



Bulgaria: from 1879 to 1947

Kalina Dimitrova¹
Bulgarian National Bank
Martin Ivanov²
Bulgarian Academy of Science

I MAJOR MONETARY EVENTS

Almost immediately after gaining its independence on 3 March 1878,³ Bulgaria started to build its political, financial and administrative institutions. The Bulgarian National Bank (BNB, Българска Народна Банка - БНБ) was established on 25 January 1879 as a state-owned deposit and commercial bank with a capital provided by the government. The government had two specific ways of exerting influence over the bank, namely through the Minister of Finance, to whom the bank reported on its activities, and by selecting the governor. According to its statute, the BNB had the objective of promoting trade development, regulating commercial relations and providing credit to the economy. The articles of establishment did not envisage any issuing rights of the BNB and allowed it to provide traditional commercial banking services.⁴

The coinage system in the Principality of Bulgaria was legislated for the first time in 1880. With the Monetary Law of 27 May 1880 the lev (лев) was established as legal tender, at par with the French franc.⁵ Under the coinage system of the Latin Monetary Union (LMU), all silver and gold Bulgarian coins were to be minted with the same weight and fineness as the French equivalents (BNB 2009). The compliance of the national monetary standard with the prevailing international standard was thought crucial for the integration of the new state into the ‘concert of nations’ (Avramov 2006, Dimitrova and Fantacci 2010). The state had the exclusive right to mint coins as the Parliament voted on the proposal from the Minister of Finance on how many and what coins should be minted (see Article 1 of the 1880 Monetary Law). According to Article 14, gold and silver coins were legal tender under other existing laws prescribing that certain government revenues (such as import taxes) should be paid only in gold leva. Thus, Bulgaria officially adopted the bimetallic standard (see BNB 1929, p. 55, Yordanov 1910, p. 51 and Avramov 1999, p. 18).

^{1,2} *Monetary History Program; Institute for Historical Research.* The chapter expands on earlier data releases of the South-eastern European historical database edited by the OeNB, *Proceedings of OeNB Workshops* no. 13 (2008) and the Bank of Greece, *Working Paper* no. 94 (2009). We would like to thank Roumen Avramov for providing us with interesting details on the major monetary events in Bulgarian economic history. Special acknowledgements should be extended to Clemens Jobst, who provided the data on the prices and yields of Bulgarian government bonds. We are also grateful to Svetla Vladimirova, Kiril Kosev and Joanna Bachovska for their valuable assistance in collecting and double checking the data. Last but not least, we would like to thank Nikolay Nenovsky for initiating the SEEMHN and encouraging us to work on this project. The views expressed herein are strictly those of the authors and do not necessarily reflect the views of the Bulgarian National Bank or the Institute of Historical Research at the Bulgarian Academy of Science. The authors alone are responsible for any remaining errors. *Email to:* dimitrova.ka@gmail.com; hadjimartin@abv.bg

³ As a result of the Russo-Turkish War of 1877–78, Bulgaria restored its *de facto* political independence. The Berlin Peace Treaty of 1878, however, divided present-day Bulgaria into several parts. The Principality of Bulgaria, comprising the territories between the Danube and the Balkan Mountains range was a tributary state with only very weak links to Istanbul. To the south, the Treaty created the autonomous Ottoman province of Eastern Rumelia, which in 1885 united with the Principality. As a result of both Balkan Wars (1912–13) and World War I, Bulgaria received part of Eastern Macedonia but lost the fertile Dobrudja region to Romania. In September 1940, with the Craiova Agreement, Bulgaria was given Dobrudja back and achieved its present-day borders.

⁴ For a detailed chronology of the institutional development of the BNB, see Avramov (1999).

⁵ See State Gazette, issue 49, 4 June 1880.

TABLE I Chronology of major monetary events

BNB institutional milestones	Milestones in the monetary history of Bulgaria
<i>1879 The BNB was established as a state-owned deposit/merchant bank.</i>	1880 The lev was introduced as legal tender. Coins were minted according to the system of the Latin Monetary Union. 1880–1887 Monetary chaos and demonetisation of foreign currencies.
<i>1885 The BNB was granted the privilege of note issue. The BNB became a commercial and issuing bank.</i>	1888–1902 Agio (premium on gold). 1899–1902 Gold-backed banknotes convertibility was suspended; only silver convertibility was allowed (plus daily agio). 1906–1912 The Bulgarian lev was de facto on gold. 1912 War force majeure: convertibility was suspended. 1915–1923 Fiat money; war and post-war inflation. 1924 De facto stabilisation of the lev at 1/27 of the pre-war gold parity.
<i>1928 The BNB was transformed into a pure central bank under the aegis of the League of Nations.</i>	1928 De jure stabilisation and entry into the gold-exchange standard. 1931 Exchange controls were imposed. 1939–1944 Monetary expansion based on clearing surpluses with Germany. 1945–1947 War and post-war inflation.
<i>1947 BNB as a monobank.</i>	1947 Nationalisation of the banking system.

Source: Avramov (2006).

While the monetary system in Bulgaria was formally intended to follow the system of the countries of the LMU, in practice it was a hybrid (Nedelchev 1940, p. 13). This is because first, the Monetary Law allowed minting of copper coins that were not legal tender. Moreover, although the law prescribed the amount of copper coins to be minted, it did not set any maximum limit on the amount that could be accepted in money transactions. Foreign copper coins were not allowed to circulate in the domestic money market. Second, although the government had the exclusive right to mint coins (private coinage was not permitted), an upper limit on silver coinage had not previously been set and therefore, in the 1890s, the practice of excessive silver coin minting turned out to be the ‘apple of discord’ between the BNB and the government, which was severely criticised by economists such as Christoforoff (1946, p. 66) and Bochev (1924, p. 33).⁶ Third, according to Article 17, the law recognised as legal tender all foreign gold and silver coins circulated in the LMU countries together with Russian and Turkish silver coins, as the Treasury accepted them at exchange rates set by the government in the monetary tariffs.

The first Bulgarian coins were minted in 1881 and were made of copper; they served for petty cash transactions. With the view to enhancing domestic money circulation, the government minted silver coins successively in 1882, 1883 and 1884, and in particularly large amounts in 1885, while the first Bulgarian gold coins were minted in 1894. While the parallel circulation of the LMU silver coins was by no means a departure from the LMU principles, the domestic money market was flooded with foreign silver coins due to the overvalued exchange rate of the silver Russian rouble⁷ imposed by the Provisional Russian Government (1878–1879) as well as due to the earlier

⁶ For a chronology of the debate, see BNB (1998), pp. 356–376.

⁷ Researchers argue that this was done with an aim to support the Russian currency by creating external demand for it, namely a zone (Bulgaria, Serbia and Romania) of roubles in circulation, making it as strong as the French franc (Christoforoff, 1946, p. 36).

demonetisation of foreign silver coins in the neighbouring countries. This resulted in an increase in the *agio*, which is defined as the premium over gold coins expressed in silver coins at the local market with respect to the officially set rate.⁸ That period, known in the literature as ‘monetary chaos’ (see Kiosseva 2000), continued until late 1887, when all foreign silver coins were ultimately demonetised.⁹

In 1885, the BNB was granted the monopoly of issuing banknotes. The first issue of banknotes, of which one third had to be covered by gold (i.e. gold-backed notes), followed soon afterwards. Although effective coverage was well above the minimum ratio, public confidence in the banknote was very low and agents were averse to holding them, keeping a vivid memory of the devalued Ottoman paper money (*kaime*) (BNB 1929, p. 57). Moreover, private agents had a strong preference for silver coins due to the high agio, since gold-backed banknotes were accepted at their nominal/face value (BNB 1895, p. 21).

Following the increasing number of countries which took steps to move onto gold in the early 1890s (Austria-Hungary, Romania), Bulgaria also made efforts in the same direction in the 1890s, but without much success (Avramov 1999, pp. 30–31). While the BNB was in favour of adopting the gold standard in order to increase the circulation of its banknotes and eliminate the agio, neither a final decision nor effective measures had been taken by the government because of the poor public finances and the need to keep reaping the seigniorage gains from the silver minting to finance fiscal deficits (Yordanov 1910, p. 52). As a compromise, the BNB was granted in 1891 the right to issue silver-backed banknotes, however only *de jure* since the ministerial decision to put this law into effect was not issued by the Minister of Finance.

The economic crisis of 1897–1901 resulted in large trade deficits, shortage of gold currencies and severe financial difficulties both for the private sector and the government and put an abrupt end to the government’s second attempt to join the classical gold standard. It is noteworthy that these last efforts culminated with a draft law on the establishment of the gold standard in 1897 (see State Gazette 1897, issue 81, 17 April 1897).¹⁰ In view of the depletion of its gold reserves, the BNB was *de facto* allowed to exercise its right of issuing silver-backed banknotes in 1899, the coverage of which was set at one third provided by silver holdings only. These banknotes quickly started circulating and replacing the silver coins. To avoid any further outflow of its gold reserves, convertibility of the gold-backed banknotes was suspended with the law of 13 November 1899. Suspension lasted for almost three years. Bulgarian economists consider that period as ‘actual silver standard’, since the gold-backed banknotes could be accepted by the BNB in exchange of silver plus the daily agio (see Nedelchev 1940, p. 27 and Christophoroff 1946, p. 68).

Soon after the end of the economic crisis, the two bumper crops of 1902 and 1903 resulted in unprecedented foreign trade surpluses. In 1902, the government managed to restructure its public foreign debt by retiring a considerable portion of the Bulgarian government bonds of past foreign loans and liquidating the floating debt and redemptions at maturities in pending with a large French loan. In return, the government provided the revenues from its tobacco monopoly to service and repay the loan and allowed for a representative of the creditor country (France) who had control on tobacco revenues.¹¹

⁸ A detailed study on the development of the agio in Bulgaria is provided in Dimitrova and Fantacci (2011).

⁹ According to Joseph Petkof (1926, pp. 17–18), foreign silver coins continued to circulate until 1888.

¹⁰ The Council of Ministers had the right to implement this law when appropriate. However, poor harvests in 1898 and 1899 prevented the application of the law.

¹¹ A thorough history of the Bulgarian public foreign debt is provided by Ivanov et al. (2009).

The 1902 foreign loan was contracted provided that convertibility of gold-backed banknotes would be re-established soon. Gold convertibility was eventually restored on 24 November 1902, putting an end to extra budget financing through silver coinage. An enabling domestic economic and financial environment allowed the BNB to accumulate sufficient gold reserves to keep the lev convertible. Further steps were taken to reform the monetary sector, including a switch in the backing of the widely used banknotes of lower denominations from silver to gold and an increase in the legal minimum coverage of silver-backed banknotes from one third to one half.¹² As a result, the newly set legal minimum cover ratio was closer (in real/effective terms) to that provided for the gold-backed banknotes (BNB 1929, p. 28). All these measures led to the disappearance of the agio, an increase in the gold-backed banknotes in circulation and an ‘invisible transition to the gold standard’ by the end of 1906 (BNB 1907, p. 17).¹³ With a new round of political turbulence starting on 10 October 1912 with the outbreak of the First Balkan War, the BNB stopped converting both gold- and silver-backed banknotes and a paper standard was *de facto* established (Avramov 1999).¹⁴

The First Balkan War in 1912, and in close succession the Second Balkan War in summer 1913 and World War I in 1914, forced Bulgaria to default on its foreign debt, which by 1912 amounted to over 600 million French francs. Extensive war financing and huge reparations imposed by the ‘Entente Powers’ in 1919 caused strong devaluation pressures on the lev against the leading European currencies as the country’s reserves were denominated in devalued German marks.

First attempts at monetary stabilisation were made in December 1923, when the BNB was granted a monopoly in foreign exchange trading. Steps towards establishing the gold-exchange standard were also taken when the BNB targeted an exchange rate of 139 leva per 1 US dollar according to the Law of 2 May 1924.¹⁵ At the same time, the Bank stopped issuing silver-backed banknotes. Article 7 of the BNB Law, as amended on 14 March 1924, gave to the bank the exclusive privilege of issuing ‘gold banknotes’ also backed by foreign currency at the gold-French franc parity. Foreign loans such as the Refugees Loan in 1926 and the Stabilisation Loan in 1928 helped the country to accumulate foreign reserves. On 3 December 1928, the lev was *de jure* stabilised and legally pegged to gold at the rate of 92 leva per 1 gram pure gold or 139 leva per 1 dollar. As a result, 1 gold lev equalled 27 paper leva (Nedelchev 1940, p. 85). According to the stabilisation law, all previously minted coins were demonetised. The new silver coins to be minted were of different fineness and weight and were not legal tender, but were acceptable for payments up to a limited amount (Article 6). Furthermore, no gold coin was envisaged and all pre-stabilisation banknotes were gradually withdrawn from circulation (Article 8). While the December 1928 amendment to the BNB Law envisaged free convertibility of banknotes, the June 1929 amendment did not implement it, as the 1924 Foreign Exchange Trade Act was still in force (Nedelchev 1940, p. 36). However, the 1928 amendment to the BNB Law allowed the operation of the bank according to the model of modern central banks: it was independent from the government and had the right to provide only short-term credit (i.e. discount facilities).

In response to the Great Depression, exchange controls were put in place by a law on 15 October 1931, which introduced restrictions in the amended Foreign Exchange Trade Act and the BNB was

¹² See the amendments to the BNB Law, dating back to 6 February 1906.

¹³ Silver coins and silver-backed banknotes continued to circulate (as there was no change in the Monetary Law) but *de facto* served money transactions of low value.

¹⁴ By the Law of 3 January 1919, the *de facto* inconvertibility of the Bulgarian banknotes was acknowledged.

¹⁵ A study on the monetary stabilisation from a modern perspective is provided by Nenovsky (2006), analysing contemporaries’ attitudes at that time (see, for example, Nikolov 1927, Yurii 1923, Toshev 1928 and Burlikov 1928).

given the full monopoly of foreign exchange trading.¹⁶ The two BNB ordinances that followed¹⁷ aimed at concentrating all foreign exchange at the bank and keeping it at its disposal. Meanwhile, the country's reparation burden was significantly reduced by two cut downs, following the second session of the Hague Conference on reparations in January 1930 and the Lausanne Conference in June-July 1932.¹⁸ Ultimately, with the assistance of the League of Nations, Bulgaria achieved substantial public foreign debt relief, which by 1935 reached almost 80 per cent of interest payments, while amortisation was postponed but practically never repaid (Ivanov and Tooze 2011).

As a response to the British and French tariff and non-tariff constraints, under which foreign trade was bound with foreign debt service,¹⁹ Bulgaria signed bilateral clearing agreements with Austria (October 1931), Switzerland (April 1932), Germany (June 1932) and Italy (1933) at fixed exchange rates. The effective appreciation of the Reichsmark vis-à-vis the lev boosted Bulgarian exports to Germany. Therefore, the clearing surpluses formed by the end of the 1930s supported the increase in money supply, thus avoiding deflation (Nenovky and Dimitrova 2007, pp. 16–17).

The negative impact of the imposition of exchange controls on foreign trade was at least partially overcome by allowing private compensation deals with an exchange rate premium. Starting in 1933, large amounts of convertible currencies were freely traded with a premium, indicating an implicit devaluation. By 1937, compensation deals amounted to 36% of the foreign trade turnover (see Christoforoff 1939, p. 16).

On 1 March 1941 Bulgaria entered WWII on the side of the Axis Powers, and the Bulgarian monetary authorities designated the Reichsmark as the new nominal anchor. This decision permitted the BNB to explicitly include foreign exchange in Reichsmark in the cover ratio, in spite of the fact that the Reichsmark did not possess the characteristics of reserve currency. Therefore, the country maintained a fixed exchange rate regime supported exclusively by extensive controls on foreign exchange transactions throughout wartime. As a result, the monetisation of war-related budget deficits caused high inflation.

By the Law on Banks of 26 December 1947 the nationalisation of the domestic banking system was effected, and the 1928 Law on BNB was abolished. Under the new law, all banking transactions were an exclusive government monopoly, entrusted to the BNB.²⁰ All joint-stock banks, under domestic and foreign ownership alike, ceased to exist independently (head offices and branches), as all their assets and liabilities were transferred to the BNB, except those of the Bulgarian Mortgage Bank that were transferred to the Bulgarian Investment Bank which provided long-term credit. According to the law, the BNB could delegate the right of certain banking transactions to the Postal Savings Bank, the Popular Banks and to the Multipurpose Agricultural Cooperatives and Departmental Funds.

In the context of the centrally planned economy established in 1947, the foreign exchange market was completely controlled. The country kept fixed exchange rates against the Soviet rouble and, through it, the lev was pegged to the US dollar (and implicitly to gold).

¹⁶ For a detailed study of the exchange control system in Bulgaria and Italy, see Nenovsky et al. (2008).

¹⁷ In particular, see the BNB's Ordinance No.1 (20 October 1931) and Ordinance No. 4 (26 February 1932).

¹⁸ See Royal Institute of International Affairs (1936, p. 98).

¹⁹ See Royal Institute of International Affairs (1936, p. 131).

²⁰ The term 'monobank' system was introduced by Antonov (1990) and widely accepted by his contemporaries (Avramov 1999, p. 161).

2 DEFINITION AND DESCRIPTION OF VARIABLES

INDEX TABLE - Country: BULGARIA

continue

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
1. MONETARY VARIABLES				
<i>Total reserves</i>	1879–1947	annual	in national currency (thous.), end-of-period	BG1A_A
	Dec. 1879–Dec. 1947	monthly		BG1A_M
<i>Metallic holdings</i>	1879–1947	annual	in national currency (thous.), end-of-period	BG1B_A
	Dec. 1879–Dec. 1947	monthly		BG1B_M
<i>Gold holdings</i>	1886–1947	annual	in national currency (thous.), end-of-period	BG1C_A
	May 1906–Dec. 1947	monthly		BG1C_M
<i>Silver holdings</i>	1886–1929	annual	in national currency (thous.), end-of-period	BG1D_A
	May 1906–Sept. 1930	monthly		BG1D_M
<i>Foreign exchange</i>	1902–1947	annual	in national currency (thous.), end-of-period	BG1E_A
	Aug. 1902–Dec. 1947	monthly		BG1E_M
<i>Total banknotes in circulation</i>	1885–1947	annual	in national currency (thous.), end-of-period	BG1F_A
	Oct. 1885–Dec. 1947	monthly		BG1F_M
<i>Gold-backed banknotes</i>	1885–1923	annual	in national currency (thous.), end-of-period	BG1G_A
	Oct. 1885–Aug. 1924	monthly		BG1G_M
<i>Silver-backed banknotes</i>	1899–1923	annual	in national currency (thous.), end-of-period	BG1H_A
	Dec. 1899–Aug. 1924	monthly		BG1H_M
<i>Other central bank liabilities at sight</i>	1927–1947	annual	in national currency (thous.), end-of-period	BG1I_A
	Jan. 1927–Dec. 1947	monthly		BG1I_M
<i>Effective cover ratio of gold-backed banknotes</i>	1886–1918	annual	per cent, end-of-period	BG1J_A
	May 1906–Dec. 1918	monthly		BG1J_M
<i>Effective cover ratio of silver-backed banknotes</i>	1899–1918	annual	per cent, end-of-period	BG1K_A
	May 1906–Dec. 1918	monthly		BG1K_M
<i>Overall effective cover ratio</i>	1919–1947	annual	per cent, end-of-period	BG1L_A
	Jan. 1919–Dec. 1947	monthly		BG1L_M
<i>Monetary base</i>	1881–1945	annual	in national currency (thous.), end-of-period	BG1M_A
<i>Total currency in circulation</i>	1881–1945	annual	in national currency (thous.), end-of-period	BG1N_A
<i>Of which: Coins in circulation</i>	1881–1945	annual	in national currency (thous.), end-of-period	BG1O_A
<i>Bank deposits at sight at the central bank</i>	1927–1945	annual	in national currency (thous.), end-of-period	BG1P_A
<i>Broad money</i>	1881–1945	annual	in national currency (thous.), end-of-period	BG1Q_A
2. INTEREST RATES				
<i>Discount rate</i>	1879–1946	date of change	per cent	BG2A_D
	Jan. 1879–Dec. 1946	monthly	per cent, end-of-period	BG2A_M
<i>Market price of 1889 State railroad mortgage bond</i>	1890–1907	annual	FF, period average	BG2B_A
	Jan. 1890–Sept. 1907	monthly	FF, end-of-period	BG2B_M
<i>Current yield of 1889 State railroad mortgage bond</i>	1890–1907	annual	per cent, period average	BG2C_A
	Jan. 1890–Sept. 1907	monthly	per cent, end-of-period	BG2C_M
<i>Market price of 1892 State mortgage bond</i>	1893–1914	annual	FF, period average	BG2D_A
	Feb. 1893–June 1914	monthly	FF, end-of-period	BG2D_M
<i>Current yield of 1892 State mortgage bond</i>	1893–1914	annual	per cent, period average	BG2E_A
	Feb. 1893–June 1914	monthly	per cent, end-of-period	BG2E_M
<i>Market price of 1902 Tobacco bond</i>	1902–1914	annual	FF, period average	BG2F_A
	Oct. 1902–June 1914	monthly	FF, end-of-period	BG2F_M
<i>Current yield of 1902 Tobacco bond</i>	1902–1914	annual	per cent, period average	BG2G_A
	Oct. 1902–June 1914	monthly	per cent, end-of-period	BG2G_M
<i>Market price of 1907 State Gold bond</i>	1907–1914	annual	per cent, period average	BG2H_A
	June 1907–June 1914	monthly	per cent, end-of-period	BG2H_M
<i>Current yield of 1907 State Gold bond</i>	1907 - 1914	annual	per cent, period average	BG2I_A
	June 1907–June 1914	monthly	per cent, end-of-period	BG2I_M
<i>Market price of 1909 State Gold bond</i>	1910–1914	annual	per cent, period average	BG2J_A
	Apr. 1910–June 1914	monthly	per cent, end-of-period	BG2J_M
<i>Current yield of 1909 State Gold bond</i>	1910–1914	annual	per cent, period average	BG2K_A
	Apr. 1910–June 1914	monthly	per cent, end-of-period	BG2K_M

INDEX TABLE - Country: BULGARIA

<i>List of Variables</i>	<i>Time Span</i>	<i>Data Frequency</i>	<i>Unit of account</i>	<i>Series Code</i>
3. EXCHANGE RATES				
<i>Pound sterling</i>	1890–1947	annual	in national currency, period average	BG3A_A
	Jan. 1890–Dec. 1947	monthly		BG3A_M
<i>French franc</i>	1890–1947	annual	in national currency, period average	BG3B_A
	Jan. 1890–Dec. 1947	monthly		BG3B_M
<i>Mark/Reichsmark</i>	1890–1946	annual	in national currency, period average	BG3C_A
	Jan. 1890–July 1946	monthly		BG3C_M
<i>US dollar</i>	1913–1947	annual	in national currency, period average	BG3D_A
	Jan. 1919–Dec. 1947	monthly		BG3D_M
<i>Agio</i>	1886–1906	annual	per cent, period average	BG3E_A
	Oct. 1885–Dec. 1906	monthly		BG3E_M
4. GOVERNMENT FINANCES				
<i>Total government revenue</i>	1879–1945	annual	in national currency (thous.)	BG4A_A
<i>Total government expenditure</i>	1879–1945	annual	in national currency (thous.)	BG4B_A
<i>Foreign debt payments</i>	1887–1945	annual	in national currency (thous.)	BG4C_A
<i>Foreign public debt</i>	1888–1945	annual	in national currency (thous.)	BG4D_A
<i>Domestic public debt</i>	1899–1945	annual	in national currency (thous.), end-of-period	BG4E_A
5. PRICES, PRODUCTION AND LABOUR				
<i>Cost-of-living index (1914=100)</i>	1922–1941	annual	index number	BG5A_A
	Jan. 1922–Dec. 1941	monthly		BG5A_M
<i>Wholesale price index (1914=100)</i>	1926–1945	annual	index number	BG5B_A
<i>Retail price index (1891/01=100)</i>	1887–1912	annual	index number	BG5C_A
<i>General index of market prices (1908/12=100)</i>	1912–1932	annual	index number	BG5D_A
6. NATIONAL ACCOUNTS AND POPULATION				
<i>GDP, nominal terms</i>	1887–1945	annual	in national currency (thous.), at current prices	BG6A_A
<i>GDP, real terms</i>	1887–1945	annual	in national currency (thous.), at 1939 prices	BG6B_A
<i>Exports</i>	1879–1945	annual	in national currency (thous.)	BG6C_A
<i>Imports</i>	1879–1945	annual	in national currency (thous.)	BG6D_A
<i>Population</i>	1880–1945	annual	in million inhabitants	BG6E_A

(*) Entries of value terms are denominated in lev. The code of each variable is generated by the country prefix (BG), the number of the variables group (1, 2, 3, 4, 5 and 6) and a letter identifying the respective time series within the group (A, B, C,...); at the end, A stands for annual, M for monthly time series and D for the date of change.

2.1 MONETARY VARIABLES

2.1.1 Total reserves

Total (currency) reserves (BG1A) are defined as consisting of two main elements: metallic holdings (*монетна наличности*) (BG1B) and a foreign exchange component (BG1E). As reported in the BNB balance sheets, metallic holdings include gold (*златна*) and silver (*сребърна*) holdings, foreign full-bodied coins from 1917 to 1926 and small exchange coins from 1923 to 1926. Reporting separately, gold (BG1C) and silver (BG1D) holdings are available from 1886 on an annual basis and on a monthly basis from May 1906 onwards. From January 1927, metallic holdings (i.e. gold and silver holdings) were revalued at the stabilisation rate of ‘92 leva per 1 gram pure gold’. As a result of the revaluation, gold holdings increased 27 times in nominal value and silver holdings increased 9 times at market prices.

The foreign exchange component of the reserves (BG1E) is defined differently across different time intervals, given the changing international monetary standard and the respectively adjusted legal concept and the balance sheet reporting constraints. On the asset side, the earliest available data included ‘receivables from foreign correspondents (*странни кореспонденти*)’ and ‘portfolio of liquid foreign assets (*портфейл срещу странство*)’.²¹ The former started to be reported in August 1902 and represented foreign currencies, while the latter started in February 1911 and represented a portfolio of foreign short-term Treasury bills. Both of them, however, were officially recognised as a part of the reserves according to the 10 February 1912 amendment to the BNB Law and therefore they are included in the total reserves indicator (BG1A) since the end of February 1912.²²

In the context of the first stabilisation efforts, Article 7 of the amended BNB Law (8 March 1924) stated that the foreign exchange component of the reserves should include foreign currencies and short-term foreign Treasury bills adjusted to the gold French franc parity. The new definition did not change the reported balance sheet items, and the foreign exchange component (BG1E) continued to be represented by the sum of ‘receivables from foreign correspondents’ and ‘portfolio of liquid foreign assets’ items. In accordance with Article 8 of the BNB Law as amended in November 1926, starting from January 1927 the foreign exchange component of the reserves should include ‘gold-backed currencies and foreign banknotes, redeemable in gold’; thus from January 1927 to November 1928 the foreign exchange indicator (BG1E) comprises two new balance sheet items on the asset side, namely ‘stable foreign currencies’ (*стабилни чужди банкноти*) and ‘foreign exchange’ (*девизи*). Although ‘foreign exchange’ also contained not-yet-stabilised currencies, the decomposition available at the end of 1927 showed that 85% was in stabilised currencies (BNB 1928, p. 48).

As from December 1928, the foreign exchange component (BG1E) represents ‘net foreign gold-backed currencies’ (*чиста сума на чуждестранните златни девизи*) (Article 10 of the BNB law), which could be directly derived from the balance sheet items ‘gold-backed foreign exchange’ (*златни чуждестранни девизи*) on the asset side and ‘foreign exchange liabilities’ (*задължения в чужди девизи*). Apart from being clearly identified in the bank’s balance sheet, they were also reported in a separate table according to a template laid down in the amended BNB Law (27 September 1928) designated for calculating the effective cover ratio. Being net, the foreign

²¹ The currency reserves data published in Dimitrova and Ivanov (2008) do not include foreign exchange.

²² Data on the foreign exchange reserve’s component are provided as early as they appeared in the BNB’s balance sheet.

exchange component recorded negative values after 1931 with the devaluation of gold convertible foreign currencies and the collapse of the gold-exchange standard (Germany and the UK abandoned the gold standard in 1931, and the US in 1933).

After the collapse of the Gold Bloc in 1936 and the devaluation of the French franc, there were no receivables in gold-backed currencies in the balance sheet of the BNB from October 1936 to November 1939; hence, data on the foreign exchange reserve component were not reported. In spite of the rapidly changing international economic environment, total reserves continued to be evaluated at the 1924 rate of '92 leva per 1 gram of pure gold'. In an attempt to avoid the official devaluation of the lev and meet the coverage requirement, the gold reserves component (BG1B) was revalued by 25% in October 1941, accounting for the market price of gold.

2.1.2 Banknotes in circulation and liabilities at sight

The starting date for the data series on banknotes in circulation (BG1G) is October 1885, when the BNB was granted the exclusive privilege to issue gold-backed banknotes (*банкноти в обръщение в злато*). Although gold holdings were high enough to cover all banknotes in circulation, they were soon returned at the BNB cash desks to be exchanged for coins due to lack of public confidence in fiduciary money and the high agio. Total banknotes in circulation (*банкноти в обръщение*) (BG1F) started to increase only in 1899, when the bank exercised its right to issue silver-backed banknotes (*банкноти в обръщение в сребро*) (BG1H), granted in 1891. After gaining credibility, gold-backed and silver-backed banknotes in circulation increased rapidly, reflecting also the gradual economic development of the country. From September 1922 onwards, the item of total banknotes in circulation reported in the bank's balance sheet also included cheques (until March 1923) and Treasury bills (until July 1924). Their individual values were provided in the weekly BNB balance sheets and the respective BNB Annual Reports (see Table 2).

TABLE 2 Non-typical components, included in total banknotes in circulation (1922–1924)

Dates/components	Sept. 1922	Oct. 1922	Nov. 1922	Dec. 1922	Jan. 1923	Feb. 1923
<i>Cheques</i>	14570	11820	15060	52240	52540	26040
<i>Treasury bills</i>	56999	111115	27661	46421	3552	1978
Dates/components	Mar. 1923	Apr. 1923	May 1923	June 1923	July 1923	Aug. 1923
<i>Treasury bills</i>	1249	878	710	639	603	371
Dates/components	Sept. 1923	Oct. 1923	Nov. 1923	Dec. 1923	Jan. 1924	Feb. 1924
<i>Treasury bills</i>	365	365	365	340	340	340
Dates/components	Mar. 1924	Apr. 1924	May 1924	June 1924	July 1924	
<i>Treasury bills</i>	340	340	340	340	340	

Notes: End-of-month values; in thousands of leva.

In line with the stabilisation efforts and in accordance with Article 7 of the BNB Law as amended on 8 March 1924, the BNB suspended the issue of silver-backed banknotes. It however maintained the exclusive privilege of issuing 'gold banknotes', which are reported as 'banknotes in circulation' (BG1F) and were covered by foreign currency at the gold franc parity. As a result, from September 1924 onwards, separate reporting of silver- and gold-backed banknotes ceased.

Article 9 of the 1926 amendment of the BNB Law expanded the liabilities' component by adding 'other liabilities at sight' (*други задължения на виждане*) next to banknotes in circulation. Being in effect from the beginning of 1927, the 'other central bank liabilities at sight' (BG1I) did not only include other banks' deposits but also government and private current account deposits at the BNB. When available, the composition of this item turned out to have included also municipal and public funds, non-interest deposits for guarantees, among other sub-items (BNB 1929, p. 51). The flexible content of this item allowed later for manipulations of the liabilities' component of the cover ratio, whenever the bank had to meet the legal minimum cover ratio at least officially in public (BNB 1944, p. 6).

Effective cover ratios

All amendments to the BNB Law defined the content of the liabilities' component and the eligible assets of the minimum cover ratio taking into account the prevailing monetary regime, the international financial constraints and the local market specificities (see Table 3).

TABLE 3 Minimum legal coverage of the BNB liabilities

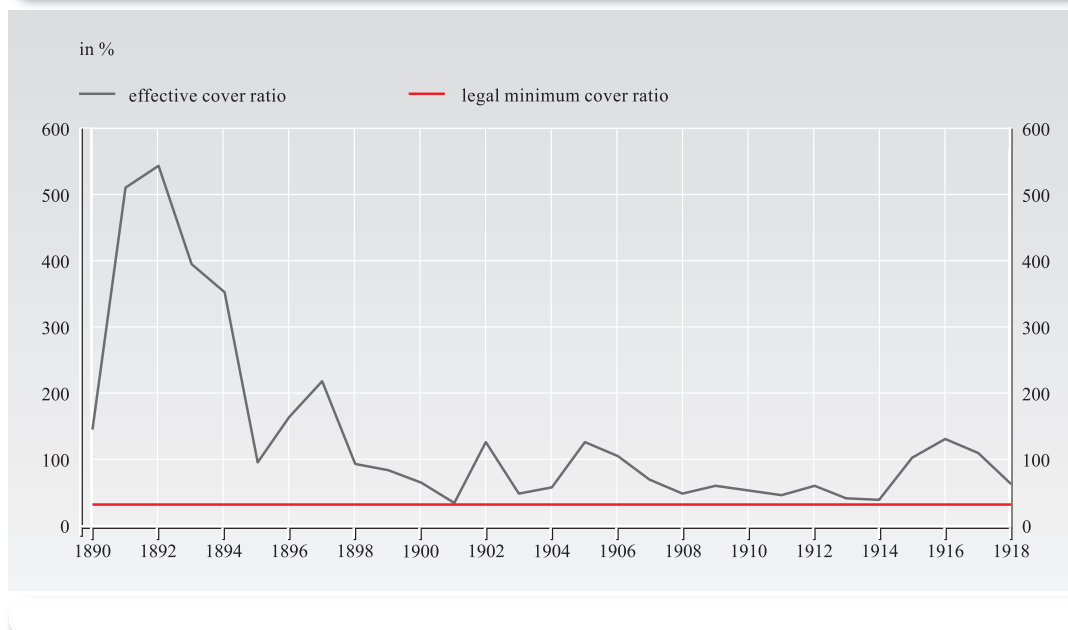
Period	Legal cover ratio (%)	Eligible assets to cover BNB liabilities	BNB liabilities to be covered
1885–1911	33.3	Gold holdings	Gold-backed banknotes
1912–1924	33.3	Gold holdings, foreign exchange and foreign short-term Treasury bills	Gold-backed banknotes
1899–1906	33.3	Silver holdings	Silver-backed banknotes
1906–1918	50.0	Silver holdings	Silver-backed banknotes
1919–1924	33.3	Gold holdings, foreign exchange and foreign short-term Treasury bills	Silver-backed banknotes
1924–1926	33.3	Metallic (gold and silver) holdings, foreign exchange adjusted to the gold French franc parity	Total banknotes
1927–1928	33.3 (40.0)	Metallic (gold and silver) holdings, foreign stabilised currencies	Total banknotes and other liabilities at sight
1928–1936	33.3	Metallic (gold and silver) holdings and net foreign gold-backed currencies	Total banknotes and other liabilities at sight
1936–1940	25.0	Gold and net foreign gold-backed currencies	Total banknotes and other liabilities at sight
1941–1947	25.0	Gold and net foreign exchange adjusted with the exchange rate premium	Total banknotes and other liabilities at sight

The main purpose of presenting separate elements of the total reserves and the liabilities subject to coverage across different periods is to calculate the effective cover ratio and compare it with the legal minimum cover ratio. In line with the BNB Act of 1885, the BNB adopted the continental European monetary system, according to which the gold-backed banknotes in circulation should be covered by gold metallic holdings at the ratio of 1/3 (33.3%) and the bank was obliged to redeem them into gold at demand. Therefore, from December 1885 to January 1912 the effective cover ratio of gold-backed banknotes (BG1J) presents the ratio (in per cent) of gold holdings (BG1C) to gold-backed banknotes in circulation (BG1G). With the amendment to the BNB Law on 10 February 1912, the foreign exchange component (BG1E) was also recognised as eligible to cover gold-backed banknotes together with gold holdings, and this is incorporated in the assets component of the calculated effective cover ratio.



tive cover ratio of gold-backed banknotes from end-February 1912 through to end-1918. Due to difficulties in placing gold-backed banknotes into circulation and the precautionary reserve management in order to maintain the value of the lev stable, the effective cover ratio of gold-backed banknotes was systemically above the legal minimum ratio until 1918, as seen in Figure 1.

FIGURE 1 Effective Cover Ratio of Gold-backed Banknotes, 1890–1918



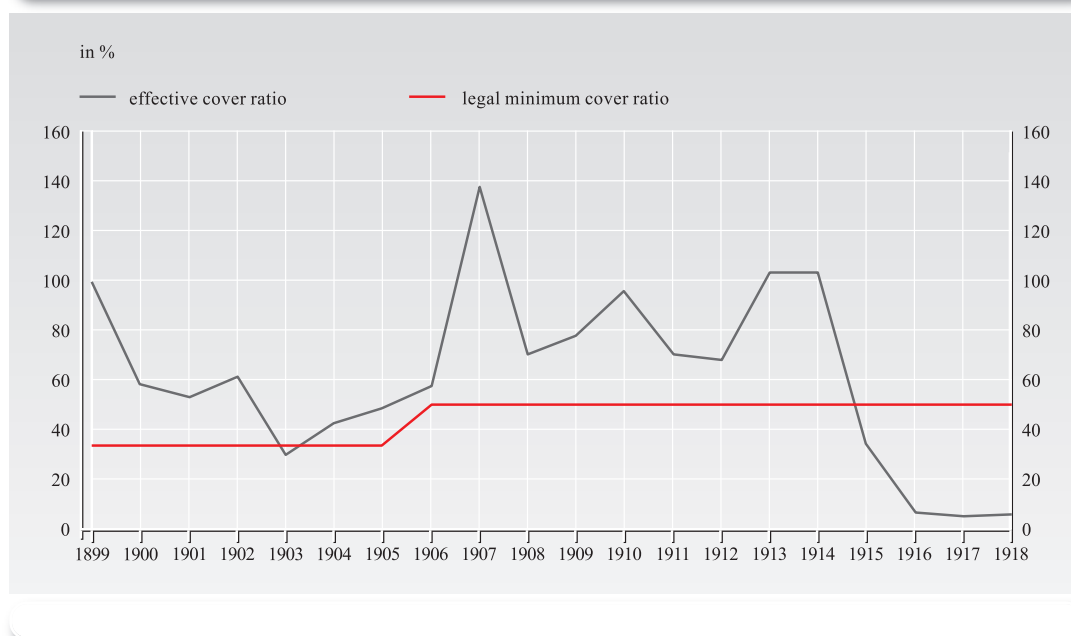
The effective cover ratio of the silver-backed banknotes (BG1K), defined as the ratio of silver holdings (BG1D) to silver-backed banknotes (BG1H), also exceeded the legal threshold during most of the period from 1899 to 1918, with two exceptions (see Figure 2). Once in 1903, when the effective cover ratio of the silver-backed banknotes fell slightly below the legal rate and scored 29.9% as a result of an excessive issue of silver-backed banknotes in that year and a sharp decrease in silver holdings. The second episode occurred in 1915, when it fell steadily below the threshold due to the monetisation of war financing.

After WWI, silver-backed banknotes could also be covered by gold holdings (BG1C), foreign exchange and foreign short-term Treasury bills (BG1E) as stipulated by the Law of 3 January 1919 (foreign exchange component of the reserves, BG1E). The cover ratio was set at 1/3, thus allowing for the calculation of a unified coverage of gold- and silver-backed banknotes. From January 1919 to August 1924 the reported 'overall effective cover ratio' (BG1L) is calculated as a weighted average of the respective effective cover ratios of both gold- and silver-backed banknotes.²³ When the separate reporting of the gold- and silver-backed banknotes ceased in 1924, the overall effective cover ratio (BG1L) is calculated as the ratio (in per cent) of total reserves (BG1A) to total banknotes in circulation (BG1F; from September 1924 to end-1926).

According to Article 8 of the 1926 amendment to the BNB Law (effective from 1 January 1927), the liabilities' component of the coverage (i.e. the denominator) comprises total banknotes in cir-

²³ The share of silver- and gold-backed banknotes to total banknote circulation is used as weight.

FIGURE 2 Effective Cover Ratio of Silver-backed Banknotes, 1899–1918



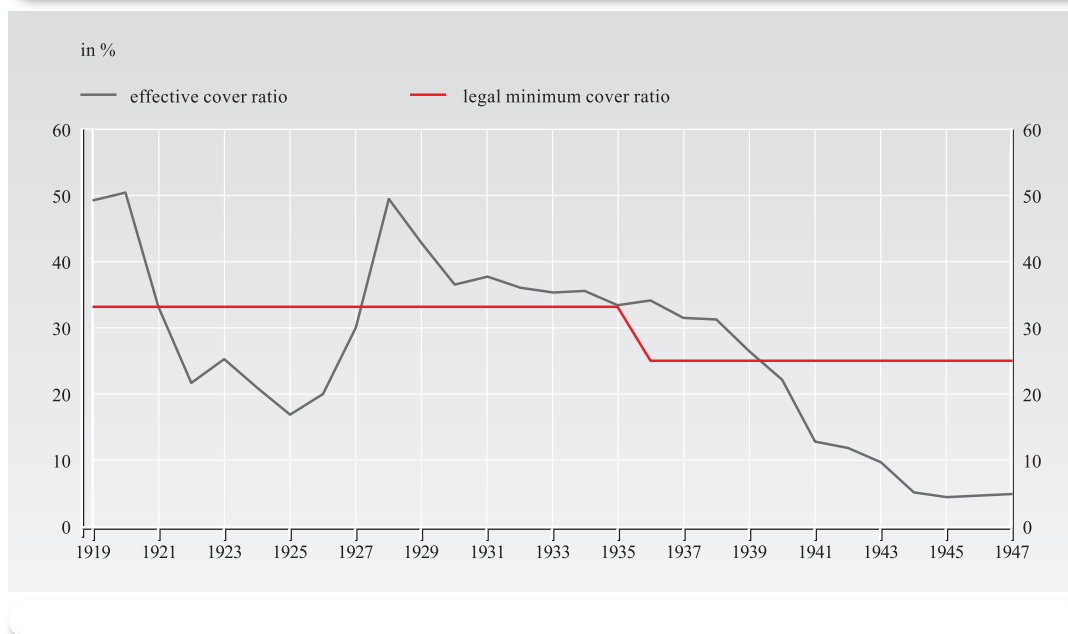
ulation (BG1F) and other central bank liabilities at sight (BG1I). Besides, apart from the legal minimum cover ratio of 33.3%, the BNB should strive to keep that component at 40%. Since then, the bank started officially reporting the ‘cover ratio’ (*покривие*) (in per cent in its weekly balance sheet statements and annual reports). In spite of the difficulty in reproducing the data series on the cover ratio published by the bank, the reported data points for the overall effective cover ratio (BG1L) from January 1927 to November 1928 are based on the bank’s balance sheet values following the changes in legislation.

As seen in Figure 3, between 1922 and 1928 the effective cover ratio was in breach of the legal minimum ratio due to several factors. First, the significant decrease in the foreign exchange component of the reserves, a substantial part of which were denominated in German marks and started to deplete after the hyperinflation in Germany. Second, the lack of economic policy coordination among the major monetary authorities of the time, and third, the comparatively early stabilisation measures taken in Bulgaria, which specified that reserves should only include stabilised foreign currencies.

Thanks to the 1928 stabilisation loan, total reserves, comprising gold, silver holdings²⁴ and net foreign gold-backed currencies, increased at the end of December 1928 and enabled to cover not only banknotes in circulation but also ‘other central bank liabilities at sight’ quite above the legal minimum ratio. Following the devaluation of the leading foreign currencies in the early 1930s, the effective cover ratio started to fall again. Upon the collapse of the France-led Gold Bloc in 1936, the legal minimum cover ratio was lowered to 25%.

Difficulties in following the monetary rules and meeting the legal minimum cover requirement resulted in a series of legislative ad hoc amendments and accounting innovations. Motivated by

²⁴ From 1927 onwards, there was a 3-year transitory period when silver holdings were still eligible for reserves. They were sold in October 1930.

FIGURE 3 Effective Cover Ratio of Total Banknotes in Circulation, 1919–1947

the increase in the market price of gold and the unchanged accounting practice of valuation of the gold reserves at the 1924 rate of '92 leva per 1 gram pure gold', the gold reserve component (i.e. total reserves) was revalued by 25% since October 1940 (BNB 2004, p. 94). Since the revaluation was not reflected in the balance sheet of the bank, but only in the table designated for calculating the cover ratio, it is not taken into account in the overall effective cover ratio which is reported in the BG1L series.

In an attempt to expand the eligible assets, and given the clearing surpluses with Germany, the BNB Law amendment of May 1941 resulted in adding the 'net of other foreign exchange', taking also into account the premium in the foreign exchange component of the coverage. The inclusion of these assets was justified by the clearing agreement with Germany allowing for immediate payment since 1940, and the practice of using them to increase the growing demand for banknotes in circulation (BNB 1943, p. 4). Moreover, manipulations applied for the artificial maintenance of the cover ratio (see BNB 1944, p. 7), thus the officially reported cover ratio could not be deducted from the published balance sheet items. Therefore, the estimated overall effective cover ratio (BG1L series), which is based on the bank's balance sheet, differs from the officially reported cover ratio. Even though the revaluation of the gold reserves by 25% was reflected in the balance sheet data by the end of October 1941, the effective cover ratio was systemically below the legal threshold due to the excessive increase in the BNB liabilities' component related to war financing.

Monetary base

The monetary base (BG1M) is defined as the sum of total currency in circulation (BG1N) and commercial bank sight deposits at the BNB (BG1P). Total currency in circulation comprises the most liquid liabilities, such as banknotes in circulation (liabilities of the issuing bank, BG1F) and coins in circulation (liabilities of the Treasury, BG1O). While official data on coins in circulation are only available from 1909, the series from 1881 to 1908 has been calculated using the informa-

tion on coins mintage and demonetisation. The so constructed data series suffers from some deficiencies which compensate for each other to some extent. On the one hand, it tends to overestimate the quantity of the coins in circulation since the BNB's vault has not been deducted. On the other hand, it underestimates the quantity of coins in circulation before the demonetisation of foreign coins as legal tender. Data on coins in circulation are not available for the period 1916–1923 and, for the sake of continuation of the time series, we applied linear interpolation for reconstructing the BG1O series, being aware of the deficiencies of this statistical manipulation and for this particular period of time, including WWI.

As explained above, banknotes in circulation (BG1F) also included cheques and Treasury bills from September 1922 to July 1924. It, however, does not include the 3% Treasury bills issued in 1942, which represented a growing and very important amount until 1947, when they were withdrawn from circulation. Although they were recognised as legal tender, they were not reflected in the BNB balance sheet with a view to keeping the liabilities' component of the coverage within limits. Additional information in the BNB annual reports (see Table 4) provides some data on Treasury bills, which are added to the series of total currency in circulation (BG1N).

TABLE 4 3% Treasury bills recognised as legal tender, 1942–1945

Year/ values	1942	1943	1944	1945
Treasury bills	1.837	8.978	18.200	26.200

Notes: Data refer to end-of-year values and are in billion leva.

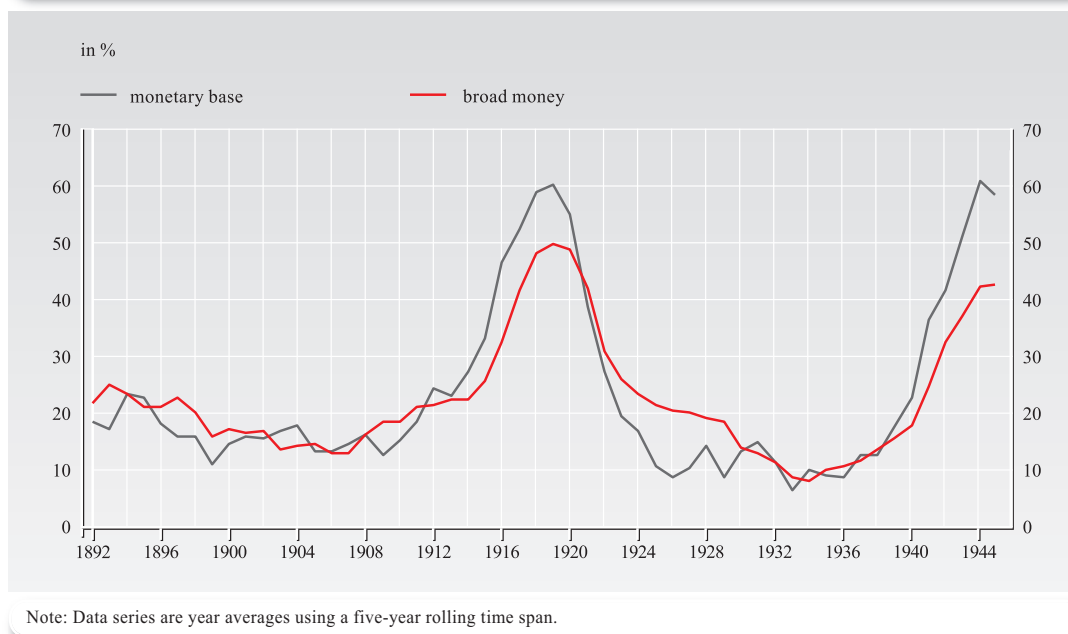
The economic concept of the monetary base demands adding commercial banks' deposits at the central bank, which were treated as commercial banks' reserves. Therefore, the constructed monetary base indicator (BG1M) includes also bank sight deposits at the central bank (*текущи сметки на банки*) (BG1P), which began being published as a separate balance sheet item only since 1927. They were part of other central bank liabilities at sight (BG1I), which were subject to coverage.

Broad monetary aggregates

Utilising different monetary aggregates according to the degree of liabilities' liquidity, we were able to construct a 'broad money' indicator of money supply. The aggregated indicator (BG1O) includes total currency in circulation (BG1N) without commercial banks' cash, plus all bank deposits. The latter includes all deposits at the BNB from 1879 to 1926²⁵ and thereafter only private (non-government and non-bank) deposits at the BNB, deposits at the Bulgarian Agrarian Bank, and at private banks (since 1887), deposits at the Post Saving Bank (since 1896), at credit cooperatives (since 1900), at the Bulgarian Central Cooperative Bank (since 1911) and at the Popular Banks (since 1912).

Developments in the monetary base and money supply outline both periods of accommodative and disinflationary monetary policies, as seen in Figure 4. In periods of low financial intermediation and extensive monetisation of fiscal deficits, which was closely related to war financing,

²⁵ In fact, shortly after its establishment, the BNB relied extensively on government deposits at lower costs, while in 1883 it stopped accepting private deposits because of the higher costs incurred.

FIGURE 4 Money Supply and Monetary Base, 1892–1945

the growth of the monetary base exceeded that of the broad monetary aggregate. Whenever the economic situation was stabilised and adherence to the gold-exchange standard was restored, as was the case in the second half of the 1920s, financial development was enhanced and therefore money supply outperformed the growth of the monetary base.

2.2 INTEREST RATES

2.2.1 Short-term interest rates

Discount rate

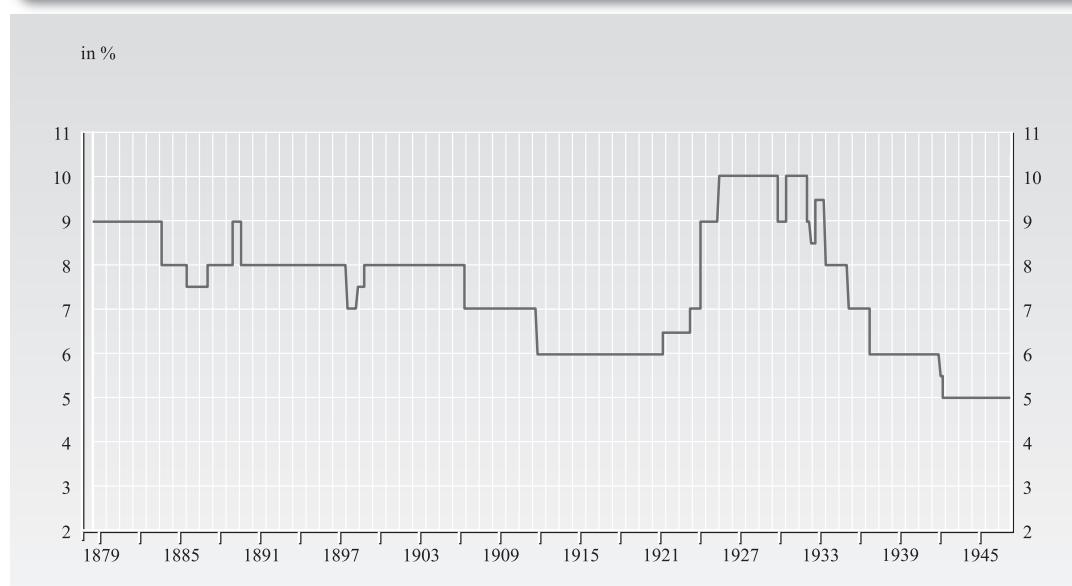
Since the BNB operated as a commercial bank and a bank of note issue, its discount rate (*сkonto*) (series BG2A) which was applied to short-term loans (up to 3 months) to traders, commercial enterprises and other banks, is considered the official interest rate. Loans were provided through buying commercial papers and discounting bills of exchange, which had to carry at least two authorised signatures. Both values by dates of change and by the end-of-month are available. As the biggest bank in the country, the BNB was the market maker determining the lending rates in the country (BNB 1929, p. 77).

Compared with core European countries, the BNB's discount rate was relatively high in the first few decades after its establishment, revealing money scarcity (Figure 5). Until 1906, its discount rate policy was not very effective, given that the bank did not have branches in the countryside until 1884, and its credit portfolio was of a long-term character as the credits extended against bills of exchange were often not repaid (BNB 1929, p. 74). The re-organisation of the BNB in 1906 resulted in an increase of the share of high-quality commercial paper and short-term credits extended against bills of exchange. In 1911, the BNB's discount portfolio was larger than the discount portfolio of the rest of the banking system, and thus it was more efficient in regulating

banking activity (BNB 1929, p. 79). From May 1911 to July 1920, the bank imposed differentiated discount rates (BG2A) depending on certain characteristics of the borrowers. For example, it lent companies with paid-in capital exceeding 500,000 leva and turnover exceeding 800,000 leva at 6% and the remaining companies at 6.5%.

A (discount) interest rate rule was legislated for the first time in the BNB Law amendment of 1926, stating that ‘whenever the minimum cover ratio of 33 1/3% was violated, the governor should propose an increase of the discount rate, as well as all other measures necessary to meet the cover ratio’ (Article 10). At the same time, the BNB ceased its operations on extending mortgage and other long-term loans, and was only allowed to discount short-term commercial paper (up to 3 months). This ‘rule’ was activated with the 1928 BNB Law amendment, stating that ‘whenever the minimum cover ratio was violated, the minimum discount rate should be increased.....’ (Article 12). Later, in the 1930s, the BNB’s discount policy again diverged from the internationally established monetary policy rule, and efforts were directed into manipulating the effective cover ratio as discussed above (cf. description of the reported effective cover ratio).

FIGURE 5 The BNB Discount Rate, 1879–1947



2.2.2 Long-term interest rates

Fixed-rate government bonds: market prices and current yields

We provide data on the market prices (BG2B, BG2D, BG2F, BG2I, and BG2J) and current yields (BG2C, BG2E, BG2G, BG2H and BG2K) of fixed-rate government bonds traded on the Vienna Stock Exchange.²⁶ The data series refer to a period from the earliest available quotations to June 1914 for five fixed-rate government bonds (for details see Table 5).

²⁶ The data were generously provided by Clemens Jobst (OeNB). This was done due to very fragmentary information on quotations from Bulgaria. The Sofia Stock Exchange was founded only in 1914 but never managed to establish itself as an important institution in the domestic capital market.

The market prices for the 1889, 1892 and 1902 Bulgarian bonds listed on the Vienna market were quoted at a nominal value of 125 French francs, which was $\frac{1}{4}$ of the face value, as one security had a face value of 500 French francs.²⁷ The market prices for the 1907 and 1909 bonds were given in percentages of their face value (500 FF). Therefore, the quoted price was multiplied by 4 to arrive at the price of one security. The coupon was paid in gold French francs or in another gold-convertible foreign currency. As the exchange rate of the Austrian currency fluctuated against gold convertible currencies (at least for a part of the period), the coupon price was converted into the Austrian currency in order to calculate current yield. To do so, the coupon price is divided by the price of the gold French franc traded on the Vienna market.²⁸ The yields are not adjusted for the coupon (which is included in the quoted price in Vienna) and do not account for regular drawings and the possibility of early redemption or conversion.

TABLE 5 Bulgarian government bonds quoted in Vienna

Bond name traded on the Vienna Stock Exchange	Coupon rate	Law	Amount	Coupon Payment	Redemption
<i>1889 State railroad mortgage bond</i>	6%	1st (13th) of November 1889	30,000.000 Leva (= FF) = £ 1,200.000 = Mk. 24,300.000	1st (14th) April 1st (13th) October	33 years in half yearly drawings. Redemption by 1907 State Gold bond.
<i>1892 State mortgage bond</i>	6%	7th October (8th November) 1892	142,780.000 Leva (=FF) = £ 5,711.200 = Mk. 115,651.800	2nd (15th) January 1st (14th) July	33 years in half yearly drawings on 1st (14th) May and 1st (14th) November. Additional early redemption possible after 1898.
<i>1902 Tabacco bond</i>	5%	3rd (16th) July 1902	106,000.000 Leva (=FF) = Rouble 39,750.000 = Mk. 85,860.000 = £ 4,197.600 = K 100,912.000 = holl. fl. 50,880.000	1st (14th) March 1st (14th) September	50 years in half yearly drawings on 1st (14th) February 1st (14th) August. Additional early redemption possible after September 1913.
<i>1907 State Gold bond</i>	4.5%	21st February (6th March) 1907	Gold Leva (=FF) 145,000.000 = Rouble 54,375.000 = Mk. 117,450.000 = £ 5,742.000 = K 138,040.000 = holl. fl. 69,600.000	1st (13th) February 1st (13th) August	60 years in half yearly drawings on 1st January 1st July (payment one month later). The entire bond could be redeemed after November 1915.
<i>1909 State Gold bond</i>	4.5%	14th (27th) November 1909	Gold Leva (=FF) 100,000.000 = Mk. 81,000.000 = £ 3,960.000 = K 95,200.000 = holl. fl. 48,000.000	1st (13th) June 1st (13th) December	50 years in half yearly drawings on 1st June 1st December. The entire bond could be redeemed or converted after 1920.

Note: The dates of the law (column 2) differ with 13 days due to the two different calendars. The earlier date is according to the Gregorian calendar and the later one is according to the Julian calendar. Bulgaria switches to the Gregorian calendar in 1916.

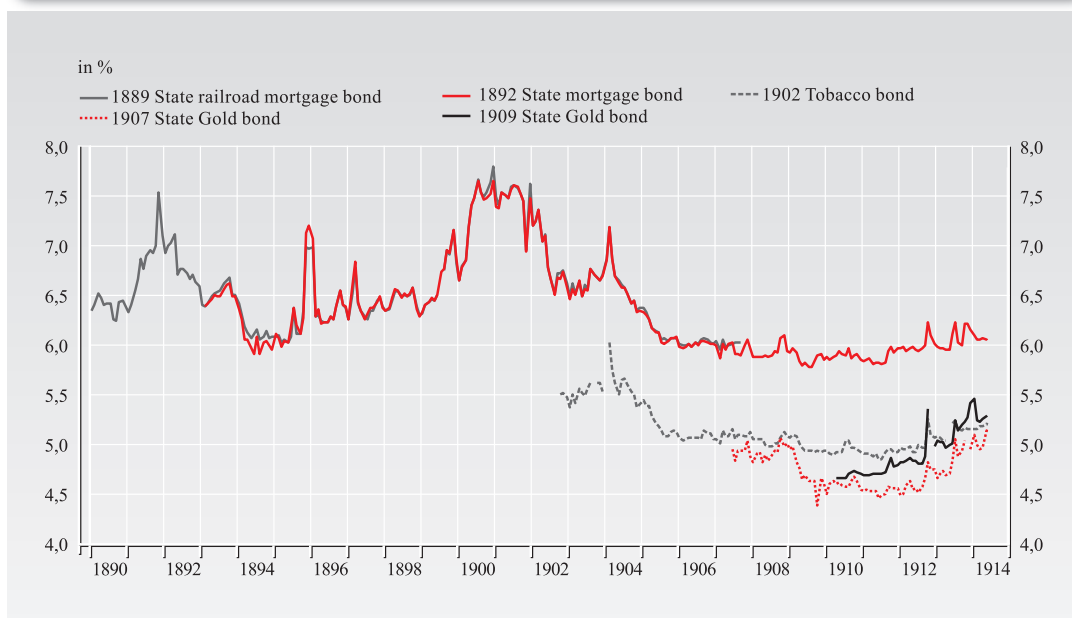
Figure 6 depicts the development of current yields on Bulgarian government bonds traded in Vienna before WWI. The earliest available quotations are of the State railroad mortgage bonds issued at the end of 1889, for which the Imperial Minister of Finance of Austria-Hungary gave his consent

²⁷ Between December 1899 and March 1900, market prices on the Vienna Stock Exchange were quoted in per cent of their face value.

²⁸ The formula used in calculating current yield is: current yield = coupon price/quoted price, which for the first three bonds is adapted to current yield = (500 * coupon rate * price of one 20 FF gold coin/20) / (quoted price * 4) and for the second two bonds: current yield = (100 * coupon rate * price of one 20 FF gold coin/20) / (quoted price). The yield calculation corrects for price quotations in per cent between December 1899 and March 1900 applying the formula: current yield = (100 * coupon rate * price of one 20 FF gold coin/20) / (quoted price). The price of one 20 FF gold coin in the Austrian currency is provided in Austrian-Hungary data tables (AH3E_M).

to be traded on the Vienna Stock Exchange. The issue was assessed as successful, although the stock exchanges in Berlin, Paris and London refrained from quotations (Ivanov et al. 2009). There is an increase in the yield from the beginning of 1891 until the end of 1892 against the background of an unsuccessful attempt of the central bank to introduce the gold standard, and a counter-attempt to start issuing silver-backed banknotes in order to enhance the circulation of banknotes and implement monetary policy efficiently. The government, for its part, proposed a change in the statute of the BNB, converting it from state-owned to a private shareholders' bank, which was, however, viewed as threatening public confidence in the major credit institution of the country and thus made German banks to demand repayment of their credits.

FIGURE 6 Yields on Bulgarian Government Bonds in Vienna, 1890–1914



Note: Quotations in Vienna; not adjusted for coupons and redemptions.

The State mortgage loan of 1892 was also invested in railroad construction works, and the yield on the issued bonds moved very closely to the State railroad mortgage bond of 1889 throughout the whole period.²⁹ The prolonged economic crisis in the late 1890s put public finances in disorder. The extremely difficult financial situation resulted in the inconvertibility of the gold-backed banknotes, which caused the yields on Bulgarian government bonds to soar until July 1902. The 1902 loan was guaranteed by budget receivables from tobacco production and directly managed by the established Committee of International Financial Control, headed by a French creditors' community representative. Thus, the country's foreign public debt was consolidated and its repayment was controlled by its holders. The granting of the 1902 tobacco loan was accompanied by the government's commitment to repay all its floating debt to the BNB and to avoid minting new silver coins without an agreement with its debt holders. On the other hand, the BNB was obliged to limit its banknote circulation in order to keep the coverage of banknotes stable, and to restore convertibility. The implication of these clauses assured creditors that their receivables would not be depreciated and thus mitigated sovereign risk.

²⁹ The 1889 State railroad mortgage bond was redeemed through the 1907 State Gold bond.

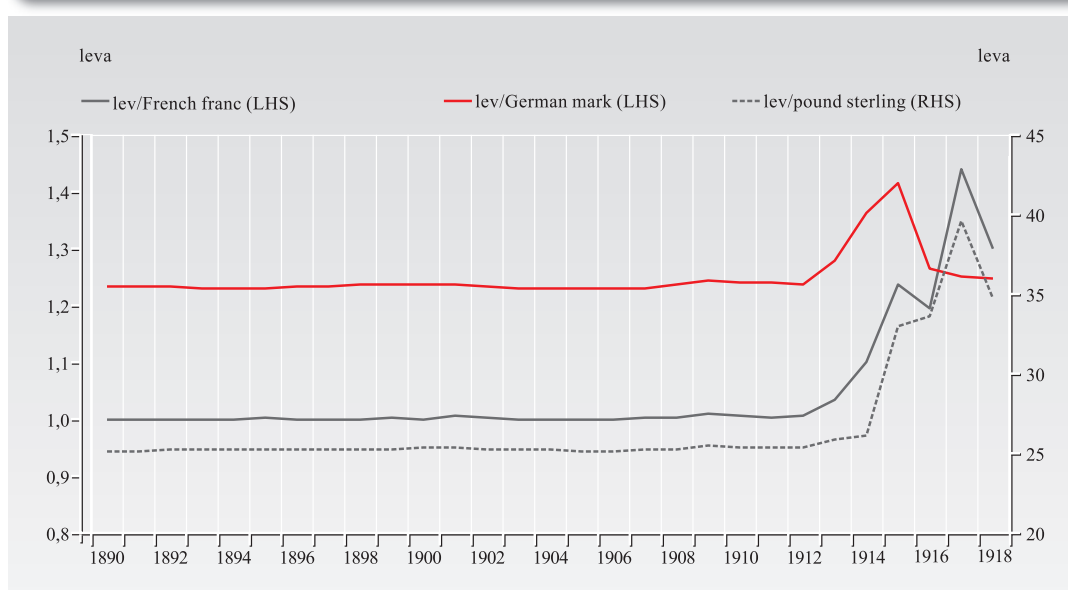
The 1907 4½ State Gold bond loan was also successfully contracted. In contrast to the 1902 loan, this one provided resources for the conversion of the residuals of the 1888 and 1889 loans only. The State Gold loan signed with the Wiener Bank-Verein in 1909 was the first (and only) foreign debt deal of the Bulgarian government which was free of any political requirements and guarantees accompanying the 1902 and 1907 loans. The loan was used to repay the outstanding public debt and to complete the railroad works. The bonds were also quoted in London and Berlin and other smaller European stock exchanges. However, from October 1912, when Bulgaria entered a long wartime period starting with the Balkan Wars, investors demanded higher returns in order to put their money into government bonds.

After WWI, Bulgaria managed to contract only two foreign loans under the auspices of the League of Nations. The first of them, issued as late as 1926, was designed to accommodate over 300,000 Bulgarian refugees that fled territories that were given to Greece and Yugoslavia at the Paris Peace Conference. The 7.5% 1928 Loan was mainly used to stabilise the national currency (Stoyanov 1933).

2.3 EXCHANGE RATES

The nominal exchange rates of the Bulgarian lev against the pound sterling (BG3A), the French franc (BG3B) and the German mark/Reichsmark (BG3C) are traced back to 1890, and against the US dollar (BG3D) to 1913. All exchange rates are transformed to report Bulgarian leva per 1 unit of foreign currency, although the original quotations of the exchange rate against the French franc and the German mark/Reichsmark were per 100 units of the respective foreign currency. For the sake of presenting a consistent and long-run time series, we report the selling rate of the bills of exchange drawn on foreign markets utilising different sources of information. The annual data series reports the year average based on 12 monthly averages, and in the cases where monthly average data are not available in the BNB Annual Reports, the series is reconstructed by averaging 4 weekly

FIGURE 7 Exchange Rates of the Bulgarian Lev Against the Pound Sterling, the French Franc and the German Mark, 1890–1918

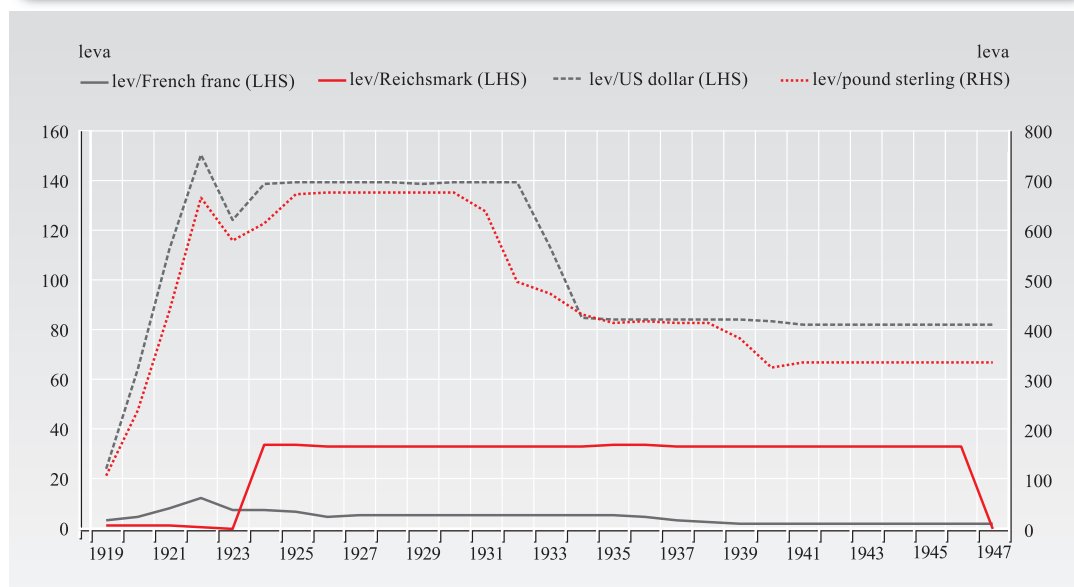


observations of the selling rate at certain dates from the State Gazette, quoted as ‘BNB exchange rates section’.³⁰ The annual average exchange rates against the French franc and the pound sterling for the years 1917 and 1918 are taken from the statistical yearbook of the Bulgarian Statistical Office since there are no monthly or daily quotations during WWI. The nominal exchange rate against the US dollar starts as late as 1913 on an annual basis and January 1919 on a monthly basis.

The evolution of the nominal exchange rates of the Bulgarian lev against the four main foreign currencies can be divided into two sub-periods (Figures 7 and 8). During the classical gold standard, the lev exhibited a stable behaviour against the French franc, the pound sterling and the German mark. However, from October 1912 onwards, the lev began to suffer from strong devaluation pressures since the high war expenditures were covered by monetary expansions.

Being an ally of Germany, Bulgaria was on the side of the defeated countries in WWI. After the Treaty of Neuilly-sur-Seine signed on 27 November 1919, Bulgaria had to pay heavy war reparations, which caused further devaluation pressures on the lev with respect to the currencies of the Entente countries (see Figure 8). After a high-inflation episode in 1922, the lev partially restored its purchasing power as the country took stabilisation measures. With the German hyperinflation in 1923, the exchange rate of the lev against the mark reached 0.2 leva per 1 billion marks.³¹ When the currency reserves, which were denominated in marks and blocked in German banks, depreciated abruptly, the lev also depreciated sharply against the pound sterling and the US dollar. In 1924, the lev was stabilised in the context of the gold-exchange standard that was implicitly in practice. In the early 1930s, when the pound sterling and the dollar were devalued, the lev remained

FIGURE 8 Exchange Rates of the Bulgarian Lev Against the Pound Sterling, the French Franc, the Reichsmark and the US Dollar, 1919–1947



³⁰ The monthly exchange rates which are reported in Table BG3_M differ slightly from the data published in Dimitrova and Ivanov (2009), referring only to the averages of the monthly minimum and maximum values of the selling rates.

³¹ Until March 1924, the lev exchange rate was expressed in terms of the mark. Thereafter, it was against the Rentmark and from 26 January 1925 against the Reichsmark.

on gold and appreciated. Thereafter, it remained relatively stable chiefly due to stringent exchange controls imposed on money flows, which were in place until the end of WWII.

During the prevailing exchange control regime, an exchange rate premium was set for a limited number of private deals in 1933 and on a larger scale in 1935. They were officially imputed by the BNB with a view to stimulating exporters by correcting the appreciation/depreciation of the lev against the foreign currencies (see Table 6). Foreign currency earned from exports was traded in ‘compensation’ deals, which formed a kind of parallel —but legal — foreign exchange market where the lev was implicitly depreciated. Those rates were officially reported and published. Nevertheless, the low trade volume during the interwar period, in conjunction with the clearing agreements did not allow for a significant increase in total exports and accumulation of other foreign currency except the Reichsmark.³²

TABLE 6 Exchange rate premium in the 1930s

Exchange rate premium	1935	1936	1937	1938	1939	1940
<i>Reichsmark (all goods)</i>	3.90	-1.50	-1.58	-1.98	-1.59	-3.60
<i>Czechoslovakian kronas (all goods)</i>	21.82	18.53	29.90	25.10	20.28	6.85
<i>Austrian schillings (all goods)</i>	15.73	12.77	27.46	27.35	0.00	0.00
<i>French francs (all goods)</i>	33.80	31.01	30.47	32.04	34.93	34.95
<i>Pound sterling (all goods)</i>	.	.	30.49	34.04	35.00	35.00
<i>Average exchange rate premium for all currencies and all goods</i>	24.51	22.53	22.02	19.03	.	.

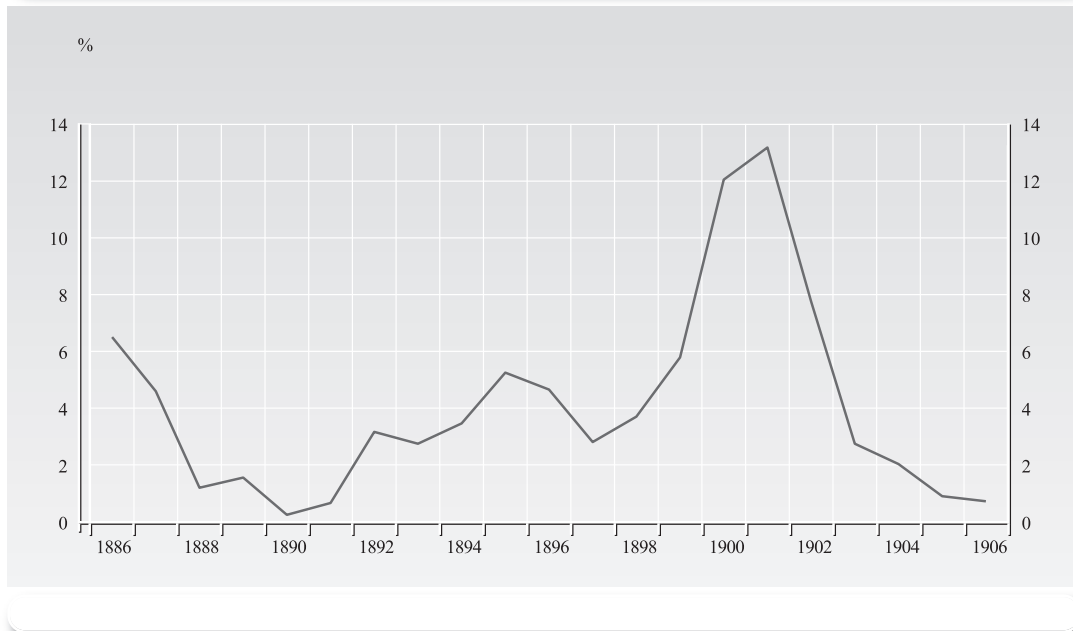
Note: Annual average data, in per cent.

Source: Statistical yearbook (1935–1940), various issues.

In our data set, we have included an additional indicator of the lev depreciation, namely the *agio*, which is defined as the difference between the market price of gold in terms of silver and the officially set ratio (i.e. legal ratio). The *agio* (BG2E) is reported in per cent and is constructed based on the monthly minimum and maximum buying and selling rates as reported by the BNB. Its development broadly followed the movements in the international bimetallic ratio and more closely the domestic money market conditions. Apart from its fundamental determinants, the *agio* was also affected by fiscal and monetary decisions and policies (Dimitrova and Fantacci 2011). It reached its minimum rate in 1890 and 1897, when the domestic monetary authorities made efforts to join gold, and its maximum rate when the BNB started massively to issue silver-backed banknotes in order to provide budget financing (Figure 9). Since 1902, the *agio* started decreasing due to the exceptionally rich harvests and foreign trade surpluses. While the value at the end of 1906 was close to zero, the BNB stated that the ‘*agio* was ultimately liquidated’ (BNB 1907, p. 17) and starting from 1907 it stopped publishing data. With the establishment of the paper standard upon the outbreak of the First Balkan War in late 1912, the *agio* was no longer applicable (Bochev 1924, p. 28 and Nedelchev 1940, p. 15).

³² An analysis of the effect of the exchange control regime in Bulgaria on foreign trade is provided in Dimitrova et al. (2009).

FIGURE 9 Agio Movements in Bulgaria, 1886–1906



2.4 GOVERNMENT FINANCES

2.4.1 Revenue and expenditure

The data set on fiscal variables consists of total government revenues (BG4A), total government expenditures (BG4B), foreign debt payments (BG4C), foreign public debt (BG4D) and domestic public debt (BG4E). Total government revenues and expenditures refer to central government and the data series are available from 1879 to 1945. Apart from the regular budgetary items such as direct and indirect taxes, customs duties, expenditures for the government administration and debt repayments, they also include extraordinary items such as 1/2% seigniorage revenues derived from minting coins, loans, extra financing for infrastructural projects and war financing.

To standardise its calendar with its German and Austro-Hungarian allies during WWI, on 31 March 1916 Bulgaria adopted the Gregorian calendar by adding 13 days (that is, 1 April became 14 April). With the exception of the period 1919–1934, both the fiscal and the calendar year started on 1 January. With the 1919 reform, the fiscal year started on 1 April. In order to convert fiscal to calendar year, the following simple rule was adopted: fiscal year 1919/20 equals calendar year 1919, fiscal year 1920/21 equals calendar year 1920 and so on. On 1 April 1934, the 1919 reform was repealed and the fiscal and calendar years coincided again. As a result, the 1939 data values for total government revenues (BG4A) and expenditures (BG4B) refer to 9 months only.³³

Foreign (public) debt payments are also included in our data set. Series BG4C is constructed for the period 1887–1945 and retrieved from Ivanov et al. (2009, v. 3, p. 365–440). To this end, data on debt repayment and the exchange rates reported in the statistical yearbooks were used to convert different debts into leva and thus construct a continuous time series.

³³ Nedkov (1937), p. 32.

2.4.2 Government debt

Foreign public debt

Our series on foreign public debt (BG4D) represents the gross outstanding debt that was issued by the government and denominated in foreign currency. The starting point is 1888, when Bulgaria issued its first foreign loan. From 1888 to WWI, like most European countries, Bulgaria used to issue debt for funding the budget deficit, railways construction, and/or rearmament. Before the Balkan wars, foreign debt was kept within manageable levels of around 30% of GDP and only one loan was restructured in 1902 (cf. Section 1). With few exceptions, most foreign loans were floated in Paris and denominated in (gold) francs. To cover bondholders from eventual devaluation of the lev all credit contracts contained a gold clause.

Wartime spending and the war reparations imposed in 1919 deteriorated the country's foreign debt position. The debt-to-GDP ratio skyrocketed to over 200%. Obviously, such a ratio was not sustainable in the long run and the government had to request a significant reduction. With the mediation of the League of Nations in 1923, reparations were divided in two parts: 1.7 billion French francs were postponed until 1953, while amortisation of remaining 550 million francs was deferred until 1935. As a result, reparation payments were reduced to just 27.5 million francs (212 million leva) for the next 12 years.

To meet high spending, the country borrowed from abroad under the auspices of the League of Nations. The 1926 Refugees Loan, floated in London and New York, envisaged the accommodation of almost 300,000 refugees, who settled in Bulgaria after World War I. The 1928 Stabilisation Loan, floated in Paris, London and New York, funded *de jure* stabilisation of the national currency and the reconstruction of the regions hardly hit by the Chirpan earthquake.

With the onset of the Great Depression, prospects for further foreign lending dried up. The falling world agricultural prices reduced the gold earnings from exports and consequently national income. The country found itself in a precarious situation and urgently needed to start talks on debt renegotiation. As far as reparations were concerned, the government took advantage of the Hoover moratorium and the two international conferences at Hague and Lausanne that followed. In 1932, Greece, the main recipient of the Bulgarian reparations, agreed to apply temporarily the Hoover moratorium. In practice, Bulgaria never resumed payments and the issue was legally settled in 1964 when Greece accepted the abolition of the reparations at the exchange of a compensation of 7 million dollars from Bulgaria.³⁴

In 1932, Bulgaria, with the assistance of the League of Nations, achieved a 50% reduction of the interest payments in hard currency. As was agreed, the other half and total amortisation were paid in leva and were held in a block account at the BNB. In the following years, Bulgaria obtained several further reductions which, in 1935, brought gold transfers down to only 21.5%. In addition, the devaluation of the pound sterling, the dollar and the French franc significantly contributed to bringing Bulgaria's foreign debt within manageable levels.³⁵

The improved fiscal situation after 1934 and the low quotations of the Bulgarian bonds prevailing on foreign stock exchanges (12–13% on pre-war and 31–34% on post-war debts) permitted

³⁴ Ivanov et al. (2009) v. 2, pp. 1–128.

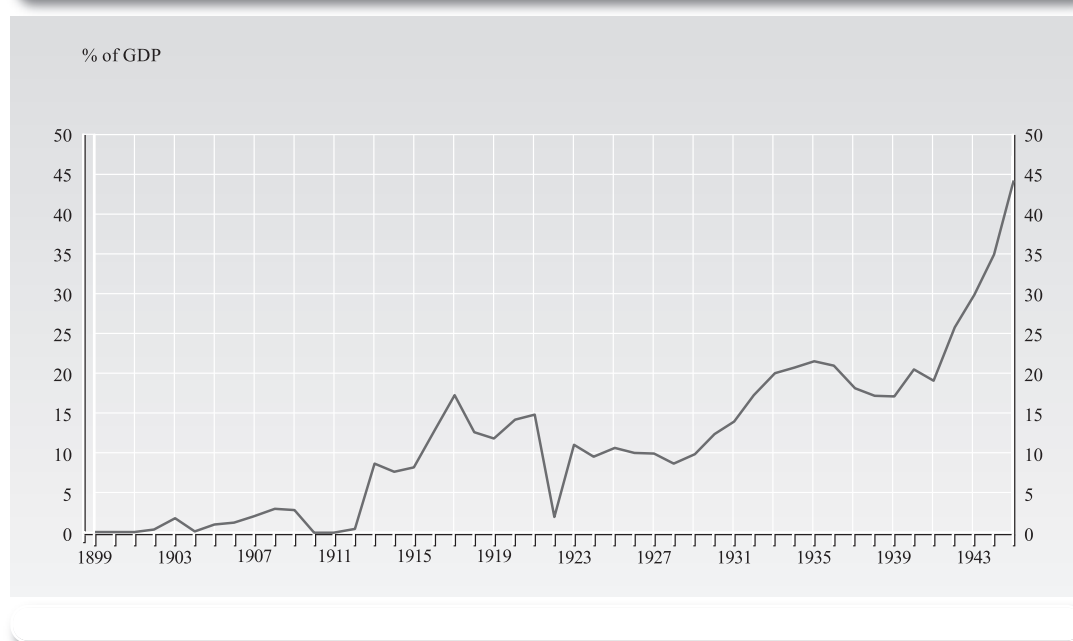
³⁵ Ivanov and Tooze (2011).

the government to adopt a pro-active debt strategy. Between 1936 and the outbreak of World War II, the government bought back a significant portion of the circulating Bulgarian bonds. Data are incomplete but, according to official reports, at least 2.8 billion leva (3.3 million dollars) were invested for that purpose.³⁶ Besides, budget consolidation and buy-back operations changed the structure of bondholding. Initially, government bonds were held predominantly by foreign (mainly French and to a lesser extent British, American and German) investors. After the mid-1930s, 30–40% was held by Bulgarian investors. A bondholder breakdown is not available. Nevertheless, if the currency of original debt issue is used as a proxy, we might conclude that at the onset of the Great Depression nearly $\frac{3}{4}$ of total debt was held by French, 8% by British, 6% by American and the rest by Bulgarian, Dutch, Swiss, Italian and German bondholders.

Domestic public debt

Series BG4E represents the gross outstanding debt which was issued by the government and denominated in national currency. It consists of two components: consolidated and non-consolidated debt according to the statistical reporting standards of the time. While the consolidated domestic public debt represents government debt in the form of bond issues, the non-consolidated component comprised any other form of debt of the government to the public such as direct credits from the banking system dominated by direct credits from the BNB. Domestic public debt was not consolidated until 1915. The debt of the government to the BNB was reported in the bank's balance sheet as 'loans to the State' (*заеми на държавата*) and the series started as late as 1899.³⁷ On 30 July 1912, due to a change in the bank's balance sheet reporting standards, governments' liabilities to the BNB started to be reported as 'State Treasury' (*държавно съкровище*) on the asset side of the bank's balance sheet. In 1915, the government broadened the sources of its domestic

FIGURE 10 Domestic Public Debt, 1899–1945



³⁶ Ivanov et al. (2009), v. 2, pp. 181–183.

³⁷ Contemporary economists argued that the BNB's monopoly right to issue silver-backed banknotes was at the cost of extending credit to the government (for details, see Danailov 1910, pp. 53–54).

debt by drawing from other banks (non-consolidated debt) and issuing bonds denominated in national currency (consolidated domestic public debt). Data on consolidated domestic debt were published in the statistical yearbook referred to 1 January of the respective year, which is treated as 31 December of the previous year, for the sake of compiling different components reported as end-of-year data in the presented series BG4E.

Until 1912, domestic public debt was below 5% of GDP, as seen in Figure 10. With the outbreak of the Balkan Wars, however, it escalated being dominated by direct financing from the BNB. During the interwar period, the stabilisation efforts reduced the non-consolidated component of the debt, and the overall domestic debt was kept at around 10% of GDP. With the outbreak of the Great Depression, the government could not raise funds from abroad and it thus relied on Treasury bonds issue. In the wake of WWII, state-owned commercial banks (e.g. the Bulgarian Agricultural Bank) and the BNB extended almost unlimited credits to the government.

2.5 PRICES, PRODUCTION AND LABOUR

2.5.1 Prices

Due to the lack of a single price index covering the whole sample period, we report four different price indices, which were indicative of the price developments in the domestic economy across different time periods. The earliest available data are presented by the retail price index (1891/1901=100; series BG5C) (*индекс на цените на дребно*), which was reported over the period 1887–1912. It encompassed the changes in the prices of 98 goods. A general index of market prices (1908/1912=100; series BG5D) (*общ индекс на пазарните цени*) captures the changes in the prices of goods between 1912 and 1932. The cost-of-living index (1914=100; series BG5A) (*индекс за издръжката на живота*) captures the changes in the prices of goods and services in 12 main towns and started to be regularly reported in January 1922 until December 1941. It is the only price index

FIGURE II Price Developments, 1887–1944



which is also reported on a monthly basis. A wholesale price index (*индекс на цените на едро*) is also available from 1926 to 1945 with different base years, which after a simple statistical transformation, resulted in the reported wholesale price index series (1914=100; series BG5B).

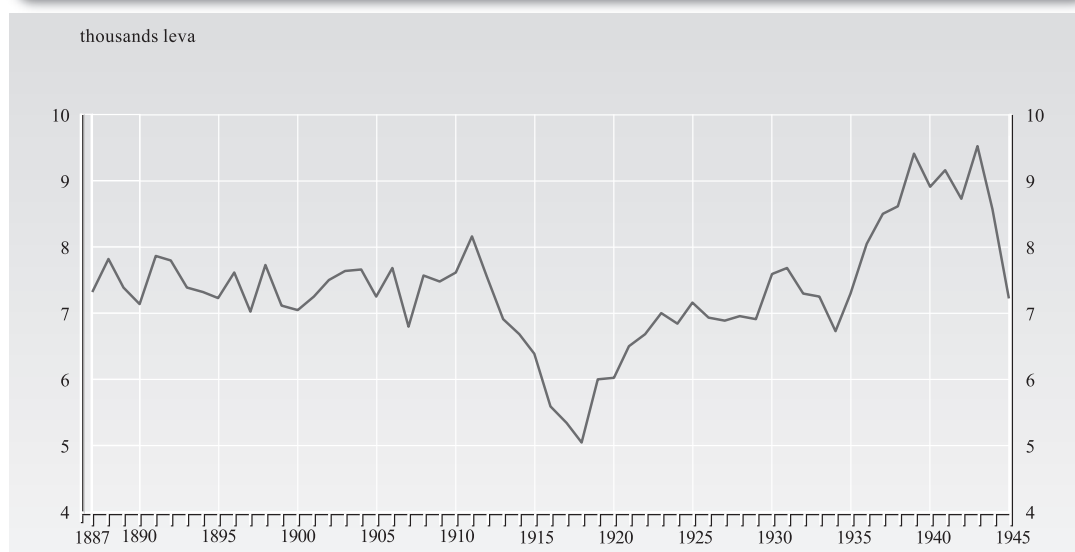
The above-mentioned price indices have different coverage and are anchored to different base years; they thus allow us to detect only a general picture of the price developments in Bulgaria (see Figure 11). Until 1912, given the rural character of the domestic economy and scarce money transactions, price developments did not fully reflect the supply and demand conditions. The general index of market prices, however, clearly depicts the rapid rise in inflation during wartime. Deflation during the Great Depression could be traced by both price indices, which outlined how wholesale price decreases were fully transmitted to retail prices. When the first signs of the economic recovery were noticed in 1934, prices started again to rise and exhibited a strong upward movement during WWII.

2.6 NATIONAL ACCOUNTS

2.6.1 Gross domestic product

In the late 19th century newly independent Bulgaria was amongst the first ten countries in the world to produce own estimates of national income.³⁸ Following in the footsteps of Popov, Geshov, and Chakalov, a new national account series for the period from the 1870s to the end of WWII has been produced recently (Ivanov 2012, Ivanov and Tooze 2009). The GDP estimates, which are reported in series BG6A and BG6B, are compiled using four different sets of data sources and methods: (i) income from agriculture and industry is derived from output data multiplied by current (and constant 1939) prices with input costs deducted; (ii) state budget and business account data provide direct information on salary bills; (iii) where neither of the former is available, annual income is estimated on the basis of the employment census data, multiplied by estimates of annual earnings; and (iv)

FIGURE 12 GDP Per Capita (at 1939 Prices and Today's Territory), 1887–1945



³⁸ Studenski (1956), p. 156–157.

income earned from the commercial sector is derived from both retail and wholesale as a fixed percentage of total sales. Real GDP (at 1939 prices) for the country's today territory is also available.

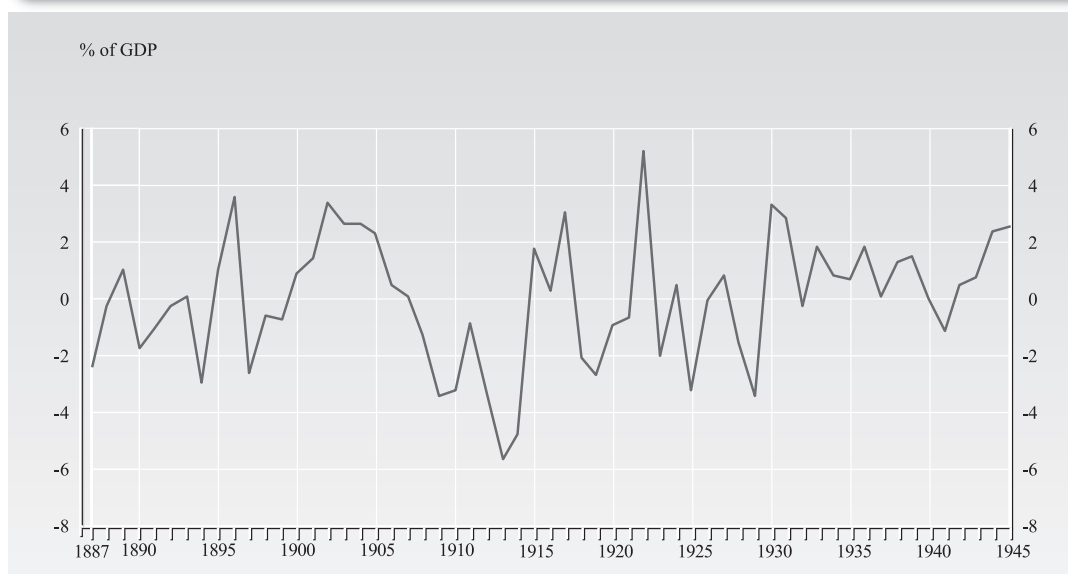
During the gold standard period real GDP per capita did not exhibit any upward long-run trend (Figure 12). The short-lived upward jump in the second half of 1900s was soon followed by a deep war recession. In the early 1920s, the Bulgarian economy stabilised, albeit at a 10–15% lower level. The two foreign loans contracted in 1926 and 1928 gave momentum to another growth episode which was abruptly ended by the Great Depression. From the mid-1930s onwards, investment in human capital (e.g. education) and infrastructure started to pay back.

2.6.2 Exports and imports

Foreign trade data comprise time series on exports (BG6C) and imports (BG6D) of goods only. Early data are only available from 1897 and were regularly reported in the statistical yearbooks. Although in some time intervals data were also available on a monthly basis, for the sake of presenting long-run time series, only data on an annual basis are reported. While GDP data refers to the present-day territory of the country, the data series on exports and imports reflect territorial changes that occurred in the period under study. Hence, from 1879 to 1885 export and import data mainly concern North Bulgaria.³⁹

Based on the goods exports and imports data series, trade balance was very volatile as the economy was dominated by the agricultural sector (Figure 13). There were years of extremely large trade deficits, which put downward pressure on the gold reserves, and years of consecutive foreign trade surpluses as a result of good crop harvests (1900–1907) or of particularly intensified relations with specific trade partners such as Germany before and during WWII.

FIGURE 13 Foreign Trade Balance, 1887–1945



³⁹ The most significant territorial changes occurred as a result of both Balkan Wars and WWI. In 1919, the country's territory increased by 6%, as compared with 1911.

2.6.3 Population

Data on population (series BG6E) were regularly reported from 1881 to 1945. For the years 1880, 1881, 1887, 1892, 1900, 1905, 1910, 1920, 1926 and 1934 the relevant data were census results. End-of-year population was constructed at the time by the Bulgarian statistical office interpolating results of the population censuses carried out at regular intervals: 1880, 1881, 1887, 1892, 1900, 1905, 1910, 1920, 1926 and 1934. Population is reported based on the present-day Bulgarian borders.

3 DATA SOURCES

The main sources for the monetary variables are the Annual Reports of the BNB (*Годишен отчет*), its weekly balance sheets published in the State Gazette (*Държавен Вестник*) and the Statistical Yearbook (*Статистически годишник*) published by the Bulgarian Statistical Office. While BG1A is a constructed indicator, data on its elements BG1B, BG1C and BG1D are directly reported in the BNB annual and weekly balance sheets, published in the State Gazette, just before the section dedicated to commercial information and announcements. Apart from using the respective BNB balance sheet items for the calculation of the foreign exchange variable (BG1E) following legislation, additional analytical information (on annual basis) is provided in BNB (1929, pp. 63–64) for the period prior to 1925. From the beginning of 1927, Table 4 of the BNB *Annual Reports* is the main data source for the monthly data. Since December 1928, an alternative source of information for the construction of the BG1E is a separate table designed for the accurate calculation of the effective cover ratio available at the bottom of the BNB weekly balance sheets, published in the *State Gazette*, allowing for cross-checking with the respective balance sheet items. Data on BG1F, BG1G and BG1H are retrieved from the BNB balance sheet items on the liabilities side. Until the end of 1928 effective cover ratios (BG1J, BG1K and BG1L) are constructed based on the respective items of reserves and BNB's liabilities (BG1F, BG1G and BG1H) of the cover ratio according to the legislation. Although from 1927 the effective cover ratio started to be reported just below the BNB weekly balance sheets, published in the *State Gazette* and provided also in Table 4 of the BNB *Annual Reports*, series BG1L is based on the values of the balance sheet items and differs from the officially published effective cover ratio. From December 1928 onwards, an additional source is a separate table at the bottom of the BNB balance sheets designed for the more transparent calculation of the effective cover ratio, and thus series BG1L is identical to the officially published effective cover ratio. From October 1940 onwards, the overall effective cover ratio (series BG1L) is constructed on the basis of the balance sheet items' values again and thus started diverging from the officially published effective ratio. Sources for double and cross-checking the validity of series BG1L (on an annual basis) are the BNB *Annual Report for the year 1944* (1945), p. 7 and Avramov (1999), pp. 116–117.

Data on the coins in circulation (series BG1O) from 1881 to 1908 are taken from Table 1 of the *Statistical Yearbook* (see Chapter Money and Credit, *Папу и кредит*, Section B, Coins and banknotes, *Монети и банкноти*) and Table 2 from 1909 to 1945, except for the period 1916–1923 when interpolation has been applied. Data on total currency in circulation (BG1N) includes total banknotes in circulation (BG1F), as reported in the BNB balance sheets published either in its *Annual Reports* and the *State Gazette*, while from 1942 to 1945 the data on 3% Treasury bills in circulation are taken from the *Annual Reports* for the years 1943, 1944, and 1947. The data on the sight deposits at the central bank (BG1P) were reported since 1927 in the BNB *Annual Reports* (Table 4). Data on other (non-BNB) deposits at banks are retrieved from the daily press, contemporary publications, and archival material (Ivanov 2012).

The dates of change in the discount rate come from the BNB *Annual Reports*. For the period prior to 1925, alternative and complementary data are provided in the BNB *Anniversary Book* (1929), p. 76.

The data on the market prices of the Bulgarian government bonds traded on the Vienna Stock Exchange (BG2B, BG2D, BG2F, BG2H and BG2J) are taken from the *Bulletin* of the Vienna Stock Exchange, as reproduced in the Vienna daily *Neue Freier Presse* (1888–1914), *Compass* (1913) and *Deutsch Heinrich* (1910). Current yields (BG2C, BG2E, BG2G, BG2I and BG2K) are calculated using the reported market prices and additional information on the face value of the bonds and characteristics about their quotations at the Vienna Stock Exchange provided in *Compass* (1913), *Neue Freie Presse* and *Deutsch Heinrich* (1910).

The exchange rate data are collected from the BNB *Annual Reports*, Section ‘BNB exchange rate’ published on the last page of the *State Gazette*, the *Statistical Yearbook* (see Chapter Money and Credit (*Пару и кредит*), Table on the BNB exchange rates). The data on the agio are retrieved from BNB (1929), pp. 198–199.

The main data source for the fiscal variables is the *Statistical Yearbook* of the Bulgarian Statistical Office. In particular, the data series on total government revenues (BG4A) and expenditures (BG4B) are available in the chapter entitled *Finances (Финанси)* (see Section *Public finances (Държавни финанси)*, Tables for budget revenues and expenditures). Due to revisions, our data series refer to the latest available reported figure for the respective year. The data on foreign and domestic debt payments are taken from Ivanov et al. (2009, v. 3, pp. 365–440). The data on foreign public debt are published in the statistical yearbook (see Table ‘Condition of the public debt’, *Положение на държавните дългове*). From 1889 to 1912, the data on government debt to the BNB (i.e. non-consolidated domestic public debt) are from the BNB *Annual Reports*.

The time series on price indices are from the *Statistical Yearbook* (see Chapter Prices and Consumption, *Цени и потребление*). GDP data series was reconstructed drawing on the official statistical data, various contemporary publications and archival material. Detailed information on sources is presented in Ivanov (2012, pp. 126–127 and Table 1). The data on exports and imports are taken from the *Statistical Yearbook* (see chapter Foreign Trade, *външна търговия*, Table 1). Population is also published in the *Statistical Yearbook* (see Chapter Condition of the Population, *състояние на населението*, Section Population Statistics, *преброяване на населението*).

4 REFERENCES

Archival sources

BNB (1998), *Bylgarska narodna banka. Sbornik dokumenti* (Bulgarian National Bank, Collection of documents), volume I, 1879–1900, Sofia.

BNB (1999), *Bylgarska narodna banka. Sbornik dokumenti* (Bulgarian National Bank, Collection of documents), volume II, 1901–1914, Sofia.

BNB (2001), *Bylgarska narodna banka. Sbornik dokumenti* (Bulgarian National Bank, Collection of documents), volume III, 1915–1929, Sofia.

BNB (2004), *Bylgarska narodna banka. Sbornik dokumenti* (Bulgarian National Bank, Collection of documents), volume IV, 1930–1947, Sofia.

Published sources – statistical publications

Statistical Yearbooks of the Kingdom of Bulgaria, (1909–1942), various issues, bilingual in Bulgarian and French, Sofia.

Statistical Yearbook of the People's Republic of Bulgaria, (1943–1946), various issues, in Bulgarian, Sofia.

Published sources – other publications

BNB (1880–1948), *Annual Reports*, various issues, in Bulgarian, Sofia.

BNB (2009), *Coins*. Catalogue, bilingual in Bulgarian and English, Sofia.

Compass (1913), *Finanzielles Jahrbuch (Financial Yearbook)*, issue 46, Vienna.

Neue Freie Presse (Viennese newspaper, published between 1864 and 1938), Vienna.

State Gazette (1890–1927), various issues, in Bulgarian, Sofia.

Secondary literature

Antonov, Ventsislav (1990), 'Teoretichni osnovi na inflaciata pri socializma (Theoretical foundations of inflation in the socialist system)', *Economics Journal*, issue IV, Sofia (in Bulgarian).

Avramov, Roumen (ed.) (1999), *120 Years Bulgarian National Bank*, Bulgarian National Bank, Sofia.

Avramov, Roumen (2006), 'The Bulgarian National Bank in a historical perspective: Shaping an institution, searching for monetary standard', in Roumen Avramov and Şevket Pamuk (eds), *Monetary and fiscal policies in South-Eastern Europe: historical and comparative perspectives*, 59–76, SEEMHN and BNB, Sofia.

BNB (1929), *Jubileen sbornik na BNB (1879–1929) (BNB Anniversary Book 1879–1929)*, State Printing House, Sofia.

Bochev, Stoyan (1924), *Bylgarskata Narodna Banka kato emisionen, kambilaen i krediten institute (The Bulgarian National Bank as an issuing, foreign exchange and credit institute)*, Publishing house Al. Paskalev, Sofia.

Burilkov, Zhelju (1928), *Parichnata reforma (The Monetary Reform)*, S.M Staikov Publishing House, Sofia.

Christophoroff, Assen (1939), *Razvievitie na konjunktturnia cikyl v Bylgaria 1934–1939 (Development of the Trade Cycle in Bulgaria 1934–1939)*, Trudove na Statisticheski institute za stopanski prouchvania pri Sofijskia darjaven univesitet (Publications of the Statistical Institute for Economic Research at State University of Sofia), No. 1–2, Court Printing Press, Sofia.

Christophoroff, Assen (1946), *Kurs po Balgarsko bankovo delo (Course on banking activities in Bulgaria)*, Izdanie na Obshtia fond za podpomagane na studentite ot wisshite uchebni zavedenia w Bylgaria (Publication of the General fund for supporting the students at the universities in Bulgaria), No. 75, Sofia.

Deutsch, Heinrich (1910), *Arbitrage in Münzen, Barren, Wechseln, Effekten und Prämien*, Verlag für Börsen- und Finanzliteratur, Berlin.

Dimitrova, Kalina and Martin Ivanov (2008), 'Bulgaria', in Peter Mooslechner and Ernst Gnan (eds.), *The experience of exchange rate regimes in Southeastern Europe in a historical and comparative perspective*, 419–423, SEEMHN and OeNB Proceedings of Workshops 13, Vienna.

Dimitrova, Kalina and Martin Ivanov (2009), 'Bulgaria', in 'Monetary times series of Southeastern Europe from the 1870s to 1914', SEEMHN and Bank of Greece, Working Paper 94.

Dimitrova, Kalina, Martin Ivanov and Ralica Simeonova-Ganeva (2009), Effective exchange rates of the Bulgarian Lev, 1879–1939, *International Centre for Economic Research (ICER) Working paper no. 4/09, ICER, Torino*.

Dimitrova, Kalina and Luca Fantacci (2010), 'The establishment of the gold standard in Southeast Europe: convergence to a new system or divergence from an old one?' in Patrice Baubeau and Anders Ögren (eds.), *Convergence and divergence of national financial systems: evidence from the gold standards, 1871–1971*, 179–196, Pickering and Chatto Ltd, London.

Dimitrova, Kalina and Luca Fantacci (2011), 'Monetary policy in Southeast Europe on the road to the gold standard', in Anders Ögren and Lars Fredrik Øksendal (eds.), *Gold standard peripheries. Monetary policy, adjustment and flexibility in a global setting*, 174–187, Palgrave Macmillan, London.

Ivanov, Martin, Tsvetana Todorova and Daniel Vtachkov (2009), *Istoria na vynshnia dyrzhaven dalg an Bylgaria (1878–1990)*, (*History of the foreign public debt of Bulgaria 1878–1990*), Bulgarian National Bank, Sofia.

Ivanov, Martin and Adam Tooze (2009), 'Convergence or decline on Europe's Southeastern periphery? Agriculture, population and GNP in Bulgaria 1892–1945', *Journal of Economic History*, 67(3), 672–704.

Ivanov, Martin (2012), *Brutniat vytreshen product na Balgaria, 1870–1945 (Gross Domestic Product of Bulgaria, 1870–1945)*, Sofia.

Kiosseva, Ninel (2000), *Istoria na parichnite krizi w Balgaria, 1879–1912 (History of the monetary crises in Bulgaria, 1879–1912)*, Economic University Press, Sofia.

League of Nations (1938), *A report on exchange control submitted by a committee composed of members of the economic and the financial committees*, Official No. C.232.M.131, Geneva.

Nedelechev, Kiril (1940), *Parichnoto delo v Balgaria, 1879–1940 (Monetary activities in Bulgaria, 1879–1940)*, Knipegraph Printing House, Sofia.

Nedkov, Boris (1937), *Razvitie na bulgarskata finansova sistema prez poslednoto desetiletie (Development of the Bulgarian financial system in the last decade)*, Trudove na Statisticheskiya institute pri Sofiiskiia darjaven universitet (Works of the Statistical Institute at State University of Sofia), 3, 3–4, Sofia.

Nenovsky, Nikolay (2006), *Exchange rates and inflation: France and Bulgaria in the interwar period and the contribution of Albert Aftalion (1874-1956)*, BNB, Sofia.

Nenovsky, Nikolay, Pavanelli Giovanni and Kalina Dimitrova (2008), 'Exchange rate control in Italy and Bulgaria in the interwar period: History and perspectives', in Peter Mooslechner and Ernst Gnan (eds), *The experience of exchange rate regimes in Southeastern Europe in a historical and comparative perspective*, 80–117, SEEMHN and OeNB *Proceedings of Workshops 13*, Vienna.

Nikolov, Georgi (1927), *Stabilizacia. Parichna I stopanska. (Monetary and economic stabilisation)*, Elisei Petkov Printing House, Sofia.

Petkof, Joseph (1926), *Prix, circulation et change en Bulgarie de 1890 à 1924*, Jouve&Cie Editeurs, Paris.

Royal Institute of International Affairs (1933), *Monetary policy and the depression. A first report on international monetary problems by a group of the Royal Institute of International Affairs*, Oxford University Press, Humphrey Milford, London.

Royal Institute of International Affairs (1936), *The Balkan states. A review of the economic and financial development of Albania, Bulgaria, Greece, Romania and Yugoslavia since 1919*, Oxford University Press, Humphrey Milford, London.

Stoyanov, Nikolai (1933), *Reparatsii i mejdusayuzni dalgove. Bulgarski darjavni dalgove (Reparations and inter-alliance debts. Bulgarian foreign debts)*, P. Glushkov Publ., Sofia.

Studenski, Paul (1956), *The income of nations. Part One: History*, New York: New York University Press.

Toshev, Georgi (1928), *Valuta u valutna politika. Nauchna anketa za prichinite na stopanskata kriza (Foreign exchange and foreign exchange policy. A scientific inquiry into the causes of the economic crisis)*, Franklin Cooperative Printing House, Sofia.

Yordanov, Danail (1910), *Bylgarskata narodna banka 1879-1908 (Bulgarian National Bank 1879–1908)*, Sofia.

Yurii (1923), *Likvidacia na parichnata kriza (pokachvane cennostta na nashia lev) (Liquidation of the monetary crisis (increasing the value of our lev))*, Pridvorna Printing House, Sofia (in Bulgarian).

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 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 BG I.1_A Total reserves, 1879–1947

continue

Year	Total reserves	Metallic holdings	Gold holdings	Silver holdings	Foreign exchange
	BG1A_A	BG1B_A	BG1C_A	BG1D_A	BG1E_A
1879	9425.0	9425.0	.	.	..
1880	2555.0	2555.0	.	.	..
1881	2115.0	2115.0	.	.	..
1882	1414.0	1414.0	.	.	..
1883	817.0	817.0	.	.	..
1884	1553.0	1553.0	.	.	..
1885	3659.0	3659.0	.	.	..
1886	1498.0	1498.0	482.0	1016.0	..
1887	2398.0	2398.0	1904.0	494.0	..
1888	3120.0	3120.0	2467.0	653.0	..
1889	11505.0	11505.0	10743.0	762.0	..
1890	4598.0	4598.0	2871.0	1727.0	..
1891	7377.0	7377.0	6638.0	739.0	..
1892	2948.0	2948.0	2565.0	383.0	..
1893	6201.0	6201.0	4865.0	1336.0	..
1894	10078.0	10078.0	2911.0	7157.0	..
1895	6400.0	6400.0	1625.0	4775.0	..
1896	6486.0	6486.0	3941.0	2545.0	..
1897	8921.0	8921.0	4283.0	4638.0	..
1898	9183.0	9183.0	2996.0	6187.0	..
1899	7398.0	7398.0	3205.0	4193.0	..
1900	13259.0	13259.0	4475.0	8784.0	..
1901	12519.0	12519.0	3399.0	9120.0	..
1902	20132.0	20132.0	9900.0	10232.0	12458.0
1903	12175.0	12175.0	5669.0	6506.0	2524.0
1904	19722.0	19722.0	9273.0	10449.0	24286.0
1905	30759.0	30759.0	20600.0	10159.0	10586.0
1906	38387.0	38387.0	27699.0	10688.0	6838.0
1907	42331.0	42331.0	27312.0	15019.0	5105.0
1908	39531.0	39531.0	24588.0	14943.0	0.0
1909	47823.0	47823.0	30745.0	17078.0	6343.0
1910	52801.0	52801.0	31541.0	21260.0	26667.0
1911	59336.0	59336.0	40142.0	19194.0	32370.3
1912	103584.0	67892.0	51103.0	16789.0	35692.0
1913	92524.0	78774.0	55335.0	23439.0	13750.0

TABLE BG I.I_A Total reserves, 1879–1947

Year	Total reserves	Metallic holdings	Gold holdings	Silver holdings	Foreign exchange
	BG1A_A	BG1B_A	BG1C_A	BG1D_A	BG1E_A
1914	109255.0	83644.0	55095.0	28549.0	25611.0
1915	337022.0	83864.0	61402.0	22462.0	253158.0
1916	777209.0	85377.0	68173.0	17204.0	691832.0
1917	1335590.0	95811.0	62855.0	16876.0	1239779.0
1918	1289993.0	103803.0	64020.0	19436.0	1186190.0
1919	1431040.0	77969.0	36978.0	17158.0	1353071.0
1920	1703416.0	69226.0	37075.0	16911.0	1634190.0
1921	1207879.0	61307.0	38006.0	20866.0	1146572.0
1922	821969.0	57395.0	38420.0	18412.0	764574.0
1923	1066257.0	72246.0	39527.0	16919.0	994011.0
1924	948164.0	72996.0	40373.0	17227.0	875168.0
1925	619595.0	132718.0	41353.0	17365.0	486877.0
1926	701749.0	195732.0	43855.0	17695.0	506017.0
1927	1849161.0	1442816.0	1277435.0	165381.0	406345.0
1928	3746138.0	1493824.0	1323412.0	170412.0	2252314.0
1929	2469673.0	1558489.0	1388527.0	169962.0	911184.0
1930	1766736.0	1454801.0	1454801.0	..	311935.0
1931	1626618.0	1511446.0	1511446.0	..	115172.0
1932	1526572.0	1519391.0	1519391.0	..	7181.0
1933	1592823.0	1544968.0	1544968.0	..	47855.0
1934	1493883.0	1546675.0	1546675.0	..	-52792.0
1935	1472680.3	1590555.0	1590555.0	..	-117874.7
1936	1652498.0	1652498.0	1652498.0	..	..
1937	1994354.0	1994354.0	1994354.0	..	..
1938	2006253.0	2006253.0	2006253.0	..	..
1939	2010133.0	2006253.0	2006253.0	..	3880.0
1940	2010133.0	2006253.0	2006253.0	..	3880.0
1941	2774381.9	2507816.8	2507816.8	..	266565.2
1942	3094495.7	2557816.8	2557816.8	..	536679.0
1943	3094495.7	2557816.8	2557816.8	..	536679.0
1944	3094495.7	2557816.8	2557816.8	..	536679.0
1945	3089669.2	2563165.9	2563165.9	..	526503.3
1946	3091308.7	2564805.4	2564805.4	..	526503.3
1947	3096123.3	2569620.0	2569620.0	..	526503.3

TABLE BG I.2_A Banknotes in circulation and effective cover ratios, 1885–1947

continue

Year	Total banknotes in circulation	Gold-backed banknotes	Silver-backed banknotes	Other central bank liabilities at sight	Effective cover ratio of gold-backed banknotes	Effective cover ratio of silver-backed banknotes	Overall effective cover ratio
	BG1F_A	BG1G_A	BG1H_A	BG1I_At	BG1J_A	BG1K_A	BG1L_A
1885	213.0	213.0	..	..	1717.84	..	..
1886	49.0	49.0	..	..	983.67	..	..
1887	1036.0	1036.0	..	..	183.78	..	..
1888	183.0	183.0	..	..	1348.09	..	..
1889	402.0	402.0	..	..	2672.39	..	..
1890	1957.0	1957.0	..	..	146.70	..	..
1891	1303.0	1303.0	..	..	509.44	..	..
1892	472.0	472.0	..	..	543.43	..	..
1893	1231.0	1231.0	..	..	395.21	..	..
1894	824.0	824.0	..	..	353.28	..	..
1895	1681.0	1681.0	..	..	96.67	..	..
1896	2397.0	2397.0	..	..	164.41	..	..
1897	1957.0	1957.0	..	..	218.86	..	..
1898	3156.0	3156.0	..	..	94.93	..	..
1899	7985.0	3779.0	4206.0	..	84.81	99.69	..
1900	21827.0	6737.0	15090.0	..	66.42	58.21	..
1901	26640.0	9579.0	17061.0	..	35.48	53.46	..
1902	24549.0	7762.0	16787.0	..	127.54	60.95	..
1903	32986.0	11226.0	21760.0	..	50.50	29.90	..
1904	40218.0	15504.0	24714.0	..	59.81	42.28	..
1905	37194.0	16267.0	20927.0	..	126.64	48.54	..
1906	44622.0	26065.0	18557.0	..	106.27	57.60	..
1907	49220.0	38298.0	10922.0	..	71.31	137.51	..
1908	71487.0	50308.0	21179.0	..	48.87	70.56	..
1909	71770.0	49730.0	22040.0	..	61.82	77.49	..
1910	81612.0	59442.0	22170.0	..	53.06	95.90	..
1911	110789.0	83360.0	27429.0	..	48.15	69.98	..
1912	164425.0	139638.0	24787.0	..	62.16	67.73	..
1913	188742.0	165959.0	22783.0	..	41.63	102.88	..
1914	226615.0	198879.0	27736.0	..	40.58	102.93	..
1915	369829.0	304763.0	65066.0	..	103.21	34.52	..
1916	833910.0	577113.0	256797.0	..	131.69	6.70	..
1917	1492768.0	1175942.0	316826.0	..	110.77	5.33	..
1918	2298619.0	1969444.0	329175.0	..	63.48	5.90	..
1919	2858489.0	2496026.0	362463.0	..	..	..	49.23
1920	3354139.0	3007588.0	346551.0	..	..	..	50.33
1921	3615440.0	3291063.0	324377.0	..	..	..	33.34
1922	3885990.0	3516338.0	270991.0	..	..	..	21.69
1923	4138985.0	3073584.0	1065061.0	..	..	..	25.38
1924	4530295.0	..	..	..	..	..	20.93
1925	3655302.0	..	..	..	..	..	16.95
1926	3480616.0	..	..	..	..	..	20.16
1927	3726972.0	..	..	2411826.0	..	..	30.12
1928	4173017.0	..	..	3389975.0	..	..	49.53

TABLE BG 1.2_A Banknotes in circulation and effective cover ratios, 1885–1947

Year	Total banknotes in circulation BG1F_A	Gold-backed banknotes BG1G_A	Silver-backed banknotes BG1H_A	Other central bank liabilities at sight BG1I_At	Effective cover ratio of gold-backed banknotes BG1J_A	Effective cover ratio of silver-backed banknotes BG1K_A	Overall effective cover ratio BG1L_A
1929	3608643.0	..	..	2175461.0	..	..	42.70
1930	3295514.0	..	..	1547043.0	..	..	36.48
1931	2918593.0	..	..	1397380.0	..	..	37.69
1932	2634530.0	..	..	1597584.0	..	..	36.07
1933	2983903.0	..	..	1516348.0	..	..	35.39
1934	2448955.0	..	..	1734002.0	..	..	35.71
1935	2496585.0	..	..	1915712.0	..	..	33.38
1936	2570749.0	..	..	2265019.0	..	..	34.17
1937	2569336.0	..	..	3738443.0	..	..	31.62
1938	2800450.0	..	..	3626909.0	..	..	31.21
1939	4245223.0	..	..	3363386.0	..	..	26.42
1940	6518354.0	..	..	2547475.0	..	..	22.17
1941	13467119.0	..	..	8088805.4	..	..	12.87
1942	18921907.8	..	..	6952544.1	..	..	11.96
1943	23860000.0	..	..	8009000.0	..	..	9.71
1944	45833924.3	..	..	12017781.4	..	..	5.35
1945	43726367.5	..	..	25885321.0	..	..	4.44
1946	41989786.0	..	..	22892935.9	..	..	4.76
1947	38701733.0	..	..	22382639.0	..	..	5.07

TABLE BG 1.3_A Monetary aggregates, 1881–1947

continue

Year	Monetary base BG1M_A	Total currency in circulation BG1N_A	of which: Coins in circulation BG1O_A	Bank deposits at sight at the central bank BG1P_A	Broad money BG1Q_A
1881	2100.0	2100.0	2100.0	.	4854.0
1882	2100.0	2100.0	2100.0	.	10773.0
1883	12100.0	12100.0	12100.0	.	12100.0
1884	14600.0	14600.0	14600.0	.	20614.0
1885	22313.0	22313.0	22100.0	.	27347.0
1886	22149.0	22149.0	22100.0	.	29456.0
1887	23136.0	23136.0	22100.0	.	39911.8
1888	25283.0	25283.0	25100.0	.	43355.0
1889	25502.0	25502.0	25100.0	.	57488.4
1890	27057.0	27057.0	25100.0	.	66450.9
1891	34403.0	34403.0	33100.0	.	74486.6
1892	38572.0	38572.0	38100.0	.	78649.3
1893	39331.0	39331.0	38100.0	.	99516.5
1894	53924.0	53924.0	53100.0	.	122952.3
1895	54781.0	54781.0	53100.0	.	127899.1
1896	55497.0	55497.0	53100.0	.	142133.1
1897	55057.0	55057.0	53100.0	.	164625.3

TABLE BG I.3_A Monetary aggregates, 1881–1947

Year	Monetary base	Total currency in circulation	of which: Coins in circulation	Bank deposits at sight at the central bank	Broad money
	BG1M_A	BG1N_A	BG1O_A	BG1P_A	BG1Q_A
1898	56256.0	56256.0	53100.0	.	182377.2
1899	61085.0	61085.0	53100.0	.	182314.2
1900	74927.0	74927.0	53100.0	.	201851.5
1901	80740.0	80740.0	54100.0	.	215489.2
1902	78649.0	78649.0	54100.0	.	257056.8
1903	87086.0	87086.0	54100.0	.	234009.0
1904	98318.0	98318.0	58100.0	.	245334.3
1905	95294.0	95294.0	58100.0	.	273107.0
1906	102722.0	102722.0	58100.0	.	267661.7
1907	107320.0	107320.0	58100.0	.	318604.6
1908	129587.0	129587.0	58100.0	.	347286.2
1909	119593.0	119593.0	47823.0	.	411716.5
1910	134413.0	134413.0	52801.0	.	455588.9
1911	170124.0	170124.0	59335.0	.	520495.4
1912	232926.0	232926.0	68501.0	.	628649.8
1913	267493.0	267493.0	78751.0	.	719660.6
1914	310257.0	310257.0	83642.0	.	847092.2
1915	453692.0	453692.0	83863.0	.	1098678.3
1916	913524.4	913524.4	79614.4	.	1677520.0
1917	1568349.0	1568349.0	75581.0	.	2913374.3
1918	2370370.9	2370370.9	71751.9	.	4429184.5
1919	2926605.8	2926605.8	68116.8	.	5574798.2
1920	3418804.9	3418804.9	64665.9	.	6995091.4
1921	3676829.8	3676829.8	61389.8	.	7965792.1
1922	3944269.7	3944269.7	58279.7	.	8687706.7
1923	4194312.2	4194312.2	55327.2	.	10800241.5
1924	4587895.0	4587895.0	57600.0	.	12018468.5
1925	3714020.0	3714020.0	58718.0	.	13779873.0
1926	3542165.0	3542165.0	61549.0	.	14747404.0
1927	4186237.0	3865746.0	138774.0	320491.0	15894439.7
1928	5395218.0	4309451.0	136434.0	1085767.0	18852117.2
1929	4112379.0	3759378.0	150735.0	353001.0	20471594.7
1930	4397695.0	3528667.0	233153.0	869028.0	17860051.9
1931	4603845.0	3628738.0	710145.0	975107.0	18247637.0
1932	4554698.0	3520502.0	885972.0	1034196.0	18111253.0
1933	4559727.0	3971083.0	987180.0	588644.0	18544663.0
1934	4428047.0	3736256.0	1287301.0	691791.0	19389067.0
1935	4495162.0	3731601.0	1235016.0	763561.0	19372608.0
1936	4621648.0	3811462.0	1240713.0	810186.0	20453017.0
1937	5582460.0	3822725.0	1253389.0	1759735.0	21487974.0
1938	5550328.0	4082556.0	1282106.0	1467772.0	24335934.0
1939	7014441.0	5686557.0	1441334.0	1327884.0	27935826.0
1940	9141441.0	8082561.0	1564207.0	1058880.0	31907682.0
1941	16656888.0	15713888.0	2246769.0	943000.0	45950898.0
1942	25023907.8	23463907.8	2705000.0	1560000.0	69205082.8
1943	38115000.0	35715000.0	2877000.0	2400000.0	96408674.0
1944	69624000.0	67200000.0	3166075.7	2424000.0	138423470.0
1945	75790367.5	73126367.5	3200000.0	2664000.0	162938250.5

TABLE BG 2.1_D Discount rate, 1879–1947

Discount rate				Discount rate			
Year	Date	Month	BG2A_D	Year	Date	Month	BG2A_D
1879	26	Jan.	9.0	1923	16	April	9.0
1884	26	Jan.	8.0	1924	16	Aug.	10.0
1885	1	Nov.	7.5	1928	15	Dec.	9.0
1887	1	May	8.0	1929	2	July	10.0
1889	1	March	9.0	1931	29	Jan.	9.0
1889	1	Nov.	8.0	1931	4	Apr.	8.5
1897	1	July	7.0	1931	29	Sept.	9.5
1898	15	April	7.5	1932	25	May	8.0
1898	20	Oct.	8.0	1934	1	Jan.	7.0
1906	1	Feb.	7.0	1935	15	Aug.	6.0
1911	15	May	6.0	1940	16	Sept.	5.5
1920	1	July	6.5	1940	1	Dec.	5.0
1922	1	July	7.0	1946	14	Aug.	4.5

TABLE BG 2.2_A Market prices and current yields on Bulgarian government bonds, 1890–1914

Year	State railroad mortgage bond 1889		State mortgage bond 1892		Tobacco bond 1902		State Gold bond 1907		State Gold bond 1909	
	Market price	Current yield	Market price	Current yield	Market price	Current yield	Market price	Current yield	Market price	Current yield
	BG2B_A	BG2C_A	BG2D_A	BG2E_A	BG2F_A	BG2G_A	BG2H_A	BG2I_A	BG2J_A	BG2K_A
1890	108.0	6.40	..	..	..	..	..	..	..	..
1891	102.3	6.83	..	..	..	..	..	..	..	..
1892	104.6	6.80	..	..	..	..	..	..	..	..
1893	113.1	6.52	113.6	6.51	..	..	..	..	..	..
1894	120.9	6.16	122.9	6.06	..	..	..	..	..	..
1895	115.7	6.28	115.2	6.31	..	..	..	..	..	..
1896	112.2	6.38	112.0	6.39	..	..	..	..	..	..
1897	111.5	6.41	111.2	6.43	..	..	..	..	..	..
1898	110.7	6.46	110.6	6.47	..	..	..	..	..	..
1899	108.2	6.65	107.9	6.67	..	..	..	..	..	..
1900	96.0	7.34	96.5	7.31	..	..	..	..	..	..
1901	95.6	7.48	95.9	7.45	..	..	..	..	..	..
1902	103.8	6.90	104.0	6.88	108.3	5.50	..	..	..	..
1903	107.9	6.62	108.2	6.61	107.7	5.53	..	..	..	..
1904	107.8	6.63	108.0	6.62	106.3	5.61	..	..	..	..
1905	116.5	6.15	116.8	6.14	114.4	5.22	..	..	..	..
1906	119.0	6.02	119.3	6.01	117.6	5.08	..	..	..	..
1907	119.2	6.02	120.3	5.97	117.4	5.09	87.3	4.93	..	..
1908	..	..	120.7	5.94	118.4	5.04	87.3	4.92	..	..
1909	..	..	122.0	5.86	119.6	4.98	91.3	4.70	..	..
1910	..	..	121.3	5.90	120.4	4.95	93.2	4.60	91.4	4.70
1911	..	..	121.7	5.88	121.3	4.91	94.6	4.54	90.5	4.74
1912	..	..	119.5	6.00	119.4	5.01	93.2	4.62	87.9	4.90
1913	..	..	118.2	6.07	116.3	5.14	89.0	4.84	83.8	5.13
1914	..	..	118.3	6.06	114.8	5.20	85.2	5.05	81.1	5.30

TABLE BG 3_A Exchange rates, 1886–1947

continue

Year	Pound sterling	French franc	Mark/ Reichsmark	US dollar	Agio
	BG3B_A	BG3A_A	BG3C_A	BG3D_A	BG3E_A (%)
1886	.	.	.	.	6.48
1887	.	.	.	.	4.60
1888	.	.	.	.	1.22
1889	.	.	.	.	1.53
1890	25.177	0.999	1.233	.	0.24
1891	25.168	1.000	1.235	.	0.68
1892	25.210	1.001	1.235	.	3.17
1893	25.228	1.000	1.231	.	2.72
1894	25.223	1.001	1.231	.	3.45
1895	25.257	1.001	1.230	.	5.26
1896	25.228	1.001	1.232	.	4.67
1897	25.202	1.001	1.233	.	2.78
1898	25.291	1.001	1.236	.	3.71
1899	25.291	1.002	1.236	.	5.76
1900	25.326	1.001	1.236	.	12.01
1901	25.354	1.006	1.238	.	13.15
1902	25.287	1.003	1.235	.	7.77
1903	25.188	1.001	1.232	.	2.76
1904	25.193	1.001	1.232	.	2.02
1905	25.136	0.999	1.229	.	0.88
1906	25.169	1.000	1.229	.	0.69
1907	25.228	1.003	1.231	.	.
1908	25.261	1.004	1.236	.	.
1909	25.460	1.011	1.244	.	.
1910	25.387	1.006	1.240	.	.
1911	25.365	1.004	1.239	.	.
1912	25.376	1.005	1.238	.	.
1913	25.822	1.035	1.279	5.400	..
1914	26.071	1.101	1.363	5.700	..
1915	32.979	1.237	1.417	6.800	..
1916	33.636	1.197	1.267	7.200	..
1917	39.600	1.441	1.251	8.300	..
1918	34.800	1.301	1.249	7.300	..
1919	107.633	3.377	1.500	24.166	..
1920	239.523	4.639	1.268	64.438	..
1921	436.268	8.416	1.245	112.755	..
1922	664.372	12.288	0.358	150.183	..
1923	580.445	7.719	0.003	124.132	..
1924	614.637	7.369	33.926	138.596	..
1925	670.864	6.710	33.703	139.000	..
1926	675.059	4.557	33.233	139.000	..
1927	674.932	5.462	33.038	139.000	..
1928	676.412	5.461	33.174	139.000	..
1929	674.401	5.449	33.068	138.778	..
1930	675.957	5.457	33.171	139.000	..
1931	636.349	5.450	32.842	139.000	..
1932	496.122	5.461	33.108	139.000	..
1933	472.374	5.480	33.199	113.307	..
1934	430.604	5.490	33.008	84.528	..

TABLE BG 3_A Exchange rates, 1886–1947

Year	Pound sterling	French franc	Mark/ Reichsmark	US dollar	Agio
	BG3B_A	BG3A_A	BG3C_A	BG3D_A	BG3E_A (%)
1935	413.900	5.490	33.502	84.058	..
1936	416.980	5.103	33.500	84.028	..
1937	414.323	3.405	33.000	84.300	..
1938	412.263	2.452	33.000	84.370	..
1939	381.828	2.179	33.000	84.400	..
1940	322.750	1.782	33.000	83.767	..
1941	334.000	1.801	33.000	82.400	..
1942	334.000	1.850	33.000	82.400	..
1943	334.000	1.850	33.000	82.400	..
1944	334.000	1.850	33.000	82.400	..
1945	334.000	1.804	33.000	82.400	..
1946	334.000	1.740	33.000	82.400	..
1947	334.000	2.200	.	82.400	..

TABLE BG 4_A Government finances, 1879–1947

continue

Year	Total government revenue	Total government expenditure	Foreign debt payment	Foreign public debt	Domestic public debt
	BG4A_A	BG4B_A	BG4C_As	BG4D_A	BG4E_A
1879	29032.0	19712.0	.	..	..
1880	33323.0	26937.0	.	..	..
1881	26551.0	26552.0	.	..	..
1882	36061.0	39278.0	.	..	..
1883	32905.0	33337.0	.	..	..
1884	31949.0	33785.0	.	..	..
1885	34328.0	45498.0	.	..	..
1886	50297.0	55169.0	.	..	..
1887	55696.0	48218.0	2951.0	..	..
1888	106093.0	119609.0	8531.8	35226.8	..
1889	79755.0	74052.0	8078.7	81504.3	..
1890	88146.0	83609.0	8287.6	110530.1	..
1891	89920.0	92532.0	18173.0	100859.6	..
1892	87388.0	104715.0	8853.4	99000.1	..
1893	96279.0	91787.0	11041.6	109638.1	..
1894	124987.0	102947.0	13968.1	128031.6	..
1895	96661.0	97233.0	14061.9	167035.6	..
1896	92185.0	104939.0	13769.3	165448.6	..
1897	91312.0	106976.0	15073.7	164442.8	..
1898	95521.0	132187.0	15770.5	160148.8	..
1899	108908.0	105429.0	17753.9	176471.2	1001.5
1900	120381.0	109768.0	18577.4	200335.0	992.7
1901	91882.0	103709.0	25535.6	220969.6	978.5

TABLE BG 4_A Government finances, 1879–1947

	Total government revenue	Total government expenditure	Foreign debt payment	Foreign public debt	Domestic public debt
Year	BG4A_A	BG4B_A	BG4C_As	BG4D_A	BG4E_A
1902	182733.0	130709.0	23170.0	212156.7	3527.5
1903	100077.0	111949.0	45381.2	285204.8	18099.2
1904	115883.0	134018.0	23745.3	280578.6	2000.3
1905	169402.0	141079.0	28883.8	354764.9	11210.4
1906	144486.0	148423.0	29131.0	367974.3	15459.3
1907	241504.0	240045.0	83599.1	363440.3	24445.7
1908	230872.0	243155.0	33573.5	451446.1	42008.0
1909	199919.0	192048.0	31597.0	446598.8	40825.7
1910	265945.0	229203.0	36031.4	523840.5	311.8
1911	203840.0	202844.0	36682.3	614779.1	271.3
1912	251785.0	301600.0	33301.4	608856.1	7930.4
1913	248051.0	359246.0	37894.3	845013.1	146685.1
1914	351125.0	303832.0	46720.4	1027510.9	138194.0
1915	292370.0	323291.0	63055.1	1383887.2	169162.2
1916	963315.0	491461.0	72314.6	1462155.2	319992.0
1917	855465.0	973341.0	82577.1	1839712.9	688883.5
1918	672218.0	1293649.0	93128.3	5522785.3	919482.9
1919	846075.0	1313120.0	130156.9	14022839.0	1827087.3
1920	2008528.0	2019865.0	138772.9	34672171.2	2979853.8
1921	2845974.0	3888616.0	244679.1	62621526.3	3758216.0
1922	4453717.0	4512019.0	490419.7	90426449.1	713971.6
1923	5365522.0	5481441.0	596639.6	71463879.7	4480362.9
1924	7274610.0	8386809.0	675826.2	35146631.9	4160221.2
1925	6408073.0	7156891.0	625718.4	38027958.2	5266613.9
1926	6594527.0	6784803.0	1038112.4	38197145.6	4944402.8
1927	6940103.0	6695912.0	798298.3	38721353.4	5211750.1
1928	8228485.0	7726302.0	747482.0	33755762.4	4904878.1
1929	10205006.0	11599403.0	1256940.2	37828045.7	5532209.3
1930	6436007.0	9443312.0	986051.2	24903234.8	6011983.3
1931	5622572.0	7831748.0	946954.1	24552244.3	6227396.1
1932	4835612.0	6711884.0	807280.6	23779279.7	6785593.0
1933	5121477.0	6631774.0	660816.6	20729893.2	7147351.0
1934	4037189.0	5001013.0	286016.7	22283886.0	7164739.0
1935	5661939.0	7295765.0	277683.5	22166669.1	7871745.0
1936	6596281.0	7650679.0	265246.8	21910340.7	8422273.0
1937	7736877.0	8791752.0	299062.3	16912080.0	8446562.0
1938	7702652.0	9335654.0	439736.1	16647319.7	8815495.0
1939	8531650.0	10197154.0	219114.4	13771718.7	10172950.0
1940	9839938.0	12051729.0	164974.2	13467403.8	13390048.0
1941	19493342.0	19735438.0	165192.3	13474096.0	16966668.0
1942	26200891.0	29765099.0	369914.1	13451479.8	28321718.0
1943	36671211.0	44303590.0	262311.3	13158275.6	43742984.0
1944	43254102.0	52483510.0	249723.8	12926729.6	71070548.0
1945	81871248.0	88041527.0	148360.5	12731849.0	107242577.0

TABLE BG 5_A Prices, 1887–1941

continue

Year	Cost-of-living index (1914=100)	Wholesale price index (1939=100)	Retail price index, 98 goods (1891/01=100)	General index of market prices (1908/12=100)
	BG5A_A	BG5B_A	BG5C_A	BG5D_A
1887	.	.	96.81	.
1888	.	.	91.61	.
1889	.	.	89.26	.
1890	.	.	94.82	.
1891	.	.	100.09	.
1892	.	.	101.14	.
1893	.	.	104.28	.
1894	.	.	101.98	.
1895	.	.	101.59	.
1896	.	.	98.84	.
1897	.	.	101.19	.
1898	.	.	100.17	.
1899	.	.	96.49	.
1900	.	.	94.66	.
1901	.	.	94.59	.
1902	.	.	98.02	.
1903	.	.	101.05	.
1904	.	.	105.10	.
1905	.	.	114.97	.
1906	.	.	120.65	.
1907	.	.	125.26	.
1908	.	.	127.81	.
1909	.	.	133.34	.
1910	.	.	135.66	.
1911	.	.	142.85	.
1912	.	.	152.73	114.0
1913	.	.	.	120.0
1914	.	.	.	123.0
1915	.	.	.	138.0
1916	.	.	.	221.0
1917	.	.	.	396.0
1918	.	.	.	767.0
1919	.	.	.	1444.0
1920	.	.	.	2707.0
1921	.	.	.	2464.0
1922	2268.58	.	.	3106.0
1923	2339.50	.	.	3377.0
1924	2642.50	.	.	3325.0
1925	2974.33	.	.	3561.0
1926	2759.08	135.20	.	3344.0
1927	2674.92	135.43	.	3235.0
1928	2801.42	145.79	.	3305.0
1929	2901.42	150.25	.	3664.0
1930	2700.42	121.96	.	3028.0
1931	2355.17	100.32	.	2480.0
1932	2160.67	87.59	.	2074.0
1933	2010.58	78.72	.	.

TABLE BG 5_A Prices, 1887–1941

Year	Cost-of-living index (1914=100)	Wholesale price index (1939=100)	Retail price index, 98 goods (1891/01=100)	General index of market prices (1908/12=100)
	BG5A_A	BG5B_A	BG5C_A	BG5D_A
1934	1898.25	80.17	.	.
1935	1918.00	81.76	.	.
1936	1674.08	83.27	.	.
1937	1719.83	94.95	.	.
1938	1772.50	98.41	.	.
1939	1818.25	100.00	.	.
1940	1988.33	115.70	.	.
1941	2458.33	148.10	.	.
1942	.	187.70	.	.
1943	.	237.40	.	.
1944	.	345.20	.	.
1945	.	550.20	.	.

TABLE BG 6_A National accounts and population, 1879–1947

continue

Year	GDP (at current prices)	GDP (at constant 1939 prices)	Exports	Imports	Population
	BG6A_A	BG6B_A	BG6C_A	BG6D_A	BG6E_A
1879	..	..	20093.0	32138.0	..
1880	..	..	33118.0	48224.0	2.01
1881	..	..	31820.0	58467.0	2.91
1882	..	..	34252.0	41565.0	2.97
1883	..	..	46126.0	48930.0	3.03
1884	..	..	35297.0	51194.0	3.09
1885	..	..	41875.0	44040.0	3.09
1886	..	..	50404.0	64285.0	3.12
1887	778039.7	23050176.1	45747.0	64742.0	3.15
1888	780158.2	24913840.9	64199.0	66362.0	3.19
1889	739630.6	23774297.7	80581.0	72869.0	3.22
1890	778650.9	23159063.6	71051.0	84530.0	3.25
1891	963456.2	25782400.8	71065.0	81348.0	3.28
1892	931585.5	25801060.5	74640.0	77303.0	3.31
1893	912023.1	24823303.5	91464.0	90868.0	3.36
1894	899796.4	24978572.0	72851.0	99229.0	3.41
1895	875276.7	25058814.6	77686.0	69020.0	3.47
1896	901891.2	26808857.3	108740.0	76530.0	3.52
1897	931336.2	25092966.6	59791.0	83994.0	3.58
1898	993857.1	28071369.4	66537.0	72730.0	3.63
1899	886587.9	26241492.3	53467.0	60178.0	3.69
1900	854760.0	26422016.4	53983.0	46342.0	3.74
1901	888854.3	27581774.1	82770.0	70044.0	3.80
1902	963877.7	28979321.9	103685.0	71246.0	3.86
1903	989950.7	29916036.5	108074.0	81803.0	3.92
1904	1056720.1	30417204.4	157619.0	129690.0	3.98

TABLE BG 6_A National accounts and population, 1879–1947

Year	GDP (at current prices)	GDP (at constant 1939 prices)	Exports	Imports	Population
	BG6A_A	BG6B_A	BG6C_A	BG6D_A	BG6E_A
1905	1111358.9	29270195.2	147961.0	122250.0	4.04
1906	1210929.1	31487847.6	114573.0	108474.0	4.09
1907	1193124.0	28216166.1	125595.0	124661.0	4.15
1908	1406918.6	31861794.1	112357.0	130151.0	4.21
1909	1439767.7	31954482.3	111434.0	160430.0	4.28
1910	1484741.0	33015183.9	129052.0	177357.0	4.34
1911	1673002.9	35929173.4	184634.0	199345.0	4.40
1912	1720375.1	33651505.3	156407.0	213110.0	4.46
1913	1694538.5	31340803.9	93330.0	189298.0	4.53
1914	1813880.5	32627616.5	154425.0	241490.0	4.88
1915	2065284.3	31758680.2	109416.0	73495.0	4.98
1916	2474541.2	28106268.3	95796.0	89428.0	5.03
1917	3997593.9	27122858.5	288906.0	168685.0	5.08
1918	7283604.0	25903785.8	415476.0	567211.0	5.13
1919	15493999.3	28835663.4	552253.0	963941.0	4.80
1920	20983123.7	29138986.1	2055999.0	2255186.0	4.85
1921	25331821.2	32132732.3	2801327.0	2975665.0	4.95
1922	35835890.4	33788891.9	5925718.0	4065972.0	5.05
1923	40608034.5	36063529.7	4343135.0	5153536.0	5.15
1924	43542089.3	35928350.6	5876226.0	5678324.0	5.26
1925	49495000.0	38466203.2	6242246.0	7834016.0	5.37
1926	49419000.0	37936595.1	5617601.0	5630982.0	5.48
1927	52462000.0	38253812.3	6627145.0	6197210.0	5.55
1928	56529000.0	39094197.9	6231247.0	7108747.0	5.62
1929	56207000.0	39359645.7	6397061.0	8324633.0	5.70
1930	48641000.0	43851460.3	6191140.0	4589725.0	5.77
1931	44561000.0	44871996.9	5934174.0	4660063.0	5.85
1932	39273000.0	43269241.4	3381845.0	3471233.0	5.92
1933	35633000.0	43516668.8	2846349.0	2202256.0	6.00
1934	34564000.0	40885977.5	2534630.0	2247232.0	6.08
1935	36569000.0	44680693.7	3253284.0	3008954.0	6.13
1936	40188000.0	49695536.2	3910382.0	3181068.0	6.17
1937	46565000.0	52870613.9	5019499.0	4985914.0	6.22
1938	51295000.0	53972359.5	5578341.0	4934193.0	6.27
1939	59430000.0	59430993.9	6064754.0	5196747.0	6.32
1940	65410000.0	56768124.8	7019066.0	7028166.0	6.37
1941	88958000.0	61832185.1	9234141.0	10238995.0	6.74
1942	109932000.0	59406033.0	13437198.0	12928574.0	6.80
1943	146183000.0	65341230.9	16270980.0	15130816.0	6.86
1944	203471000.0	59292696.2	11356702.0	6478287.0	6.91
1945	242262000.0	50560928.5	12232444.0	5819637.0	6.97