[109] See Lazaretou (2005b, 2009). Even though it is an *ad hoc* definition, it well captures all seven historical episodes of hyperinflation and the recent Serbian episode as well.
[110] This is the well-known effect of the Laffer curve: an increase in the tax rate above a crucial limit will eventually reduce revenue. See Blanchard and Fischer (1990, ch. 4).

FIGURE 11 The Greek Inflation Rate, 1939–1948
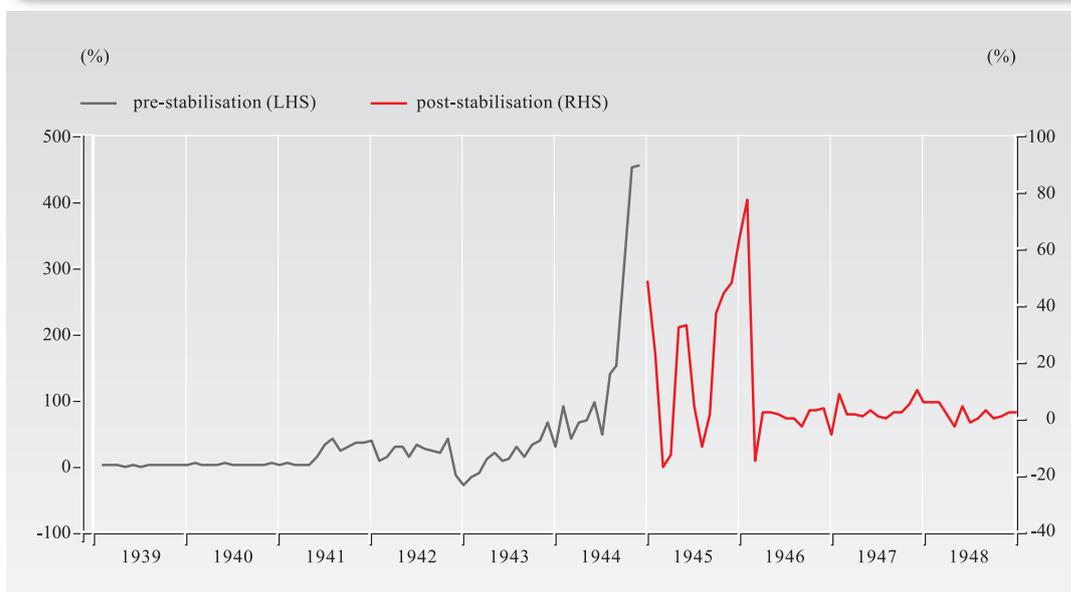
Note: monthly percentage changes (first differences of the natural logarithms). Post-stabilisation: new series.
Sources: BoG and Delivanis and Cleveland (1949).

FIGURE 12 Seigniorage Revenue, 1939–1948
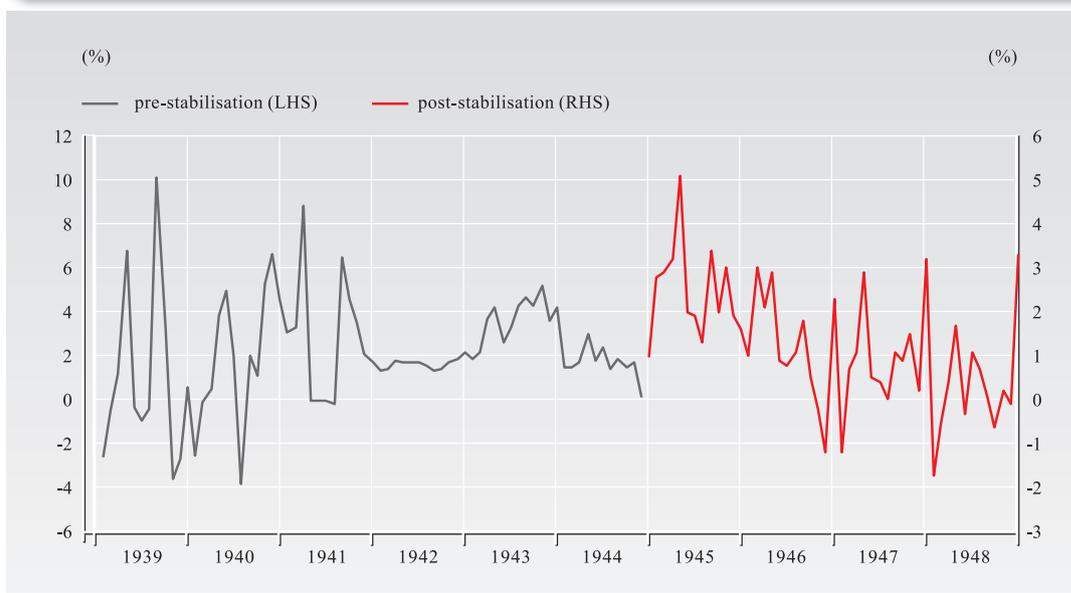
Note: Own calculations based on data provided by the BoG and Delivanis and Cleveland (1949). Monthly data, index (1938.09–1939.08) = 1.
Data do not exist for April and May 1941.

mercial banks' reserves which were held with the BoG are not taken into account due to lack of data. Thus, the series coming directly from the balance sheet of the central bank can be considered a safe proxy for the monetary base (M0). Data do not exist for the first two months of the coun-

try's occupation, i.e. April and May 1941. The BoG resumed its official reporting as late as 1946, starting from 11 November, 1944. GR7B_A_I displays the index of the cost-of-living in Athens.[111] The yearly data points are monthly not seasonally adjusted averages. The December 1944 data value is missing. GR7C_A and GR7C_A_I report the nominal exchange rate (spot, fixing price) of the drachma against the British gold sovereign traded on the Athens money market. Up to December 1944, the monthly data points refer to the last day of every month call dates, while the yearly figures refer to the mean average using the end-of-month figures. From January 1945 to December 1949, the monthly data points are the monthly averages of the daily observations (end-of-day) and the yearly data entries are year averages. The monthly data are presented in Table GR7_M of the volume's CD (GR7A_M; GR7A_M_I; GR7B_M; GR7B_M_I; GR7C_M; GR7C_M_I).

3   DATA SOURCES

As far as monetary variables are concerned, mainly banknotes in circulation for the period prior to 1928, the published primary sources are the NBG's *Balance Sheets* and *Annual Reports*. In its annual and semi-annual balance sheets, the stock of banknotes in circulation was reported for the end-June (as at the last working day) and the end-December (as at the last working day) call dates. In its annual report, observations appeared on a monthly and a yearly basis. Analytically, for 1842[112], which was the first year of the NBG's operation, only the end-June and the end-December call dates are available. The figures are derived from its annual and semi-annual balance sheets for that year. Both the NBG's balance sheet and the profit-loss statement for that year were published in French language and were not typed but handwritten. From 1843 onwards, *Table 1* of the NBG's annual report is still the only well-defined information set for the 19th century Greek monetary data. It reports the stock of notes (of both high- and low-denomination values) in circulation on the last day of the NBG's monthly statement. The maximum and the minimum values[113] as well as the year averages based on the monthly (end-of-month) observations were also reported. Daily observations do not exist and thus a monetary aggregate relied on the averages of the daily data could not be built. Weekly entries (as at the last day of a six-day working week) are also available, albeit for very few years. Keeping the same publication practice throughout the period under study, data comparability is enhanced.

Fortunately, the other two provincial note-issuing banks, namely the Bank of Crete and the Bank of Epirus and Thessaly, followed the same publication practices as the NBG used to, i.e. they officially reported the stock of their banknotes in circulation on the last working day of every month or year. Primary data sources are their *Annual Reports* and *Balance Sheets*.

For the period 1928–1939, the primary data source is the *Monthly Statistical Bulletin* of the BoG. The first issue of the *Bulletin* appeared in January 1930. Again, monetary data did not refer to a consistent time series of narrow or broad money definitions but to reported data for money in circulation (commercial bank's vault cash is included) and private bank deposits at monthly and yearly frequencies. Specifically, *Table 3* of the *Bulletin* shows notes and coins in circulation, and demand deposits of the government and the commercial banks with the BoG, for every month call date

---

[111] It is a general weighted price index with 1938.09–1939.08 = 100 as the base year until November 10, 1944 and 1938=100, onwards. It captures the price developments in five main product categories: food, clothing, housing, electricity and heating, and miscellaneous.

[112] Prior to 1842, the Greek Ministry of Finance had the right of money issue. Coins of low denomination were chiefly used in money transactions; although data do not exist. The only available information concerns few yearly data entries widely dispersed across time on the amount of the coins issued (but not circulated).

[113] They refer to that monthly (as at the last day of month) observation with the maximum and minimum value.

(as at the last day of month) since the BoG's inception in May 1928. It describes monthly developments of its balance sheet items and the commercial banks' sheet as well; it reports monthly figures on all commercial bank private deposits and money balances held as vault cash by the banks. The modified *Table 1* of the post-war version of the BoG's *Monthly Statistical Bulletin* comes directly from *Table 3* of the pre-war version. In the modified *Table 1*, the staff of the BoG regularly reported data on M1 and its components.[114]

The data figures on the currency reserves are from *Table 2* and *Table 3* of the NBG's *Annual Reports*, the *Annual Reports* of the other provincial note-issuing banks and the BoG's *Monthly Statistical Bulletin*.

The data entries on the consumer prices are from the BoG (Prices Section) based on information released by the GSSG. The data on the wholesale price index are from the AOS and are reported in the GSSG's *Statistical Yearbook* and its *Monthly Statistical Bulletin*.[115] The data figures on the import and export prices are from the GSSG's *Yearbook* and its *Bulletin*. The data on the value of industrial production is taken from the GSSG's Yearbook based on information released by the *Industry Inspection*, while the data series on the index of the volume of the industrial production is from the AOS and the GSSG's *Yearbook*. The data on the economic activity index is from the BoG's *Monthly Statistical Bulletin*. The data on the employment index and the wage index are from the periodical edition of the AOS, *the Greek Economy during the years 1935, 1936, 1937, 1938 and 1939* (various issues).

The data on the NBG's discount rate, the short-term and long-term lending rates have been collected (date of change) from its *Annual Report* (various issues). Particularly, valuable information on lending rates or the date of their change is extracted from the part of the *Annual Report* detailing the progress of the bank's lending activity over the previous year. Unfortunately, regularly published reports on the lending rates or on the date of their change do not exist. The data on the BoG's discount rate and the short-term market lending rate have been collected (date of change) from the BoG's *Monthly Statistical Bulletin*. Bank deposit rates have been collected (date of change) from the NBG's *Annual Reports* and the BoG's *Monthly Statistical Bulletin*. An additional source for the period 1928–1939 is the NBG's reports on deposit rates (see NBG, *Historical Archive*, file 19). The data on the market bond prices are from the Athens Stock Exchange *Yearbook* (issues for the years 1911, 1915, 1918, 1926, 1929–1930, 1930–1931) and the BoG, *Monthly Statistical Bulletin* (various issues).

The data on GDP at current and constant 1914 prices are from Kostelenos et al. (2007). The data on population are derived from the GSSG's *Yearbook*. The data series on the value of the imports and exports in nominal terms, both at annual and monthly frequencies, are taken from the GSSG's *Yearbook* and its *Bulletin*.

The data on total public revenue, total tax revenue, direct taxes and indirect taxes are from Prontzas et al. (2012). Their primary source is the *Annual Government Reports* on public revenue. The data on government spending, defence spending and interest payments are from the *Annual Government Reports* on public spending and from Antoniou (2012). Total liabilities of the Greek State to the NBG and to the BoG are taken from the NBG's and the BoG's Balance Sheets.

[114] The post-war version of the BoG's *Monthly Statistical Bulletin* first appeared in January 1950. The publication was discontinued in 2004.

[115] The first issue of the GSSG *Bulletin* appeared in March 1929 (1929 was the reference year) and the first issue of its *Statistical Yearbook* appeared in May 1931 (1930 was the reference year).

The data on the drachma nominal exchange rates (spot rates, monthly and yearly averages, fixing) are from the NBG's *Annual Reports*, the GSSG's *Bulletin* and the BoG's *Bulletin*. Valaoritis (1902) and Zolotas (1928, 1929) are additional sources. The data on the gold/paper drachma parity are from Simantiras (1905, see the appendix), Valaoritis (1902–1903, see Tableau H), the BoG's *Monthly Statistical Bulletin* (various issues) and the GSSG's *Statistical Yearbook* (various issues).

For the period 1940 to 1949, the primary data source is the BoG's *Monthly Statistical Bulletin*. However, from December 1941 to December 1944, the BoG stopped reporting data. The BoG published its post-war *Monthly Statistical Bulletin* as late as 1946 without, however, reporting ex-post data series covering the years 1941–1944. The data appendices of Delivanis and Cleveland (1949) and Delivanis (1946) are the only available data source covering that period.

4 REFERENCES

Alogoskoufis, George and Sophia Lazaretou (2002), *Η δραχμή: από τον φοίνικα στο ευρώ (The drachma: from the phoenix to the euro)*, 2nd edition, Livanis Publishers, Athens (in Greek).

Andreades, Andreas (1916), *Παραδόσεις δημόσιας οικονομίας και στατιστικής, Μέρος ΙΙ: Το φορολογικό σύστημα της Ελλάδος (Lectures on public finance and statistics. Part II: The Greek tax system)*, Athens (in Greek).

Andreades, Andreas (1904), Ιστορία των εθνικών δανείων. *Μέρος Α: Τα δάνεια της Ανεξαρτησίας (1824-1825), το δημόσιο χρέος επί της Βαυαρικής δυναστείας (History of national loans. Part I: The loans of Independence (1824–1825) and public debt during Bavaria dynasty)*, Library of Historical Studies, Hestia Publishers, Athens (in Greek).

Angelopoulos, Angelos (1933), *Η άμεσος φορολογία εν Ελλάδι (Income taxation in Greece)*, Athens, Eleftheroudakis Publishers (in Greek).

Antoniou, Antonios (2012), *Historical time-series data on Greek expenditures*, KEPE and NBG, work in progress.

Bank of Greece (2014), *Η Ιστορία της Τράπεζας της Ελλάδος, 1928–2008 (History of the Bank of Greece, 1928–2008)*, Athens (in Greek).

Bank of Greece (2011), *Νομισματική πολιτική και οικονομική κρίση: η νομισματική πολιτική της Τράπεζας της Ελλάδος στα χρόνια 1929–1941, (Monetary Policy and the Economic Crisis: the Bank of Greece Policy in the years 1929–1941)*, July, Athens (in Greek).

Bank of Greece (2009a), 'Monetary time-series of South-Eastern Europe from the 1870s to 1914', *SEEMHN and Bank of Greece Working Paper 94*.

Bank of Greece (2009b), *Η κρίση του 1929 και η Ελληνική οικονομία (The 1929 Crisis and the Greek Economy)*, November, Athens (in Greek).

Bank of Greece (1978), *Τα πρώτα πενήντα χρόνια της Τράπεζας της Ελλάδος (The first fifty years of the Bank of Greece)*, Athens (in Greek).

Bank of Greece (1930–1941), *Μηνιαίο Στατιστικό Δελτίο (Monthly Statistical Bulletin)*, various issues (in Greek).

Bank of Greece (1947), *Έκθεση του Διοικητή για τα έτη 1941, 1944, 1945 και 1946 (Annual report of the Governor for the years 1941, 1944, 1945 and 1946)*, Athens (in Greek).

Bank of Crete (1899–1920), *Annual reports and balance sheets*, Historical Archives of the National Bank of Greece, various issues (in Greek).

Bank of Epirus and Thessaly (1882–1897), *Annual reports and balance sheets*, Historical Archives of the National Bank of Greece, various issues (in Greek).

Barro, Robert (1987), 'Government spending, interest rates, prices, and budget deficits in the UK, 1701–1918', *Journal of Monetary Economics 20*, 221–247.

Barro, Robert (1979), 'On the determinants of the public debt', *Journal of Political Economy 87*, 940–971.

Bernholz, Peter (2008), 'Government bankruptcy of Balkan nations and inflation before 1914: a comparative analysis', *SEEMHN and Bank of Greece Working Paper 74*.

Blanchard, Olivier and Stanley Fisher (1990), *Lectures on macroeconomics*, MIT Press.

Bordo, Michael D. (2008), 'Growing up to financial stability', *SEEMHN and Bank of Greece Working Paper 85*.

Bordo, Michael D. (2006), 'Sudden stops, financial crises and original sin in emerging markets: déjà vu?' *NBER Working Paper 12393*.

Bordo, Michael D., Barry Eichengreen, Daniela Klingebiel and Maria Soledad Martinez-Peria (2001), 'Is the crisis problem growing more severe?' *Economic Policy 32*, 51–75.

Bordo, Michael D., Michael Edelstein and Hugh T. Rockoff (1999), 'Was adherence to the gold standard a 'good housekeeping seal of approval' during the interwar period?', *NBER Working Paper 7186*.

Bordo, Michael D. and Anna J. Schwartz (1997), 'Monetary policy regimes and economic performance: the historical record', *NBER Working Paper 6201*.

Bordo, Michael D. and Hugh T. Rockoff (1996), 'The gold standard as a good 'Housekeeping seal of approval', *Journal of Economic History 56*, 389–428.

Bordo, Michael D. and Finn Kydland (1995), 'The gold standard as a rule: An essay in exploration', *Explorations in Economic History 32*, 423–464.

Branco, Amélia, Nuno Valério and Rita Martins de Sousa (2010), 'Monetary policy during two crises in a semi-peripheral economy: Portugal 1891 and 1929'*, paper presented at the 5th SEEMHN Conference on *Monetary policy during economic crises: a comparative and historical perspective*, hosted by the Central Bank of the Republic of Turkey, 16–17 April, Istanbul.

Caballero, Ricardo, Kevin Cowan and Jonathan Kearns (2004), 'Fear of sudden stops: Lessons from Australia and Chile', NBER *Working Paper 10519*.

Cagan, Phillip (1956), 'The monetary dynamics of hyperinflation', in Milton Friedman (ed), *Studies in the quantity of money*, 25–117, Chicago, University of Chicago Press.

Chouliarakis, George and Sophia Lazaretou (2014), 'Déjà vu? The Greek crisis experience, 2010s versus 1930s. Lessons from history', *Bank of Greece Working Paper 176*.

Christodoulakis, Nicos (2013), 'Currency crises and collapse in interwar Greece: Predicament or policy failure?' *European Review of Economic History*, 17, 294–317.

Delivanis, Dimitrios (1946), *Η Δραχμή από του φθινοπώρου 1939 μέχρι της νομισματικής διαρρυθμίσεως της 25ης Ιανουαρίου 1946 και τα πρώτα αποτελέσματά της (The drachma from September 1939 to the monetary stabilisation of January 1946 and its first effects)*, Papazisis Publishers (in Greek).

Delivanis, Dimitrios and William C. Cleveland (1949), *Greek monetary developments*, Bloomington Indiana University Press.

Eichengreen, Barry (2011), *Exorbitant privilege: The rise and fall of the dollar and the future of the international monetary system*, Oxford University Press.

Eichengreen, Barry, Ricardo Hausman and Ugo Panizza (2003), 'Currency mismatches, debt intolerance and original sin: Why they are not the same and why it matters', *NBER Working Paper 10036*.

Eichengreen, Barry and Ricardo Hausmann (1999), 'Exchange rate and financial fragility', Federal Reserve of Kansas City, *New challenges for monetary policy*. A Symposium sponsored by the Federal Reserve of Kansas City, 329–368.

Eichengreen, Barry and Peter H. Lindert (eds) (1989), *The international debt crisis in historical perspective*, Cambridge MIT Press.

Einaudi, Luca (2008), 'Monetary separation and European convergence in the Balkans in the 19th century', in Peter Mooslechner and Ernst Gnan (eds), *The experience of exchange rate regimes in South-eastern Europe in a historical and comparative perspective, SEEMHN and OeNB, Proceedings of Workshops 13*, 30–49.

Esteves, Rui Pedro, Jaime Reis and Fabiano Ferramosca (2007), 'Market integration in the golden periphery: the Lisbon/London exchange, 1854–1891', University of Oxford, *Economic Series Working Paper 338*.

Flandreau, Marc and Nathan Sussman (2004), 'Old sins: exchange clauses and European foreign lending in the 19th century', *CEPR Discussion Papers 4248*.

Flandreau, Marc and Mathilde Maurel (2001), 'Monetary union, Trade integration and business fluctuations in 19th century Europe. Just do it', *CEPR Discussion Papers 3087*.

Fratianni, Michele and Franco Spinelli (2001), 'Fiscal dominance and money growth in Italy: the long record', *Explorations in Economic History 38*, 252–272.

Freris, Andrew (1986), *The Greek economy in the twentieth century*, Croom Helm, London.

Friedman, Milton and Anna J. Schwartz (1970), *Monetary statistics of the United States*, Columbia University Press and NBER.

General Statistical Service of Greece (1930–1939), *Monthly Statistical Bulletin*, various issues.

Gennadios, John (1878), *The Greek loans of 1824–25: How they were handled and what the world thought of. Opinions of the day without comment*, London.

Gervinus, Georg Gottfried (1863), *Insurrection et régénération de la Grèce*, volumes I, II. Translated to French by J. F. Minssen and Léonidas Sgouta, Publisher A. Durand, Paris.

IMF (2013), International reserves and foreign currency liquidity. Guidelines for a data template.

Karabalis, Nicos and Euripides Kontelis (2007), 'Inflation measurement in Greece', Bank of Greece *Economic Bulletin 28*, 83–95.

Kehayias, E. (1875), *Το νέο νομισματικό σύστημα (The new monetary system)*, National Bank of Greece, 1927, (in Greek).

Kindleberger, Charles (1989), *Manias, panics and crashes: A history of financial crises*, New York, Basic Books.

Kordatos, John (1957), *Ιστορία της νεότερης Ελλάδος, 1860–1900 (History of modern Greece, 1860–1900)*, volume 4, Athens (in Greek).

Kostelenos, George, Dimitris Vasiliou, Emmanuel Kounaris, Socrates Petmezas and Michael Sfakianakis (2007), *Sources of the economic history of modern Greece: quantitative data and statistical series: Greek domestic product, 1830–1939*, Centre for Planning and Economic Research and the National Bank of Greece (in Greek with an English summary).

Kostis, Constantine and George Kostelenos (2003), *Ιστορία της Εθνικής Τράπεζας, 1914–1940 (History of the National Bank of Greece, 1914–1940)*, Historical Archive of the NBG, (in Greek).

Kirkilitsis, Andreas (1934), *Αι τράπεζαι εν Ελλάδι (The Greek banking system)*, Athens (in Greek).

Kirkilitsis, Andreas (1935), *Η Εθνική Τράπεζα της Ελλάδος και άλλαι εμπορικαί τράπεζαι κατά την περίοδον 1928–1934 (The National Bank of Greece and other commercial Greek banks in 1928–1934)*, Kyklos Publishers, Athens (in Greek).

Lazaretou, Sophia (2013), *Από την πτώχευση στην ύφεση: ο διεθνής οικονομικός έλεγχος του 1898 (From debt default to recession: the 1898 International finance control)*, Issues of Economic History no 2, Gutenberg, Athens (in Greek).

Lazaretou, Sophia (2012), 'Financial crises and financial market regulation: the long record of an 'emerger', in Yüksel Görmez, Şevket Pamuk and M. İbrahim Turhan (eds) *Monetary policy during economic crises: a comparative and historical perspective*, 85–112, SEEMHN and Central Bank of the Republic of Turkey, Ankara.

Lazaretou, Sophia (2010), 'Money supply and Greek historical monetary statistics: Definition, construction, sources and data', *Economies et Sociétés* 41, 47–67.

Lazaretou, Sophia (2009), 'Greece: WWII and efforts for monetary reconstruction 1939–1948. Data and sources', paper presented at the 5th SEEMHN DCTF meeting, Bank of Greece, Athens, 26 June.

Lazaretou, Sophia (2008), 'Banking and central banking in pre-WWII Greece: money and currency developments', *SEEMHN and Bank of Greece Working Paper 86*.

Lazaretou, Sophia (2006), 'Greek monetary economics in retrospect: History and data' in Roumen Avramov and Şevket Pamuk (eds), *Monetary and fiscal policies in SE Europe, historical and comparative perspectives*, 109–126, SEEMHN and Bulgarian National Bank, Sofia.

Lazaretou, Sophia (2005a), 'The Drachma, foreign creditors and the international monetary system: tales of a currency during the 19th and the early 20th centuries', *Explorations in Economic History* 42, 202–236.

Lazaretou, Sophia (2005b), 'Greek monetary economics in retrospect: the adventures of the drachma', *Economic Notes, Review of Banking, Finance and Monetary Economics* 34, 331–370.

Lazaretou, Sophia (2004), 'Monetary system and macroeconomic policy in Greece, 1833–2003', Bank of Greece *Economic Bulletin* 22, 33–66.

Lazaretou, Sophia (1999), 'The Drachma on the metallic monetary standards: Lessons from the past', Bank of Greece *Economic Bulletin* 13, 7–25.

Lazaretou, Sophia (1996), 'Macroeconomic policies and nominal exchange rate regimes: Greece in the interwar period', *Journal of European Economic History* 25, 647–670.

Lazaretou, Sophia (1995), 'Government spending, monetary policies and exchange rate regime switches: the drachma in the gold standard period', *Explorations in Economic History* 35, 28–50.

Maddison, Angus (2004), The world economy. *Historical statistics*, OECD Development Centre Studies.

Martín-Aceña, Pablo (2007), 'Central banking in the Iberian Peninsula: A comparison', paper presented at the annual conference of the EABH, Malta, May 2007.

Martin-Aceña, Pablo and Jaime Reis (2000), *Monetary standards in the periphery: paper, silver and gold*, *1854–1933* (eds), New York, St. Martin Press.

Mazower, Mark (1992), 'Οικονομική πολιτική στην Ελλάδα, 1932–1936' (Economic policy in Greece, 1932–1936)', in George Mavrogordatos and Christos Chatziosiph (eds), *Βενιζελισμός και αστικός εκσυγχρονισμός (Venizelos and urban modernisation)*, Crete University Press (in Greek).

Mazower, Mark (1991), *Greece and the interwar economic crisis*, Clarendon Press, Oxford.

Mazower, Mark (1989), 'Ελλάδα και η οικονομική κρίση του 1931' (Greece and the Economic Crisis of 1931), in Thanos Veremis and George Gouloumis (eds), *Ελευθέριος Βενιζέλος: Κοι-*

νωνία, οικονομία και πολιτική (Eleftherios Venizelos: Society, economy and policy), Athens (in Greek).

Meissner, Christopher M. (2002), 'A new world order: explaining the emergence of the classical gold standard', *NBER Working Paper 9233*.

Mooslechner, Peter (2008), 'The choice of exchange rate regimes. Where do we stand?', in Peter Mooslechner and Ernst Gnan (eds), *The experience of the exchange rate regimes in South–Eastern Europe in a historical and comparative perspective, SEEMHN and OeNB, Proceedings of Workshops 13*, 10–29, Vienna.

Morys, Matthias (2008), 'Adjustment under the classical gold standard (1870s–1919): How costly did the external constraint come to the European periphery', in Peter Mooslechner and Ernst Gnan (eds), *The experience of the exchange rate regimes in South–Eastern Europe in a historical and comparative Perspective, SEEMHN and OeNB Proceedings of Workshops 13*, 50–79, Vienna.

Morys, Matthias (2006), 'South–Eastern European growth experience in European perspective, 19th and 20th centuries', in Roumen Avramov and Şevket Pamuk (eds), *Monetary and fiscal policies in SE Europe: Historical and comparative perspectives*, SEEMHN and Bulgarian National Bank, 23–44, Sofia.

National Bank of Greece (2001), *Ιστορικό χρονολόγιο 1841–2001 (A historical chronicle 1841–2001)*, Historical Archive of the NBG (in Greek).

National Bank of Greece (1842–1927), *Έκθεση του Διοικητή και Ισολογισμοί (Annual Reports and Balance Sheets)*, Historical Archive of the National Bank of Greece, microfilms.

OeNB (2008), *The experience of exchange rate regimes in South–Eastern Europe in a historical and comparative perspective, SEEMHN and OeNB Proceedings of Workshops 13*, Appendix, Vienna.

Ögren, Anders (2003), 'Reserves, money supply and prices: the international adjustment mechanism in Sweden under the silver and gold standards, 1834–1913', *SSE/EFI Working Paper Series in Economics and Finance 544*.

Øksendal, Lars Frederik (2006), '1931 and all that: Re–examining Norwegian monetary policy in the 1930s', paper presented at the XIV International Economic History Congress, Helsinki, August.

Prontzas, Vangelis, Panayotis Kimourzis and Nicos Melios (2012), *Sources of the economic history of modern Greece: Quantitative data and statistical series: Public Revenue, 1833–1939*, Centre for Planning and Economic Research and the National Bank of Greece (in Greek with an English summary).

Reinhart, Carmen M. and Kenneth S. Rogoff (2009), *This time is different. Eight centuries of financial folly*, Princeton University Press.

Reinhart, Carmen M. (2010), 'This time is different Chart book: Country histories on debt, default and financial crises', *NBER Working Paper 15815*.

Reinhart, Carmen M. and Kenneth S. Rogoff (2010), 'From financial crash to debt crisis', *NBER Working Paper 15795*.

Simantiras, John K. (1905), *Το ζήτημα της αναγκαστικής κυκλοφορίας, (The issue of fiat money)*, Appendix, Athens (in Greek).

Valaoritis, John A. (1902), *Ιστορία της Εθνικής Τραπέζης της Ελλάδος, 1842–1901 (History of the National Bank of Greece, 1842–1901)*, Volumes 1, 2, National Bank of Greece, Cultural Institute (in Greek).

Valaoritis, John A. (1902–1903), *Notes*, Tableaux et Graphiques relatifs à la question du cours force et du change en Grèce présentes à Monsieur E. Streit gouverneur de la Banque Nationale de Grèce, Athènes.

Venezis, Elias (1955), *Το χρονικό της Τραπέζης της Ελλάδος (Chronicle of the Bank of Greece)*, Bank of Greece (in Greek).

Zolotas, Xenophon (1929), *Νομισματική σταθεροποίησις (Stabilisation policies in theory and practice)*, Greka Publishers (in Greek).

Zolotas, Xenophon (1928), *Νομισματικά και συναλλαγματικά φαινόμενα, 1910–1927 (Monetary and exchange rate phenomena in Greece, 1910–1927)*, volume 1, Hellenic Society for Scientific Studies, Greka Publishers (in Greek).

Note: In the following tables ".." indicates that the item did not exist; in case of reconstructed data, that the entry was not calculated for that point in time; "." indicates a missing value. An absolute zero is coded as "-", while "0.0" codes a rounded zero. For details on the unit of the series, see index table in section 2.

Table GR1.1_A Currency reserves, 1842–1927   *continue*

(NBG and other note-issuing banks; thousands of LMU drachmas)

Year	Total currency reserves GR1A_A	Metallic holdings GR1B_A	Foreign exchange GR1C_A
1842	397.5	397.5	..
1843	345.9	345.9	..
1844	535.9	535.9	..
1845	762.3	762.3	..
1846	771.8	771.8	..
1847	620.1	620.1	..
1848	964.0	964.0	..
1849	1205.8	1205.8	..
1850	1114.7	1114.7	..
1851	1218.2	1218.2	..
1852	1473.8	1473.8	..
1853	1822.7	1822.7	..
1854	3424.8	3424.8	..
1855	3835.3	3835.3	..
1856	5191.4	5191.4	..
1857	4656.9	4656.9	..
1858	4717.4	4717.4	..
1859	3625.1	3625.1	..
1860	4411.0	4411.0	..
1861	4749.6	4749.6	..
1862	6105.4	6105.4	..
1863	7232.7	7232.7	..
1864	6461.4	6461.4	..
1865	6437.3	6437.3	..
1866	6101.6	6101.6	..
1867	8487.2	8487.2	..
1868	7386.5	7386.5	..
1869	10955.3	8066.3	2889.0
1870	14342.7	11932.4	2410.3
1871	14207.1	11254.0	2953.1
1872	18259.9	11943.7	6316.2
1873	18359.5	14696.8	3662.7
1874	17042.6	14444.5	2598.1
1875	17959.8	16316.7	1643.1
1876	16318.3	12797.6	3520.7
1877	13270.8	9659.5	3611.3
1878	7342.5	6121.4	1221.0
1879	18591.8	17074.3	1517.6
1880	18706.6	12396.7	6309.9
1881	15041.3	5453.9	9587.4
1882	18033.5	8091.4	9942.1
1883	16274.6	8205.8	8068.8
1884	48629.7	34901.8	13727.9

Table GR1.1_A Currency reserves, 1842–1927

(NBG and other note-issuing banks; thousands of LMU drachmas)

Year	Total currency reserves GR1A_A	Metallic GR1B_A	Foreign exchange GR1C_A
1885	13887.6	7209.9	6677.7
1886	9015.2	4522.4	4492.7
1887	9646.9	3724.2	5922.7
1888	11620.4	3523.9	8096.5
1889	13234.2	3334.0	9900.2
1890	10096.5	3426.1	6670.5
1891	10720.4	3149.0	7571.4
1892	11672.3	2609.9	9062.4
1893	10422.0	2692.8	7729.2
1894	9478.1	2178.7	7299.3
1895	9695.5	2021.2	7674.3
1896	11017.1	1949.1	9068.1
1897	13075.1	1930.8	11144.9
1898	11852.2	2581.4	9270.8
1899	20787.1	4058.9	16728.3
1900	23249.7	4142.7	19107.0
1901	25789.7	6008.0	19781.6
1902	22627.1	4627.2	18000.0
1903	21935.7	4166.8	17768.9
1904	26491.1	4397.5	22093.6
1905	31832.0	5378.8	26453.3
1906	40141.5	4801.6	35339.8
1907	39870.6	5401.9	34468.7
1908	49064.2	5737.9	43326.3
1909	47428.3	5879.3	41548.9
1910	76682.3	8883.2	67799.1
1911	114411.1	15738.1	98673.0
1912	178087.8	19408.3	158679.5
1913	262608.6	28809.2	233799.4
1914	219256.5	41285.9	177970.6
1915	320611.5	60853.2	259758.3
1916	556566.2	63486.9	493079.8
1917	971886.1	66144.9	905741.2
1918	1720357.0	54307.3	1666049.7
1919	1562934.5	56993.9	1505940.6
1920	1439646.1	56642.0	1383004.1
1921	1373434.8	56406.7	1317028.1
1922	1398601.9	31386.7	1342215.1
1923	1384359.4	37876.3	1321483.1
1924	1309920.2	39792.9	1245127.3
1925	1344783.2	46324.1	1273459.1
1926	1449458.5	52118.8	1372249.7
1927	1457682.6	83936.6	1373746.0

Table GR1.1_A Currency reserves, 1928–1939

(BoG; thousands of LMU drachmas)

Year	Total currency reserves GR1D_A	Metallic GR1E_A	Foreign exchange GR1F_A	Government bonds GR1G_A
1928	4240600.0	553500.0	3687100.0	.
1929	3115900.0	640500.0	2475400.0	.
1930	3011400.0	510000.0	2501400.0	.
1931	1916000.0	869300.0	1046700.0	.
1932	3129100.0	.	1821500.0	653800.0
1933	4659000.0	.	4018500.0	640500.0
1934	4104900.0	.	4104900.0	638500.0
1935	3489600.0	.	3489600.0	567200.0
1936	3385000.0	.	3385000.0	557000.0
1937	3657900.0	.	3657900.0	514000.0
1938	3824500.0	.	3824500.0	112300.0
1939	4223200.0	.	4223200.0	122900.0

Table GR1.2_A Main monetary statistics, 1842–1939

(GR1H_A and GR1I_A: in thousands of LMU drachmas; GR1J_A and GR1K_A: ratio)

Year	Broad money (M3) GR1H_A	Narrow money Monetary base (M0) GR1E_A	Money multiplier (M3)/(M0) GR1F_A	Reserve-banknote ratio GR1G_A
1842	323.5	535.4	0.604	1.45*
1843	624.5	839.3	0.744	0.57
1844	1033.2	982.2	1.052	0.67
1845	1820.7	2252.8	0.808	0.50
1846	2692.7	3121.4	0.863	0.37
1847	2490.5	2299.0	1.083	0.36
1848	2002.8	2297.3	0.872	0.87
1849	2803.3	1797.5	1.560	0.86
1850	3471.4	2443.0	1.421	0.56
1851	3254.8	2618.5	1.243	0.78
1852	3529.8	2224.8	1.587	0.80
1853	4136.0	3286.3	1.259	0.94
1854	5409.4	4386.8	1.233	1.33
1855	7004.1	4863.1	1.440	1.14
1856	9752.0	6378.5	1.529	0.97
1857	12829.7	8822.5	1.454	0.65
1858	12312.8	9471.8	1.300	0.68
1859	13690.8	10828.5	1.264	0.52
1860	16967.0	9958.9	1.704	0.59
1861	19211.9	12671.2	1.516	0.50
1862	20836.6	12305.9	1.693	0.54
1863	23256.3	14962.5	1.554	0.50

Table GR1.2_A Main monetary statistics, 1842–1939   *continue*

(GR1H_A and GR1I_A: in thousands of LMU drachmas; GR1J_A and GR1K_A: ratio)

Year	Broad money (M3) GR1H_A	Narrow money Monetary base (M0) GR1E_A	Money multiplier (M3)/(M0) GR1F_A	Reserve-banknote ratio GR1G_A
1864	24853.2	16349.4	1.520	0.41
1865	26490.8	16684.8	1.588	0.40
1866	24231.9	16514.3	1.467	0.40
1867	28993.1	23376.4	1.240	0.47
1868	32609.5	31637.1	1.031	0.36
1869	37329.1	32348.9	1.154	0.46**
1870	39863.9	40341.8	0.988	0.61
1871	41209.2	46939.9	0.878	0.56
1872	48127.3	56263.7	0.855	0.64
1873	52776.7	44632.8	1.182	0.55
1874	57130.1	55349.8	1.032	0.48
1875	54427.0	56099.9	0.970	0.56
1876	55287.3	59504.8	0.929	0.51
1877	65226.1	70674.8	0.923	0.34
1878	83653.9	79016.9	1.059	0.14
1879	78386.4	77127.7	1.016	0.40
1880	105655.5	83134.3	1.271	0.32
1881	147200.9	118996.8	1.237	0.18
1882	167958.6	127320.3	1.319	0.17
1883	189208.1	139405.8	1.357	0.16
1884	178474.3	127741.3	1.397	0.69
1885	189299.5	124349.2	1.522	0.18
1886	224960.3	175422.3	1.282	0.09
1887	224073.3	168376.6	1.331	0.09
1888	216641.7	176768.0	1.226	0.13
1889	217774.4	168762.1	1.290	0.15
1890	236361.3	154826.9	1.527	0.10
1891	246425.2	159606.2	1.544	0.09
1892	241998.6	189887.0	1.274	0.10
1893	242841.7	169296.9	1.434	0.09
1894	220990.6	161096.0	1.372	0.09
1895	218368.7	159832.3	1.366	0.09
1896	222291.4	158975.5	1.398	0.10
1897	227191.8	161606.3	1.406	0.10
1898	240013.1	182828.8	1.313	0.10
1899	248776.5	211128.2	1.178	0.12
1900	242360.9	198798.2	1.219	0.14
1901	253506.6	223449.5	1.135	0.15
1902	258134.6	243416.9	1.060	0.13
1903	269524.1	257974.7	1.045	0.14

Table GR1.2_A Main monetary statistics, 1842–1939

(GR1H_A and GR1I_A: in thousands of LMU drachmas; GR1J_A and GR1K_A: ratio)

Year	Broad money (M3) GR1H_A	Narrow money Monetary base (M0) GR1E_A	Money multiplier (M3)/(M0) GR1F_A	Reserve-banknote ratio GR1G_A
1904	292906.9	245211.1	1.195	0.17
1905	289701.1	237093.6	1.222	0.22
1906	315082.8	236481.3	1.332	0.29
1907	329427.5	236406.4	1.393	0.27
1908	394388.3	237219.6	1.663	0.35
1909	408833.8	220521.0	1.854	0.33
1910	416411.8	219655.7	1.896	0.55
1911	454854.4	160812.8	2.828	0.81
1912	633191.4	230635.2	2.745	0.88
1913	730022.8	297748.5	2.452	1.08
1914	727807.5	294431.5	2.472	0.84
1915	930819.2	395345.2	2.354	0.82
1916	1249487.3	571723.5	2.185	0.99
1917	1812870.6	890493.6	2.036	1.13
1918	2542432.6	1402051.6	1.813	1.37
1919	2973115.9	1401744.0	2.121	1.14
1920	3798776.0	2019385.8	1.881	0.95
1921	5273189.0	2508553.8	2.102	0.64
1922	6830899.0	3698465.4	1.847	0.44
1923	9268719.0	5406933.9	1.714	0.30
1924	10014923.7	5292613.8	1.892	0.27
1925	10719249.0	5547900.5	1.932	0.25
1926	11262640.3	5716500.9	1.970	0.30
1927	10175903.3	5690844.5	1.788	0.29
1928	17053400.0	6346700.0	2.687	0.54***
1929	17499300.0	5741200.0	3.048	0.46
1930	22343600.0	5596500.0	3.992	0.46
1931	21775500.0	4743300.0	4.591	0.41
1932	20716800.0	5494100.0	3.771	0.30
1933	23296200.0	6904500.0	3.374	0.42
1934	24499400.0	7602400.0	3.223	0.41
1935	24685700.0	6813400.0	3.623	0.30
1936	25665400.0	7461500.0	3.440	0.27
1937	29167600.0	7657700.0	3.809	0.26
1938	31387500.0	8106800.0	3.872	0.21
1939	34066000.0	10060300.0	3.386	0.30

Notes: (*) metallic holdings only; (**) total reserves (metallic and foreign exchange holdings); (***) ratio of total reserves and 'potential' circulation. 'Potential' money in circulation was defined as the sum of the banknotes in the hands of the public plus reserves and commercial balances with the central bank (see the statute of the BoG, Article 61). The data refer to the end of the year.

Table GR1.3_A Total banknote circulation, 1842–1927

(thousands of LMU drachmas)

Year	Total banknotes in circulation GR1L_A	Year	Total banknotes in circulation GR1L_A	Year	Total banknotes in circulation GR1L_A
1842	274.6	1871	25180.0	1900	130001.3
1843	601.4	1872	28389.3	1901	131472.0
1844	799.0	1873	33380.9	1902	135624.8
1845	1511.3	1874	35472.4	1903	131356.0
1846	2079.7	1875	32278.7	1904	126666.2
1847	1699.5	1876	32173.4	1905	119804.5
1848	1101.9	1877	38985.5	1906	123050.2
1849	1397.7	1878	54023.4	1907	129321.9
1850	1978.6	1879	45196.5	1908	121718.2
1851	1561.1	1880	56962.0	1909	135151.8
1852	1839.1	1881	84763.2	1910	133587.7
1853	1949.3	1882	92506.9	1911	136960.3
1854	2575.4	1883	97489.9	1912	199254.4
1855	3373.1	1884	70333.0	1913	236008.8
1856	5333.4	1885	80305.2	1914	255089.5
1857	7190.9	1886	109164.3	1915	384765.2
1858	6983.3	1887	110142.9	1916	562083.3
1859	6932.9	1888	94001.1	1917	855154.6
1860	7487.6	1889	99228.2	1918	1256520.6
1861	9491.8	1890	112676.1	1919	1373513.9
1862	11355.2	1891	129767.9	1920	1508365.0
1863	14390.3	1892	127153.0	1921	2161182.0
1864	15633.8	1893	119559.6	1922	3149445.0
1865	15877.7	1894	114658.3	1923	4681200.0
1866	15206.2	1895	116681.9	1924	4865923.7
1867	17970.9	1896	118944.4	1925	5339249.0
1868	20408.9	1897	130231.7	1926	4864640.3
1869	23588.4	1898	130979.5	1927	4966258.3
1870	23613.5	1899	138959.5		

Table GR1.4_A Money balances, 1928–1939

(thousands of LMU drachmas)

Year	Total currency in circulation GR1M1_A	Vault cash GR1M2_A	Deposits with the BoG GR1M3_A
1928	5219300.0	470200.0	657200.0
1929	4668100.0	525100.0	547900.0
1930	4226300.0	575700.0	793600.0
1931	3635700.0	367300.0	740300.0
1932	4281600.0	432600.0	779900.0
1933	4946700.0	502100.0	1455700.0
1934	5123200.0	563200.0	1916000.0
1935	5484100.0	503500.0	825800.0
1936	5666200.0	536300.0	1259000.0
1937	6201500.0	575000.0	881200.0
1938	6654500.0	584200.0	868100.0
1939	8877200.0	575600.0	607500.0

Table GR1.5_A Bank deposits, 1842–1939

(thousands of LMU drachmas)

Year	Private bank deposits GR1N_A	Year	Private bank deposits GR1N_A
1842	48.9	*1891*	116657.3
1843	23.1	*1892*	114845.6
1844	234.2	*1893*	123282.1
1845	309.4	*1894*	106332.3
1846	613.0	*1895*	101686.8
1847	791.0	*1896*	103347.0
1848	900.9	*1897*	96960.1
1849	1405.6	*1898*	109033.6
1850	1492.8	*1899*	109817.0
1851	1693.7	*1900*	112359.6
1852	1690.7	*1901*	122034.6
1853	2187.7	*1902*	122509.7
1854	2834.0	*1903*	138168.1
1855	3631.0	*1904*	166240.7
1856	4418.6	*1905*	169896.6
1857	5638.8	*1906*	192032.6
1858	5329.5	*1907*	200105.6
1859	6757.9	*1908*	272670.1
1860	9479.4	*1909*	273682.0
1861	9720.1	*1910*	282824.1
1862	9481.4	*1911*	317894.1
1863	8866.0	*1912*	433937.0
1864	9219.4	*1913*	494014.0
1865	10613.1	*1914*	472718.0
1866	9025.7	*1915*	546054.0
1867	11022.2	*1916*	687404.0
1868	12200.6	*1917*	957716.0
1869	13740.7	*1918*	1285912.0
1870	16250.4	*1919*	1599602.0
1871	16029.2	*1920*	2290411.0
1872	19738.0	*1921*	3112007.0
1873	19395.8	*1922*	3681454.0
1874	21657.7	*1923*	4587510.0
1875	22148.3	*1924*	5149000.0
1876	23113.9	*1925*	5380000.0
1877	26240.6	*1926*	6398000.0
1878	29630.5	*1927*	5209645.0
1879	33189.9	*1928*	11834100.0
1880	48693.5	*1929*	12831200.0
1881	62437.7	*1930*	18117300.0
1882	75451.7	*1931*	18139800.0
1883	91718.2	*1932*	16443700.0
1884	108141.3	*1933*	18349500.0
1885	108994.3	*1934*	19376200.0
1886	115796.0	*1935*	19201600.0
1887	113930.4	*1936*	19999200.0
1888	122640.6	*1937*	22966100.0
1889	118546.2	*1938*	24733000.0
1890	123685.2	*1939*	25188800.0

Table GR2.1_D NBG's lending interest rates, 1842–1939

(in per cent per annum)

Date of change	Discount rate head offices/ branches GR2A_D[1]	Date of change	Collateralised loans GR2C_D[2]	Date of change	Collateralised credit line GR2D_D	Date of change	Mortgage-backed loans GR2I_D[3]
30 March 1841	8	1843	6	1849	9	1849	10
April 1847	7.2	22 Aug. 1853	8	22 Aug.1853	8	22 Aug.1853	8
22 Aug. 1853	8	1872	12	1858	8	11 Apr.1859	7
1 April 1869	7/ 8*	1889	6	1889	6	15 Aug.1864	8
20 Oct.1871	8	1898	5.5	1 Jan.1892	6.5	1869	8
Nov. 1878	7	1902	6	1894	6	1871	8
24 Feb. 1888	7*	1914	6	1923	8	1 Oct.1890	7
Dec. 1890	6.5/ 7*	1 July 1918	6.5	21 Sept.1931	8	1911	9
28 Sept. 1898	6/ 6.5*	16 Sept.1918	8			1914	6.5
1 July 1901	6	16 May 1920	8			1915	6
1 Jan. 1902	6.5/ 7*	2 Jan.1923	8			1923	6
1 July 1908	5.5/ 6.5*	21 Sept.1931	8–9			April 1925	8
1 Jan. 1909	5.5/ 7*						
1 Jan. 1910	6/ 6.5*						
19 July 1914	8						
11 Nov. 1914	6.5						
30 Sept. 1916	6						
6 Sept. 1917	5.5						
8 March 1918	6						
6 Sept. 1918	5.5						
1 Jan. 1920	6						
15 May 1920	6.5**						
1 Jan. 1923	7.5						
15 Feb. 1923	8.5						
1924	7.5						
23 Feb. 1925	8.5						
18 Aug. 1925	10						
9 Sept. 1925	10						
7 July 1926	11***						
6 June 1927	10						
Until May 1928	9						
1929	11–13						
1930	8–10						
1931	12–11						
1932	12–11						
14 Oct. 1933	7						
Jan. 1937	6						

Notes:
1 lending rates on advances to traders with a maximum 3-month maturity (68 days on average).
2 the value of the collateral was set up to 75% of the amount of the loan. The loans had a maturity of 4 to 12 months.
3 in the first years of the NBG function, the non-bank rate was 12–20%. In 1871, a rate of 8% was set by law. In 1925, the non-bank rate was two or even three times higher 18–22%.
(*) The first figure refers to the rate imposed on trade advances at the head offices of the NBG in Athens as well as at its branches in big commercial cities, such as Piraeus, Patras and Syros, while the second figure refers to the rate imposed on advances to traders at the branches located in the country's provinces. The latter rate was always much higher by 0.5, 1.0 or even 1.5 percentage points. (**) in the non-bank market, the rate was 18–20%. (***) the non-bank rate was even higher 18–30%.

Table GR2.1_D The BoG's discount rate and the short-term market lending rate, 1928–1941

(in per cent per annum)

	Discount rate (*)		Short- term market lending rate (**)
Date of change	GR2B_D	Date of change	GR2E_D
14 May 1928	10	*Dec.1928*	9
30 Nov. 1928	9	*Dec.1929*	11–13
26 Sept. 1931	12	*Jan.1931*	8–9
29 Oct.1931	11	*April 1931*	7–8.5
12 Jan.1932	12	*May 1931*	7–8
20 Feb.1932	11	*Aug.1931*	7.5–8
8 Aug.1932	10	*Sept.1931*	12
3 Dec.1932	9	*Nov.1931*	11–12
6 June 1933	7.5	*Jan. 1932*	12
14 Oct.1933	7	*June 1932*	11
4 Jan. 1937	6	*Jan.1933*	9–12
15 July to Nov. 1941	5	*June 1933*	8–10.5
		Nov.1933	7.5–10.5
		Dec.1933	7–9
		June 1934	7.5–9.5
		Aug.1934	7–9.5
		Sept.1934	8–10
		Dec.1934	7.5–10
		Jan. 1935	7–10
		Feb. 1935	7.5–10
		March 1935	8–10
		April 1935	7.5–10
		May 1935	7–10
		July 1935	7.5–10
		Aug.1935	9–10
		Oct.1935	8.5–10
		Feb.1936	8–10
		March 1936	8.5–10
		Dec.1936	8–9
		July 1937	7.5–9
		Aug.1937	7–9
		Aug.1939	7.5–9
		Dec.1939	7–9
		Sept.1940	8–9
		July–Nov.1941	7

Notes: (*) official rate; (**) 4 biggest commercial banks (NBG, Emporiki Bank, Bank of Athens, and Bank of Anatolis), unweighted rates, minimum and maximum rates; it was 3 percentage points higher than the deposit rate.

Table GR2.1_D Deposit rates

(in drachmas; in per cent per annum)

	Sight deposits		Savings deposits		Time deposits
Date of change	**GR2F1_D**	**Date of change**	**GR2F2_D**	**Date of change**	**GR2F3_D**
Until end-June1909	no return	*Until Nov.23, 1925*	4	*Nov. 1897*	1.5–4 (*)
July 1909	1–1.5	*24 Nov. 1925*	5	*Jan.1903*	1.5–4
April 1918	1	*1926–1929*	5–7	*April 1909*	2–4
Jan.1920	2	*Oct.1930*	4.25	*Jan.1920*	2.25–4
Feb.1925	3	*April 1931*	4–4.25	*Feb.1925*	3.25–7
Nov.1925	4	*May 1933*	3–4	*Nov.1925*	4.25–7
1926–1929	3.5–5			*1926–29*	4.5–7
Oct.1930	3			*Oct.1930*	4–5.5
Jan. 1931	3–4.5			*May 1933*	3–6
April 1931	3				
May 1933	2.5–3.5				
June 1933	2.5				
Dec.1933	2				
June 1941	1				

Notes: From 1928, the series refer to all domestic banks; (*) a lower limit was applied to deposits up to 3 months; an upper limit was applied to deposits with a longer maturity.

Table GR2.1_D Deposit rates

(in foreign exchange; in per cent per annum)

	Sight deposits in pound sterling		Sight deposits in US Dollar		Sight deposits in FRF
Date of change	**GR2F4_D**	**Date of change**	**GR2F5_D**	**Date of change**	**GR2F6_D**
Until end-June 1913	no return	*Until end-Feb. 1918*	no return	*Until end-Feb. 1918*	no return
July 1913	1	*March 1918*	0.5	*March 1918*	1
Jan.1914	1.5	*Jan.1920*	2	*Jan.1920*	2
Feb.1916	3	*Dec.1920*	2	*Dec.1920*	3
July 1916	2–3.5	*May 1921*	3.5	*Feb.1920*	3.5
Jan.1917	3	*Oct.1922*	3	*Oct.1930*	2
Mach 1918	3.5	*Feb.1925*	3.5	*June 1933*	1.5
Jan.1919	1	*Oct.1930*	3	*July 1933*	no return
Jan.1920	3	*June 1933*	2.5		
April 1920	4.5	*July 1933*	1		
Dec.1920	5				
June 1921	4.5				
Oct.1922	3				
June 1923	2				
Jan.1925	3				
Feb.1925	3.5				
Oct.1930	3				
June 1933	2.5				
July 1933	1				

Table GR2.2_A Market bond prices, 1901–1940 (quoted on the Athens Stock Exchange)

(in FRF until 1921 and in 1929 paper drachmas onwards)

Year	GR2G1 _A 1881*	GR2G2 _A 1884*	GR2G3_A 1887*	GR2G4_A 1889*	GR2G5_A 1890*	GR2G6_A 1902*	GR2G7_A 1907*	GR2G8_A 1910*	GR2G9_A 1914*	GR2G10_A 1928*
1901	200.5	198.5	222.5	154.5	193.5	..	..	..	..	..
1902	212.5	211.0	228.0	156.5	206.0	..	..	..	..	..
1903	219.0	214.5	233.5	161.0	209.0	410.0	..	..	..	..
1904	221.5	221.0	229.5	172.0	218.0	421.5	..	..	..	..
1905	258.5	256.0	263.0	203.5	253.5	457.0	..	..	..	..
1906	264.5	263.0	270.5	208.0	260.5	468.0	..	..	..	..
1907	255.0	252.5	250.5	201.0	251.0	458.0	..	..	..	..
1908	251.0	252.0	258.5	198.0	247.0	462.5	98.2	..	..	..
1909	251.0	250.5	255.5	193.5	248.0	479.5	98.0	..	..	..
1910	258.5	258.5	243.5	196.0	247.0	462.5	96.7	..	..	..
1911	279.5	272.5	258.0	216.0	268.5	459.0	100.2	437.9	..	..
1912	301.0	285.0	272.5	234.0	293.5	451.5	101.7	422.9	..	..
1913	300.0	295.0	276.5	236.5	297.0	421.5	101.1	402.5	..	..
1914	288.0	285.5	260.0	226.0	286.5	395.0	97.5	379.3	462.6	..
1915	262.5	255.5	248.0	205.0	252.5	391.0	93.7	371.8	387.0	..
1916	268.5	263.0	242.5	214.5	263.5	333.0	93.7	373.7	428.1	..
1917	292.0	254.0	257.5	215.7	272.5	333.0	92.2	345.6	431.7	..
1918	295.5	341.5	321.5	271.5	335.0	366.5	96.5	364.0	442.3	..
1919	350.0	348.5	313.0	264.7	346.0	354.5	92.5	407.1	520.0	..
1920	378.5	374.5	301.7	299.0	371.5	318.5	77.9	441.4	578.7	..
1921	576.0	572.5	488.0	475.5	571.5	517.0	138.5	323.2	428.1	..
1922	1320.6	1308.5	1190.0	1088.0	1292.5	1300.0	312.5	1038.0	1390.0	..
1923	2716.8	2775.0	2685.0	2480.0	2900.0	2525.0	650.0	2135.0	2450.0	..
1924	2478.5	2480.0	2057.5	1910.0	2500.0	2337.5	625.0	1972.5	2565.0	..
1925	2584.5	3585.0	2925.0	2925.0	3510.0	3155.0	837.5	2437.5	3114.0	..
1926	4394.1	4522.5	3700.0	3525.0	4507.5	3592.5	1175.0	3550.0	4670.0	..
1927	4113.3	4110.0	3365.0	3142.5	4050.0	3750.0	1170.0	3830.0	4880.0	..
1928	4887.3	4845.0	4050.0	3895.0	4820.0	4287.5	1257.5	4310.0	5600.0	..
1929	5369.9	5365.6	4365.3	4210.4	5318.1	4434.6	1281.5	4393.8	5606.1	6653.3
1930	5563.1	5560.3	4588.7	4445.8	5506.5	4454.9	1311.9	4502.8	5797.3	6822.7
1931	5688.8	5687.2	4674.4	4506.4	5634.6	4633.6	1353.7	4617.9	5899.1	6752.3
1932	3197.5	3247.2	2662.6	2684.1	..	..	775.0	2850.0	3179.1	..
1933	2739.8	2737.7	2216.8	2148.8	2689.1	2131.7	566.4	2109.2	2785.0	3144.2
1934	3395.3	3394.9	2695.3	2633.3	3367.4	2585.7	681.6	2576.5	3350.5	3653.3
1935	3096.0	3095.6	2462.7	2357.1	2976.3	2359.1	643.3	2354.3	3099.0	3631.3
1936	3128.9	3133.1	2644.7	2426.7	3061.4	2479.8	620.4	2541.2	3172.9	3683.7
1937	3521.1	3521.3	2867.1	2781.9	3404.8	2793.3	713.1	2898.5	3753.2	4300.1
1938	3434.1	3433.9	2736.1	2659.7	3348.9	2706.8	682.6	2717.1	3726.8	4337.9
1939	2827.6	2827.6	2258.8	2241.6	2814.6	2325.6	556.2	2275.7	2958.3	3422.5
1940	2243.2	2243.3	1807.9	1802.7	2213.8	1843.9	445.1	1847.7	2413.8	2859.0

Note: the 1901–1921 data values can be easily transformed into 1929 current paper drachmas by multiply with the conversion rate: 1 gold drachma = 14.87 new paper drachmas. Until 1919, one gold franc was equal to one gold drachma and the drachma was theoretically convertible; however, in practice it was a fiat money. * year of loan issue.

Table GR2.3_A Current yields, 1901–1940

(in per cent per annum)

Year	GR2H1 _A 1881*	GR2H2 _A 1884*	GR2H3_A 1887*	GR2H4_A 1889*	GR2H5_A 1890*	GR2H6_A 1902*	GR2H7_A 1907*	GR2H8_A 1910*	GR2H9_A 1914*	GR2H10_A 1928*
1901	12.47	12.59	8.99	12.94	12.92	..	..	..	..	..
1902	11.76	11.85	8.77	12.78	12.14	..	..	..	..	..
1903	11.42	11.66	8.57	12.42	11.96	4.88	..	..	..	..
1904	11.29	11.31	8.71	11.63	11.47	4.74	..	..	..	..
1905	9.67	9.77	7.60	9.83	9.86	4.38	..	..	..	..
1906	9.45	9.51	7.39	9.62	9.60	4.27	..	..	..	..
1907	9.80	9.90	7.98	9.95	9.96	4.37	..	..	..	..
1908	9.96	9.92	7.74	10.10	10.12	4.32	5.09	..	..	..
1909	9.96	9.98	7.83	10.34	10.08	4.17	5.10	..	..	..
1910	9.67	9.67	8.21	10.20	10.12	4.32	5.17	..	..	..
1911	8.94	9.17	7.75	9.26	9.31	4.36	4.99	4.57	..	..
1912	8.31	8.77	7.34	8.55	8.52	4.43	4.91	4.73	..	..
1913	8.33	8.47	7.23	8.46	8.42	4.74	4.94	4.97	..	..
1914	8.68	8.76	7.69	8.85	8.73	5.06	5.13	5.27	5.40	..
1915	9.52	9.78	8.06	9.76	9.90	5.12	5.33	5.38	6.46	..
1916	9.31	9.51	8.25	9.32	9.49	6.01	5.33	5.35	5.84	..
1917	8.56	9.84	7.77	9.27	9.17	6.01	5.42	5.79	5.79	..
1918	8.46	7.32	6.22	7.37	7.46	5.46	5.18	5.50	5.65	..
1919	7.14	7.17	6.39	7.55	7.23	5.64	5.41	4.91	4.81	..
1920	6.61	6.68	6.63	6.69	6.73	6.28	6.42	4.53	4.32	..
1921	4.34	4.37	4.10	4.21	4.37	3.87	3.61	6.19	5.84	..
1922	28.15	28.41	24.99	27.33	28.76	22.88	23.79	28.65	26.74	..
1923	13.68	13.40	11.08	11.99	12.82	11.78	11.44	13.93	15.17	..
1924	15.00	14.99	14.45	15.57	14.87	12.72	11.90	15.08	14.49	..
1925	10.37	10.37	10.17	10.17	10.59	9.43	8.88	12.20	11.94	..
1926	8.46	8.22	8.04	8.44	8.25	8.28	6.33	8.38	7.96	..
1927	9.04	9.05	8.84	9.46	9.18	7.93	6.35	7.77	7.62	..
1928	7.61	7.67	7.34	7.64	7.71	6.94	5.91	6.90	6.64	..
1929	6.92	6.93	6.81	7.06	6.99	6.71	5.80	6.77	6.63	6.76
1930	6.72	6.73	6.52	6.73	6.79	6.72	5.70	6.64	6.45	6.60
1931	6.62	6.62	6.44	6.68	6.68	6.50	5.56	6.52	6.38	6.27
1932	20.38	20.07	19.58	19.45	..	..	16.82	18.32	20.52	..
1933	31.85	31.88	39.50	32.49	32.45	32.75	30.75	33.10	31.34	22.74
1934	25.70	25.71	25.90	26.51	25.92	27.00	25.61	27.10	26.05	17.87
1935	28.25	28.26	28.42	29.69	29.39	29.66	27.20	29.72	28.23	17.49
1936	26.06	26.03	24.67	26.88	26.64	26.31	26.29	25.67	25.70	17.54
1937	18.23	18.23	17.91	18.46	18.86	18.39	18.01	17.72	17.10	15.35
1938	18.77	18.78	18.85	19.39	19.25	19.06	18.89	18.98	17.30	15.21
1939	24.91	24.91	24.94	25.13	25.02	24.23	25.32	24.76	23.81	19.28
1940	38.38	38.38	38.11	38.21	38.89	37.36	38.69	37.28	35.67	22.75

Notes: Current yield has been calculated as the ratio of the annual interest paid to the bond's market price, i.e. current yield = ((face value × coupon interest rate) / market price) × 100. The face value and the market price are in French francs till 1921; from 1922 onwards are both in 1929 paper drachmas. The coupon rate is in decimal form. The multiplication by 100 converts the decimal into percentage return. * year of loan issue.

Table GR3_A Exchange rates, 1877–1941   *continue*

(in LMU paper drachmas)

Year	drachma/ pound sterling GR3A_A	drachma/ French franc GR3B_A	drachma/US dollar GR3C_A	gold/paper drachma GR3D_A
1877	26.332	1.034	.	.
1878	28.197	1.113	.	.
1879	25.786	1.050	.	.
1880	.25.807	1.028	.	.
1881	26.616	1.050	.	.
1882	27.586	1.085	.	.
1883	28.458	1.143	.	.
1884	26.415	1.047	.	.
1885	26.719	1.059	.	1.058
1886	31.070	1.232	.	1.233
1887	31.881	1.263	.	1.263
1888	32.145	1.274	.	1.274
1889	31.006	1.230	.	1.230
1890	31.074	1.233	.	1.236
1891	32.838	1.298	.	1.290
1892	36.123	1.436	.	1.437
1893	40.441	1.608	.	1.600
1894	43.921	1.749	.	1.745
1895	45.469	1.803	.	1.802
1896	43.907	1.739	.	1.736
1897	42.102	1.676	.	1.686
1898	38.208	1.474	.	1.471
1899	39.501	1.565	.	1.567
1900	41.467	1.644	.	1.645
1901	41.761	1.658	.	1.658
1902	40.932	1.620	.	1.623
1903	39.133	1.564	.	1.565
1904	34.744	1.389	.	.
1905	31.024	1.232	.	.
1906	27.751	1.104	.	.
1907	27.411	1.088	.	.
1908	27.183	1.081	.	.
1909	26.038	1.029	.	.
1910	25.109	0.999	.	1.000*
1911	25.241	0.999	.	1.000
1912	25.235	0.999	.	1.000
1913	25.225	1.000	.	1.000
1914	25.160	1.002	5.165	1.000
1915	25.035	0.944	5.271	1.000
1916	24.632	0.879	5.188	1.000
1917	24.604	0.900	5.172	1.000
1918	24.823	0.926	5.168	1.000
1919	24.325	0.775	5.510	1.000
1920	37.079	0.648	9.444	1.370
1921	70.459	1.374	18.174	2.800
1922	170.459	2.884	36.862	6.650
1923	296.097	3.895	64.009	12.040
1924	247.348	2.921	56.083	9.900
1925	312.712	3.065	64.764	12.510

Table GR3_A Exchange rates, 1877–1941

(in LMU paper drachmas)

Year	drachma/ pound sterling GR3A_A	drachma/ French franc GR3B_A	drachma/US dollar GR3C_A	gold/paper drachma GR3D_A
1926	386.516	2.496	79.563	15.470
1927	368.548	2.981	75.821	14.740
1928	372.872	3.004	76.628	14.900
1929	375.000	3.025	77.133	14.868
1930	375.000	3.028	77.080	14.960
1931	352.803	3.036	77.376	15.062
1932	472.966	4.934	133.738	26.065
1933	595.961	7.069	145.001	34.830
1934	543.942	7.077	108.363	34.910
1935	529.153	7.115	108.425	34.990
1936	538.414	6.893	108.707	32.620
1937	550.000	4.682	111.393	25.680
1938	550.000	3.304	112.617	25.790
1939	550.000	3.131	125.090	28.170
1940	542.060	3.120	151.340	34.440
1941	518.200	2.791	137.917	.

Note: (*) 1910–1919: estimates.

Table GR4_A Government finances, 1833–1939, nominal terms   *continue*

(thousands of LMU drachmas)

Year	Total public revenue GR4A_A	Total taxes GR4B_A	Direct taxes GR4C_A	Indirect taxes GR4D_A	Government expenditure GR4E_A	Interest payments GR4F_A	Defence spending GR4G_A
1833	7118.6	6320.0	4262.5	2057.5	13395.1	1673.6	7630.7
1834	9306.7	7564.8	5079.2	2485.6	28931.2	14272.7	21255.1
1835	11595.7	9912.5	7485.4	2427.1	16130.8	3229.7	7739.5
1836	11911.4	9621.0	6967.8	2653.3	15603.9	2499.5	7761.0
1837	12392.0	9979.8	6793.3	3186.5	17864.8	3109.8	8213.1
1838	13049.3	10939.2	7284.4	3654.7	15333.9	3398.8	6562.9
1839	13584.5	11382.3	7900.1	3482.1	15468.0	3322.0	6662.8
1840	14300.0	12031.0	8255.8	3775.2	15972.4	4123.8	6419.4
1841	13281.1	11349.8	7621.4	3728.4	16017.3	4299.8	6055.3
1842	11812.5	10188.0	6566.2	3621.7	15916.4	3694.6	6268.0
1843	13478.4	9136.7	5787.2	3349.5	14397.1	3472.0	5498.0
1844	12753.7	8049.7	4924.3	3125.4	13755.8	3469.9	5190.4
1845	13170.6	8335.7	4710.6	3625.1	14101.0	3475.5	4884.7
1846	14649.8	8780.8	5275.3	3505.5	14426.3	3475.3	4966.3
1847	13928.5	7279.4	3587.6	3691.8	15320.8	4074.6	5209.4
1848	14985.0	8876.2	5298.3	3578.0	15771.7	3861.1	5635.7
1849	16273.0	9749.8	5625.1	4124.6	15682.3	3652.6	5691.0
1850	16587.1	9536.4	5424.4	4112.0	16657.4	3650.3	6076.9
1851	16235.0	9889.2	5225.4	4663.8	15933.1	3486.7	5668.1
1852	16446.7	9935.7	6133.3	3802.5	16313.5	3479.6	5707.4

Table GR4_A Government finances, 1833–1939, nominal terms   *continue*

Year	Total public revenue GR4A_A	Total taxes GR4B_A	Direct taxes GR4C_A	Indirect taxes GR4D_A	Government expenditure GR4E_A	Interest payments GR4F_A	Defence spending GR4G_A
1853	17116.7	10351.2	6496.0	3855.2	16228.8	3476.1	5719.0
1854	18143.0	11669.6	8304.9	3364.8	17544.2	3490.4	6958.1
1855	19834.8	13056.0	8404.6	4651.4	19258.9	3473.7	7587.2
1856	21490.2	14244.0	8774.2	5469.8	19346.8	3473.6	7412.2
1857	22433.4	14780.2	9193.1	5587.1	19722.8	3475.5	6570.3
1858	21848.2	13959.3	8003.9	5955.5	22834.0	3477.4	8219.4
1859	23219.6	15385.2	9415.6	5969.6	23231.3	3481.4	7821.8
1860	.	.	.	.	23347.1	3793.7	7769.6
1861	22836.1	15424.5	9370.6	6053.9	25172.4	4383.8	8286.3
1862	19645.2	12183.4	6740.4	5443.0	25485.9	3610.6	8361.1
1863	22637.3	11790.1	6119.7	5670.4	23463.6	4071.6	8965.8
1864	24142.4	14496.5	7820.2	6676.3	24495.8	5240.3	7773.6
1865	26040.4	16307.7	6328.1	9979.6	28336.8	5647.1	9186.3
1866	27070.5	16909.4	7814.8	9094.6	27946.3	6016.4	9773.7
1867	41073.6	21732.8	10428.1	11304.8	38030.7	6182.2	18455.2
1868	38816.9	22560.3	11312.1	11248.3	44460.9	7154.2	22129.7
1869	41010.8	20777.6	9070.9	11706.8	37241.3	8732.2	12316.0
1870	41017.5	21753.6	10502.6	11250.9	35833.8	9099.7	11862.0
1871	37232.9	23832.2	10824.7	13007.5	36848.7	8812.7	9641.8
1872	33014.7	24106.0	11484.7	12621.3	32943.5	7057.9	9857.8
1873	31211.7	23849.1	10935.5	12913.6	32286.9	7078.5	9269.0
1874	54611.9	25436.5	12104.2	13332.3	45318.1	14122.6	11509.9
1875	32554.5	25357.7	9917.5	15440.3	34961.3	6844.6	10167.6
1876	31799.5	23677.3	9456.9	14220.4	34907.3	6724.7	11043.8
1877	40021.9	25776.3	9758.9	16017.4	35171.5	7011.8	10118.1
1878	37521.2	27848.6	11381.2	16467.4	36580.4	7719.6	11214.2
1879	72679.9	29370.6	9942.1	19428.5	95583.8	12029.1	63187.5
1880	45171.4	28723.3	8599.4	20123.9	88701.1	15223.0	53746.8
1881	106588.3	31447.9	8566.5	22881.3	101945.0	16511.4	62725.0
1882	71507.9	41026.7	12117.8	28908.9	64260.2	20126.9	20071.9
1883	58537.6	44154.0	12002.9	32151.1	67795.9	20411.3	20653.3
1884	107419.6	47027.7	13308.7	33719.0	91346.8	24982.1	32307.2
1885	61427.0	44321.0	11283.0	33037.9	122797.8	30507.5	57045.3
1886	95568.0	49886.6	13066.7	36819.8	129717.5	35299.4	59560.2
1887	176210.2	60714.0	17177.8	43536.2	107128.3	46078.2	27251.2
1888	93671.2	65708.3	18859.8	46848.5	108050.9	36005.8	31683.1
1889	183032.0	44211.6	17414.9	26796.7	168739.3	98256.1	26419.4
1890	123155.3	41666.4	14762.7	26903.6	141465.4	53916.6	31874.2
1891	106396.1	46174.9	18347.1	27827.7	122836.4	41713.8	30717.1
1892	106465.5	48738.8	18579.8	30159.0	117664.7	42254.7	25067.7
1893	96723.4	49430.5	20718.1	28712.3	97016.2	25973.7	24441.2
1894	102885.6	52786.3	19144.9	33641.4	85135.7	22210.8	25908.0
1895	94657.1	52026.9	19106.9	32920.0	91642.0	23222.3	27846.3
1896	96931.7	52973.4	18546.1	34427.2	90890.6	23618.3	30237.4

Table GR4_A Government finances, 1833–1939, nominal terms

Year	Total public revenue GR4A_A	Total taxes GR4B_A	Direct taxes GR4C_A	Indirect taxes GR4D_A	Government expenditure GR4E_A	Interest payments GR4F_A	Defence spending GR4G_A
1897	98485.8	47457.3	14145.3	33312.0	137043.9	20030.8	79685.6
1898	330918.8	59109.5	17415.7	41693.8	312056.6	135452.2	140831.6
1899	115392.6	60651.8	19418.0	41233.8	104608.5	29744.7	36467.4
1900	119199.3	58964.6	19209.4	39755.3	109318.4	33554.7	32923.2
1901	167652.1	65236.0	21589.2	43646.7	114130.7	36321.9	33302.0
1902	138279.0	64836.1	20674.5	44161.6	124504.3	35191.6	34928.4
1903	116154.2	64877.7	19670.8	45206.9	116259.6	36387.9	37367.4
1904	133570.8	64890.8	19080.3	45810.6	116150.5	37060.5	36554.0
1905	129716.0	68131.1	19949.1	48182.0	116321.3	35330.4	37132.5
1906	133074.4	75080.3	20885.1	54195.2	121599.9	34006.5	40046.6
1907	136532.0	76953.6	21714.7	55238.9	119319.1	34170.6	40602.5
1908	126385.2	73677.6	20979.4	52698.2	133651.8	36659.2	49848.8
1909	125046.1	71860.1	21505.6	50354.5	136789.9	32458.0	55713.6
1910	175440.8	81213.2	23019.9	58193.3	140440.3	35148.5	59120.7
1911	240193.7	85611.5	23554.1	62057.4	181368.6	78784.7	53648.1
1912	224919.5	76586.9	20606.9	55980.0	207984.0	38815.5	116160.0
1913	303119.0	77502.0	19338.0	58164.1	261973.3	46257.0	160797.6
1914	559377.7	135317.5	48342.4	86975.1	485671.4	229544.0	175289.9
1915	438004.4	139719.3	50286.9	89432.4	385900.1	143212.2	142246.1
1916	312845.1	138413.1	45910.3	92502.7	237804.6	65911.0	90167.7
1917	443420.3	111357.0	47642.3	63714.7	317024.3	67112.7	145231.6
1918	1250505.3	204484.5	67891.4	136593.0	1446062.8	151695.6	1095227.3
1919	1128729.0	276315.0	89314.2	187000.8	1353603.6	96397.5	994010.5
1920	1653582.5	365351.9	127787.4	237564.5	1682637.7	138942.0	1158953.8
1921	2278723.3	495243.2	159537.3	335705.9	2472776.6	288542.5	1767289.4
1922	4577184.7	1147303.5	304199.9	843103.5	3458422.4	464613.6	2348724.9
1923	3989809.7	2320598.6	667944.0	1652654.7	4978434.0	1044198.0	2878270.8
1924	5758377.5	3348230.4	855975.2	2492255.2	5497477.0	1329234.8	2753922.7
1925	7922178.0	3528361.7	855697.9	2672663.8	6840698.4	1428967.8	3149381.4
1926	9508112.1	4378727.0	1111280.8	3267446.1	8687190.1	2962618.8	3312458.2
1927	8996026.9	5571501.8	1347136.0	4224365.8	7769917.2	2320387.0	3344723.8
1928	10551516.6	5667122.8	1445811.0	4221311.8	9446396.6	3698774.8	3253122.3
1929	18729433.2	5626247.8	1255903.9	4370343.9	18354678.5	3482660.4	9928750.1
1930	11393607.3	5550409.7	1203216.8	4347192.9	11176466.0	3371930.8	4395622.7
1931	11076989.2	6451711.7	1266669.4	5185042.4	11098635.1	3123642.7	3488632.0
1932	9144413.0	5733350.7	1282469.1	4450881.6	9117017.1	1710843.9	2999377.8
1933	8476149.8	6037571.7	1512842.6	4524729.2	7705821.0	785386.9	3009677.6
1934	9237042.9	6662425.0	1776194.0	4886231.0	11151021.5	3602287.2	3320176.2
1935	10646907.9	7518474.1	1927843.2	5590630.9	10048246.0	1499014.7	3182460.2
1936	.	.	.	.	12683391.6	1460057.9	4346606.1
1937	14130251.2	9203091.8	2749882.3	6453209.5	13415652.7	1649706.9	5579005.1
1938	13846906.4	9414488.3	2892601.5	6521886.8	12634730.1	1780192.5	4271586.2
1939	14339608.3	9106827.0	2916986.2	6189840.8	14011200.7	1900756.0	5557494.6

Table GR4_A Government finances, 1833–1939, nominal terms   *continue*

(thousands of LMU drachmas; GR4I_A: percentage of total assets)

Year	Domestic public debt* GR4H_A	Domestic public debt* GR4I_A	Year	Domestic public debt* GR4H_A	Domestic public debt* GR4I_A
1833	..	..	1880	52868.3	37.7
1834	..	..	1881	90300.6	49.7
1835	..	..	1882	86169.3	42.8
1836	..	..	1883	96154.2	43.6
1837	..	..	1884	40058.9	18.8
1838	..	..	1885	89000.5	39.9
1839	..	..	1886	140551.5	53.8
1840	..	..	1887	142581.4	55.1
1841	..	..	1888	134052.6	53.1
1842	0.0	0.0	1889	133677.5	53.5
1843	0.0	0.0	1890	135920.7	51.2
1844	0.0	0.0	1891	150053.6	54.4
1845	0.0	0.0	1892	145994.2	54.1
1846	0.0	0.0	1893	146568.3	55.0
1847	0.0	0.0	1894	132617.7	53.8
1848	336.4	4.8	1895	128047.2	52.4
1849	0.0	0.0	1896	124833.8	50.3
1850	302.9	3.5	1897	149947.0	55.2
1851	205.3	2.4	1898	150880.4	52.9
1852	105.5	1.2	1899	144282.0	46.4
1853	0.0	0.0	1900	143364.8	45.5
1854	0.0	0.0	1901	142785.1	43.3
1855	0.0	0.0	1902	140875.2	40.3
1856	8.2	0.05	1903	134792.1	40.4
1857	0.0	0.0	1904	132922.6	36.6
1858	0.0	0.0	1905	131458.7	36.5
1859	0.0	0.0	1906	131579.7	34.1
1860	0.0	0.0	1907	131256.8	33.2
1861	842.8	3.2	1908	136908.7	33.5
1862	2210.1	7.2	1909	137862.0	33.9
1863	3775.0	11.4	1910	135042.9	31.9
1864	5553.5	13.5	1911	127869.9	25.9
1865	5807.3	13.5	1912	135581.9	21.6
1866	7162.8	16.2	1913	221805.3	26.6
1867	8555.3	16.8	1914	209108.3	28.1
1868	14088.7	26.1	1915	261781.9	27.5
1869	23882.5	29.7	1916	263058.8	22.1
1870	15842.7	24.2	1917	275828.7	16.2
1871	16887.4	24.9	1918	257906.9	10.4
1872	16120.2	21.7	1919	653036.2	24.3
1873	14594.1	18.3	1920	1321799.8	33.3
1874	16796.0	18.9	1921	2570302.9	50.3
1875	16082.2	18.6	1922	3598027.4	44.4
1876	16727.0	19.1	1923	5058637.4	50.1
1877	32177.9	32.7	1924	5805827.9	52.4
1878	51785.5	44.5	1925	5651032.8	48.6
1879	29543.8	25.5	1926	4014553.8	36.1

Table GR4_A Government finances, 1833–1939, nominal terms

(thousands of LMU drachmas; GR4I_A: percentage of total assets)

	Domestic public debt*	Domestic public debt*		Domestic public debt*	Domestic public debt*
Year	GR4H_A	GR4I_A	Year	GR4H_A	GR4I_A
1927	4141056.2	40.8			
1928	3789638.2 (1148953.0)	40.2 (15.6)	*1934*	3152905.6 (2011100.5)	27.0 (16.3)
1929	3596490.9 (1107240.5)	39.4 (13.5)	*1935*	3145039.3 (2077835.0)	27.7 (16.7)
1930	3388763.0 (1669325.1)	40.1 (18.6)	*1936*	3605111.2 (2092160.4)	25.8 (16.9)
1931	3125542.1 (1858820.6)	41.9 (19.6)	*1937*	3856056.2 (2074036.3)	24.6 (16.4)
1932	3168042.1 (1944002.9)	34.8 (20.7)	*1938*	4180142.9 (3136968.3)	22.4 (23.8)
1933	3154870.5 (1899338.2)	26.1 (17.1)	*1939*	4084144.7 (2879115.6)	17.5 (23.0)

Notes: *claims on the government. From 1929 onwards, the State's debt to the NBG is shown in the parentheses.

Table GR5.1_A Prices, 1914–1941   *continue*

(indices)

Year	CPI (2009=100) GR5A_A	Wholesale prices (1913–1914=100) GR5B_A	Export prices (1914=100) GR5C_A	Import prices (1914=100) GR5D_A
1914	0.081	..	100.0	100.0
1915	0.102	..	142.0	135.0
1916	0.143	..	164.0	209.0
1917	0.224	..	186.0	237.0
1918	0.326	..	375.0	433.0
1919	0.285	..	373.0	430.0
1920	0.326	..	385.0	516.0
1921	0.346	..	622.0	475.0
1922	0.672	..	1454.0	982.0
1923	1.058	..	2478.0	1519.0
1924	1.151	..	2491.0	1924.0
1925	1.294	..	2794.0	1498.0
1926	1.562	..	2507.0	1845.0
1927	1.683	..	2649.0	1932.0
1928	1.700	..	2615.0	1866.0
1929	1.712	1811.0	3024.0	1759.0
1930	1.615	1646.0	2967.0	1526.0
1931	1.551	1471.0	2474.4	1136.5
1932	1.658	1766.0	2045.5	1183.4

Table GR5.1_A Prices, 1914–1941

(indices)

Year	CPI (2009=100) GR5A_A	Wholesale prices (1913–1914=100) GR5B_A	Export prices (1914=100) GR5C_A	Import prices (1914=100) GR5D_A
1933	1.811	1997.0	.	.
1934	1.864	1969.0	.	.
1935	1.902	2003.0	.	.
1936	1.950	2038.0	.	.
1937	2.170	2281.0	.	.
1938	2.186	2227.0	.	.
1939	2.165	2208.0	.	.
1940	2.402	2616.0	.	.
1941	4.360	2930.0	.	.

Table GR5.2_A Production and labour, 1921–1939

(GR5E_A: thousands of LMU drachmas)

Year	Industrial production value GR5E_A	Industrial production index volume (1928=100) GR5F_A	Economic activity index, prices adjusted (1928=100) GR5G_A	Employment (1928=100) GR5H_A	Wages (1928=100) GR5I_A
1921	1077103	..	..	..	..
1922	1958417	..	..	..	..
1923	3189867	..	..	..	..
1924	3883162	..	..	..	..
1925	4977829	..	..	..	..
1926	5472686	..	..	..	..
1927	6655375	..	..	..	..
1928	7115149	100.0	100.0	100.0	100.0
1929	7153095	101.8	105.4	107.9	.
1930	6631363	105.3	105.3	104.6	100.2
1931	6082008	108.9	102.0	101.9	.
1932	6749598	102.7	86.9	86.7	96.8
1933	8548654	111.8	88.9	94.3	.
1934	9913281	127.5	97.9	94.9	102.3
1935	10177256	143.2	113.1	99.7	103.0
1936	11840829	141.7	108.3	102.3	107.6
1937	13829834	153.9	122.5	119.3	120.4
1938	13552083	168.1	131.0	123.7	124.5
1939	..	179.1	132.3	124.8	129.8

Table GR6_A GDP, trade and population, 1833–1939   *continue*

(GR6A_A, GR6B_A: thousands of LMU drachmas; GR6D_A: in LMU drachmas; GR6E_A, GR6F_A: thousands of 1929 paper drachmas)

Year	GDP at current prices GR6A_A	GDP at constant 1914 prices GR6B_A	GDP deflator (1914=100) GR6C_A	GDP per capita at constant 1914 prices GR6D_A	Imports GR6E_A	Exports GR6F_A	Population (millions) GR6G_A
1833	49327.6	118348.4	41.7	164.6	..	..	0.72
1834	60111.4	127112.2	47.3	175.2	..	..	0.73
1835	76038.4	167603.8	45.4	228.9	..	..	0.73
1836	64873.6	163590.4	39.7	221.5	..	..	0.74
1837	71130.9	169223.9	42.0	227.0	..	..	0.75
1838	76561.5	179679.7	42.6	238.9	..	..	0.75
1839	82158.9	178274.3	46.1	216.4	..	..	0.82
1840	90511.4	176015.8	51.4	207.0	..	..	0.85
1841	81524.3	176848.3	46.1	205.4	..	..	0.86
1842	72050.8	178997.0	40.3	209.8	..	..	0.85
1843	70304.7	161974.0	43.4	177.0	..	..	0.92
1844	72286.5	159620.9	45.3	171.6	..	..	0.93
1845	72555.3	158694.6	45.7	165.3	..	..	0.96
1846	77311.0	175555.1	44.0	181.2	..	..	0.97
1847	70202.2	150953.7	46.5	154.4	..	..	0.98
1848	78740.3	164202.3	48.0	166.4	..	..	0.99
1849	81072.2	169835.5	47.7	170.5	..	..	1.00
1850	89725.8	173222.8	51.8	172.2	..	..	1.01
1851	93491.6	214242.1	43.6	210.9	344455	183179	1.02
1852	111072.0	182647.6	60.8	178.1	330397	137574	1.03
1853	102915.9	202088.8	50.9	195.2	267287	118880	1.04
1854	118870.2	213562.1	55.7	204.5	281300	89918	1.04
1855	109909.1	226513.1	48.5	215.0	349864	143414	1.05
1856	151598.7	200050.6	75.8	188.3	396762	343860	1.06
1857	145800.0	260967.3	55.9	244.0	484525	322209	1.07
1858	136394.9	253204.7	53.9	235.3	534380	330947	1.08
1859	166176.3	250741.3	66.3	231.5	611608	323116	1.08
1860	152205.8	248017.0	61.4	227.6	713904	356179	1.09
1861	150281.2	265697.3	56.6	242.2	633690	371723	1.10
1862	154490.2	271558.3	56.9	244.5	583760	370683	1.11
1863	160133.8	245687.8	65.2	218.4	747191	304585	1.12
1864	187269.1	269801.2	69.4	198.5	727174	333354	1.36
1865	182285.0	291844.4	62.5	212.2	998562	548364	1.38
1866	194257.9	281820.3	68.9	202.6	1019307	549998	1.39
1867	227097.9	301132.0	75.4	213.9	993629	644146	1.41
1868	217616.3	308206.0	70.6	216.4	980755	536624	1.42
1869	193019.2	307551.0	62.8	213.4	1112068	617210	1.44
1870	230486.4	302649.5	76.2	207.6	1130608	501971	1.46
1871	263454.3	294960.3	89.3	199.2	1290338	839441	1.48
1872	221459.6	291045.6	76.1	193.5	1310221	743282	1.50
1873	239559.8	348434.5	68.8	228.0	1219218	852815	1.53
1874	256489.1	334920.7	76.6	215.7	1306640	861598	1.55
1875	256007.2	325877.0	78.6	206.6	1514115	1002010	1.58
1876	246853.1	329567.9	74.9	205.7	1291081	794698	1.60
1877	280196.1	314550.0	89.1	193.3	1428150	779466	1.63
1878	287893.8	351606.9	81.9	212.7	1345454	848907	1.65
1879	284472.5	371041.8	76.7	220.9	1509330	826766	1.68

Table GR6_A GDP, trade and population, 1833–1939

(GR6A_A, GR6B_A: thousands of LMU drachmas; GR6D_A: in LMU drachmas; GR6E_A, GR6F_A: thousands of 1929 paper drachmas)

Year	GDP at current prices GR6A_A	GDP at constant 1914 prices GR6B_A	GDP deflator (1914=100) GR6C_A	GDP per capita at constant 1914 prices GR4D_A	Imports GR6E_A	Exports GR6F_A	Population (millions) GR6G_A
1880	294015.3	368270.7	79.8	217.2	1450603	895493	1.70
1881	340537.2	423267.5	80.5	211.1	1728129	1038521	2.00
1882	378493.2	455587.8	83.1	224.8	2118352	1134472	2.03
1883	402037.4	458988.2	87.6	224.0	1803112	1228075	2.05
1884	409597.8	521668.6	78.5	251.9	1723062	1094008	2.07
1885	404370.4	569014.7	71.1	271.8	1687724	1134368	2.09
1886	427885.0	550073.1	77.8	259.9	1735054	1165367	2.12
1887	445552.6	575373.0	77.4	268.9	1957790	1525483	2.14
1888	457843.9	594950.2	77.0	275.0	1621954	1421418	2.16
1889	441011.8	560106.6	78.7	256.1	1971224	1601581	2.19
1890	463711.5	536998.3	86.4	241.8	1794880	1423469	2.22
1891	506074.8	475333.1	106.5	210.8	2085750	1597301	2.25
1892	530183.0	503475.8	105.3	219.9	1772887	1222398	2.29
1893	550345.2	544083.5	101.2	234.0	1359467	1308185	2.32
1894	497796.0	564934.4	88.1	239.3	1633991	1103964	2.36
1895	519172.2	551800.8	94.1	230.2	1603498	1087306	2.40
1896	551490.1	615251.5	89.6	252.8	1727861	1077008	2.43
1897	512247.6	526250.9	97.3	214.7	1729154	1214196	2.45
1898	568609.0	572303.8	99.4	231.8	2054648	1310979	2.47
1899	542817.1	588433.3	92.2	236.7	1950509	1393913	2.49
1900	585318.9	529113.7	110.6	211.3	1952396	1526702	2.50
1901	663880.0	510806.7	130.0	202.5	2087919	1396751	2.52
1902	638047.4	659238.2	96.8	259.5	2039223	1183792	2.54
1903	623984.5	648889.9	96.2	253.7	2043161	1276831	2.56
1904	572452.5	689235.3	83.1	267.5	2036058	1345870	2.58
1905	579591.9	711668.7	81.4	274.3	2106494	1243648	2.59
1906	604517.0	708073.6	85.4	271.0	2149291	1835596	2.61
1907	646723.4	723079.1	89.4	274.7	2215150	1747833	2.63
1908	638396.8	723944.8	88.2	273.3	2297846	1645195	2.65
1909	689464.6	743041.0	92.8	278.6	2043978	1511069	2.67
1910	660869.1	745026.7	88.7	277.6	2385565	2148325	2.68
1911	847536.7	935285.7	90.6	346.2	2578359	2093819	2.70
1912	823862.6	913394.0	90.2	335.9	2342783	2171982	2.72
1913	856722.1	968758.0	88.4	201.0	2644084	1768355	4.82
1914	1235786.6	1235786.6	100.0	256.5	4738052	2653461	4.82
1915	1420876.6	1168280.5	121.6	242.5	4300335	3244770	4.82
1916	1882928.7	1174429.9	160.3	243.9	5935664	2300952	4.82
1917	2689025.1	1130057.4	238.0	234.7	3314894	1673637	4.82
1918	4196152.0	1373319.8	305.5	285.2	10905858	4411339	4.82
1919	3789750.0	1129857.9	335.4	234.7	23065880	11356309	4.81
1920	5361536.9	1410411.7	380.1	281.1	23843953	7515105	5.02
1921	6821748.1	1439035.7	474.0	282.7	9334041	4994871	5.09
1922	10780134.5	1471597.5	732.5	247.6	7131964	5600518	5.94
1923	16558597.5	1309372.9	1264.6	215.5	7655284	3205840	6.08
1924	20718344.4	1484058.3	1396.1	250.6	12219224	4964601	5.92
1925	23992285.3	1590990.1	1508.0	265.5	12212186	5489119	5.99
1926	28217011.6	1634905.3	1725.9	268.4	9668232	5276441	6.09

Table GR6_A GDP, trade and population, 1833–1939

(GR6A_A, GR6B_A: thousands of LMU drachmas; GR6D_A: in LMU drachmas; GR6E_A, GR6F_A: thousands of 1929 paper drachmas)

Year	GDP at current prices GR6A_A	GDP at constant 1914 prices GR6B_A	GDP deflator (1914=100) GR6C_A	GDP per capita at constant 1914 prices GR4D_A	Imports GR6E_A	Exports GR6F_A	Population (millions) GR6G_A
1927	30874784.6	1586247.0	1946.4	257.2	12852219	6161000	6.17
1928	33618998.2	1729994.1	1943.3	278.8	12416936	6330861	6.20
1929	32387828.5	1811652.4	1787.8	286.9	13276097	6960424	6.32
1930	31089932.9	1950230.3	1594.2	306.3	10524285	5985677	6.37
1931	29751944.8	1933182.1	1539.0	299.1	8763320	4203591	6.46
1932	33071900.1	1876030.8	1762.9	286.7	7869989	4757385	6.54
1933	38349976.1	2018529.5	1899.9	304.7	8431531	5141066	6.62
1934	42085624.6	2197799.7	1914.9	326.7	8792417	5474229	6.73
1935	44494188.1	2362801.1	1883.1	345.6	10681388	7101289	6.84
1936	46725383.8	2311371.2	2021.5	333.2	11962420	7378877	6.94
1937	56570810.2	2621762.8	2157.7	373.0	15204363	9555893	7.03
1938	55688778.5	2588572.4	2151.3	363.5	14761395	10149180	7.12
1939	54836336.5	..	..	..	12276182	9202519	7.32
1940	..	..	..	..	12214853	9079380	..
1941	..	..	..	..	4838264	3904166	..
1942	..	..	..	..	12704996	5390043	..
1943	..	..	..	..	28634196	10213211	..
1944	..	..	..	..	3311515183	11328437	..

Table GR7_A WWII, 1939–1949

(money balances: end-of-year value, in thousands of drachmas; index: 1938.09–1939.08=100; cost-of-living index: general weighted index 1938.09–1939.08=100 until November, 10; afterwards 1938=100; drachma/British gold sovereign: value in drachmas; index: 1938.09–1939.08=100)

Year	Money balances value GR7A_A	index GR7A_A_I	Cost-of-living index GR7B_A_I	Drachma/British gold sovereign value GR7C_A	index GR7C_A_I
1939	9452791.6	123.8	100.2 (2.2)	929.9	97.9
1940	15369024.8	201.2	111.2 (2.4)	1072.0	112.8
1941	48794900.6	638.9	309.3 [201.9] (4.4)	9876.0	1039.6
1942	335081365.6	4387.6	6787.6	130870.0	13775.8
1943	3199235134.3	41891.3	28613.4	486053.3	51163.5
1944 (10 Nov.)	6279943102000000.0	82230766789.2	18850000000000.0	43166600000000.0	4543852631578.9
1944	1665000.0	21.8	1731907751492.3*	3814273529486.7*	401502476788.1
1944 (11 Nov.)	156000.0	2.0		2100.0	221.0
1944 (30 Nov.)	1362000.0	17.8		3100.0	326.3
1944 (Nov.)			394.6** (8.6)	2661.0***	280.1
1945	104083000.0	1362.9	1895.7 (41.4)	25348.0	2668.2
1946	537463000.0	7037.6	14522.5 (317.5)	137247.0	14447.0
1947	973608800.0	12748.6	17462.7 (381.8)	148732.0	15656.0
1948	1202166000.0	15741.4	24734.7 (540.8)	227087.0	23903.9
1949	1858613000.0	24337.0	28375.0 (620.4)	226908.0	23885.0

Notes: *mean average January-November, 10; **monthly observation starting November, 11; ***monthly average starting November, 11. The December 1944 value is missing. For 1941 the BoG yearly data point of the index with base year 1938.09–1939.08=100 (January-November) is presented into the bracket. The December 1941 value is from Delivanis and Cleveland (1949). The BoG data points with base year 2009=100 are presented in the parentheses.