VII Serbia/Yugoslavia: from 1884 to 1940

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1 MAJOR MONETARY EVENTS

SERBIA[2]

Serbia introduced national coinage, with a view to re-establishing a national monetary system, while still formally under the monetary sovereignty of the Ottoman Empire. National coinage started in 1868, when the government minted copper coins of low denominations with the aim of withdrawing foreign copper coins from circulation.[3] A further step in monetary reform was the re-introduction of the national currency minting. The first issue to be resolved was the choice of a monetary standard.

Although the initial intention was to introduce the gold standard, the current state of the Serbian economy did not support such a move. Serbia at the time was a developing country mainly engaged in agricultural production. Trade and industry were still in their early stages of development. Almost all industrial products were imported from the neighbouring Austro-Hungarian Empire, which at the same time imported most of Serbia's exports, primarily cattle and agricultural products. Besides, the country had tiny gold reserves which would constrain money supply. It was therefore more realistic to consider either bimetallism or silver monometallism as the country's new monetary standard.[4]

The introduction of the coinage legislation indicated that Serbia decided to follow the bimetallistic system of France and other member countries of the Latin Monetary Union (LMU). It was expected that reliance on this system would provide both monetary stability and flexibility of money supply. The 1873 Law on Minting Serbian Silver Coins set the dinar silver coin at par with the French franc as the national monetary unit. The fineness and weight of silver, the dimensions of the currency and the metric system, as well as the government's exclusive right of minting were determined in accordance with the provisions of the LMU.[5] Soon after putting silver coins into circu-

[1] *Directorate for Economic Research and Statistics*. The chapter extends 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 are grateful to Sophia Lazaretou, Matthias Morys, Thomas Scheiber, Jobst Clemens, Dragana Gnjatović and other members of the SEEMHN for their thoughtful comments and suggestions. Special thanks are due to Dragan Stankov, Miodrag Jović, Olivera Jovanović and Marija Nenadović from the Directorate for Economic Research and Statistics of the NBS for their contribution to the preparation of the database. Finally, we wish to thank the *Archive* and the *Library* of the National Bank of Serbia for kindly providing their material. The views expressed here are those of the authors and do not necessarily reflect those of the National Bank of Serbia. We are responsible for the remaining errors.
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[2] Serbia refers to the Principality of Serbia until 1882 and the Kingdom of Serbia from 1882 to 1918.

[3] About 43 foreign currencies were in circulation in the internal money market: 10 types of gold, 28 types of silver and 5 types of copper coins. All foreign currencies were divided into two main groups: the Caesarean (European) and Turkish group. The Caesarean money, especially Austrian money, was deemed better and 'cleaner', which is why the Austrian ducats and florins circulated widely.

[4] See Gnjatović (2006).

[5] The law prescribed that the minted silver dinar coin should be of fineness of 835/1000 (tolerance 3/1000) and weight of 5 grams. According to the letter of the 1875 law, silver coins in denominations of 2, 1 and 0.5 dinars were minted in Vienna and were put into circulation considering 1875 as the year of coinage.

lation, foreign silver coins of lower value started being withdrawn and thus circulation was reduced by one third on average, based on the dinar exchange rates as last modified in April 1866.

The coinage reform gained momentum once Serbia was recognised as a sovereign state. The 1878 Law on Serbian National Currency prescribed minting of 20- and 10-dinar gold coins, as well as minting of silver and copper coins of small value. The legislation adopted the bimetallic ratio between gold and silver of 1:15.5 and again confirmed the intention of the Serbian authorities to develop a monetary system similar to that of the LMU. By the time the law was passed, all member countries of the LMU had already restricted free coinage of silver and moved to a 'limping gold standard' (or 'incomplete bimetallism'[6]). A similar provision was included in the Serbian Law as well. However, contrary to the LMU coinage system, it was envisaged that the government alone should have the right to mint not only silver and copper, but also gold coins. Although Serbia adopted the LMU coinage system, it had never joined formally the LMU. It applied for membership three times in 1874, 1879 and 1880, but was rejected on all occasions.

At that time, domestically-minted coins amounted to 24.7 million dinars: in gold (40.4%), silver (38.8%), nickel (12.9%) and copper (7.8%). However, the quantity of money that circulated in specie was greater. The circulation of foreign coins and their evaluation by official tariffs continued even after Serbia had started to mint its own coins. There were still a substantial number of Austrian ducats, florins, thalers and other foreign coins in circulation. Foreign currency inflows mainly occurred during autumn, as payment for Serbian [agricultural] exports. The disproportion between gold coins and coins made of other metals, which were used for domestic payments only, caused the appearance of an agio (*ажиja*)[7] on gold and complicated money transactions. It is well-known that in the metallic monetary systems, with a fixed exchange rate within the margins of 1% around the mint parity, the agio was an indicator of the depreciation rate of the national currency. The agio equalled 5–6% in 1866, 5% in 1875 and 3–4% in 1880.[8]

Meanwhile, bank credit was hard to get, and banks in Belgrade charged borrowers 11% and 12% per annum, while in provincial Serbia they charged much higher rates. Most households were unable to borrow from banks, and usurers often charged rates as much as 50% higher. It was thus necessary to make credit easier and provide greater flexibility of money supply. On the eve of the First Serbian-Turkish War, the budget was in difficulty and paper money issue was deemed necessary. Even though a decision was enacted in January 1876, the money printed in July was never put into circulation.

A roadmap for further reform called for the establishment of a bank of note issue that would address all matters related to the currency and provide credit for the development of trade and production. The issue of convertible banknotes was the main instrument for achieving this goal. In late 1882, the Assembly of the Kingdom of Serbia adopted the Law on the National Bank of Serbia (NBS), under which the bank of note issue was established as a privileged private institution in the form of a joint-stock company under strict government control. The government's representative in the management of the NBS could veto any decision of the bank. The prevalent view was that the bank should be established with private capital, but the issue of whether the capital should be domestic, foreign or mixed remained outstanding. This was resolved at the Conference of May 1883, which was attended by approximately 150 most reputable merchants and entrepreneurs from

[6] Contrary to 'complete' or 'full-fledged bimetallism', which implies the free minting of both silver and gold coins, 'incomplete bimetallism' implies only the free minting of gold coins.
[7] See the Section on the exchange rates.
[8] For details, see the Monograph of the National Bank 1884–1934 (1935), p. 38.

across Serbia. After a long debate, it was decided that the bank would be established with domestic capital only.[9] The Privileged National Bank of the Kingdom of Serbia (NBS; *Привилегована народна банка Краљевине Србије*) started operations in 1884.

The bank was designated as: the issuer of the currency, the main provider of credit to the economy and the banker to the government. The NBS's issue activity was dominated by a metallic monetary standard in which two precious metals, namely gold and silver, were used to back paper notes: silver-backed banknotes were redeemable on demand at the bank's cash desk for silver, and gold-backed banknotes for gold, at full face value without any discount. At first, the idea was to issue only banknotes redeemable in gold. The first gold-backed banknote was issued right after the establishment of the NBS in 1884. When founded, the NBS was vested with the authority to issue the 100-dinar gold-backed banknotes, and later 50, 500 and 1000-dinar gold-backed banknotes. However, the 100-dinar gold-backed banknotes were not very well received and did not remain in circulation for long, but rather were immediately converted into gold. Non-acceptance was due to several reasons: their denomination was too high; domestic trade was based on barter; public had low confidence in domestic money; and the agio on gold was high (4% in that year).[10] It was thus expected that a banknote of a lower denomination such as the 50-dinar would manage to remain in circulation. However, such a banknote, placed into circulation in February 1885, was not received any better; it was exchanged for coins immediately and therefore it was soon taken out of circulation and returned to the bank.

As it became apparent, neither of the two gold-backed banknotes could remain in circulation, and the NBS requested permission to issue 10-dinar gold-backed banknotes. This met with more opposition than expected, because the government had intended to issue by itself a gold-backed note of the same denomination. Therefore, in 1885 the NBS issued a silver-backed 10-dinar banknote.

The quantity of the silver-backed notes in circulation kept rising and gained prevalence over gold-backed ones. On average, silver-backed notes made up 95% of total note circulation. They were rarely converted into silver, and when they were, it was mainly due to the shortage of small change. Therefore, demand for money was satisfied mainly with the silver-backed notes and silver coins (used exclusively as change money), whereas gold coins, of which only a small quantity was in circulation, were used in foreign payments.

The increase in banknote circulation was usually followed by a rise in the agio on gold. As the agio was charged on gold purchased in exchange for silver-backed banknotes, the rise in the agio was attributed to the large amount of silver-backed banknotes in circulation, which remained unlimited until 1893, when the government came to interpret the law as setting an upper limit on their issue. It had been proven, however, increasingly restrictive and was raised several times in the following years. The NBS dismissed the allegations concerning the rise in the agio and opposed the limitation of silver-backed note circulation. It pointed out that 'agio was not so much a consequence of the issue of silver-backed notes as of the deficit on the country's external account balance and poor government finances; for the agio to be eliminated and the currency exchange rate to return to normal overall economic circumstances need to improve'.[11]

[9] The principle proposal was the establishment of the bank with foreign capital. Common belief was that domestic capital was inadequate. Truly, some of the more affluent merchants endeavoured to convince the government against the feasibility of establishing the bank with domestic capital only. However, protests against foreign capital were voiced in the domestic press throughout 1882; this came as a result of the bad experience and rather costly repercussions of the bankruptcy the same year of the General Union, which was building the Belgrade-Nis railway.

[10] See the Monograph of the National Bank 1884–1934 (1935), p. 38.

[11] See the Monograph of the Privileged National Bank of the Kingdom of Serbia 1884–1909 (1909), p. 155.

During the export season, gold flowed into the country but it quickly flowed back out since almost all industrial products were imported. After 1888, Serbia began to enjoy gold inflows as trade was growing. Significant inflows also arose from the transit of foreign goods through Serbia, which picked up in the second half of the 1880s when the new railway system was built. However, ever larger repayments on the foreign public debt resulted in a deficit on the balance of payments and a gold outflow, which was reflected on the agio rates.

Over the whole period under review, the NBS's interest rates were lower than the market interest rates and were not used as an instrument to contain pressure on gold reserves. Instead, the bank directly intervened in the market by purchasing or selling gold. It purchased gold during the autumn season, when there was enough of it in circulation, and sold gold usually in March, when it was scarce and the agio went up. The agio peaked between 1893 and 1903 primarily as a result of the high budget deficits, unprecedented over a span of 25 years (1878–1903). Deficit financing through borrowing both foreign and domestic, notably from the NBS, resulted in the emergence of serious vulnerabilities which adversely affected currency stability.

The growing foreign debt service was a severe burden on the country's budget. In the mid-1890s, it seemed that Serbia would not be able to avoid a default on its foreign debt obligations. The government chose an aggressive stance towards with foreign bondholders. In June 1895, an agreement was concluded between Serbia and three banks (the Ottoman Bank, Viennese Länderbank and Berliner Handels-Gesellschaft) in Carlsbad (the so-called Carlsbad arrangement). It stipulated the replacement of the outstanding 5% bonds with a new 4% bond with a longer maturity. The three banks which participated in the agreement, held only one seventh of the 5% bonds, which were converted. The other foreign bondholders stood against this agreement, but eventually were forced to accept it. The Independent Monopoly Administration (*Самостална управа монопола*) was established in order to ensure debt service payments and was in charge of collecting public revenues that guaranteed the new bonds. Four representatives of the Serbian government (the governor and the vice governor of the NBS among them) and two representatives of the foreign creditors participated in the board of directors. The debt conversion brought relief to the state Treasury, but the forced exchange of bonds harmed the reputation of Serbia as a borrower and raised serious concerns about the country's future access to foreign capital markets. Therefore, the budget crisis was prolonged until 1903, when public finances were brought under control and consequently the country's creditworthiness started to improve. Until WWI, government bonds were issued on more favourable conditions but still below par. Ultimately, Serbia successfully repaid its debt while at war (the Balkan wars and World War I).

The extension of the NBS's privilege of note issue in 1908 was of particular significance, as the Annexation Crisis and fears of war depleted the reserves of the banks. The NBS suspended lending in gold, but continued to lend in silver. In particular, to avoid a financial breakdown, the bank was allowed to issue silver-backed banknotes up to 10% of total circulation and lend 2.5 million dinars to the economy from the amount earmarked for discounting state coupons. Furthermore, in order to suppress the agio, it directly intervened in the foreign exchange market.

The agio persisted well until WWI, but it was significantly lower from 1903 onwards, as the budget gap closed, government borrowing from the NBS was reduced and goods exports and foreign capital inflows gathered pace. The ensuing period from 1909 to 1911 was marked by considerable economic progress. The economic upswing reached its peak in 1911. The country received substantial foreign capital inflows through newly founded branches of foreign banks in Belgrade, while the circulation of silver-backed banknotes hit a record of 59.2 million dinars in October and gold-

backed notes reached as much as 19.5 million. Economic progress was however abruptly interrupted once again with the outbreak of WWI in 1914.

Looking at Serbia's history from 1884 to 1914, a chain of political and war events can easily be noticed, which to a great extent determined the country's economic development process: the war with Bulgaria in 1885; the customs war against the Austro-Hungarian Empire in 1906–1911, which, albeit not an armed conflict, did have a negative effect on the economy; the Balkan Wars in 1912–1913 and finally WWI in 1914−1918. On the eve of WWI, the government suspended convertibility of banknotes into specie for the first time ever, since the inception of the NBS. The NBS was evacuated to Marseille. During the war, the bank was forced to cover the huge government expenditures by issuing banknotes on behalf of the government. Initially, the government's floating debt to the bank was gold-covered; later on, state claims abroad and letters with the French Treasury were used for cover.

TABLE 1 Serbia: A Chronology of the major monetary events, 1868–1920

Major monetary events	Dates
The coinage reform aimed at re-establishing a national monetary system according to the LMU	**1868–1878**
– Serbian copper coins and demonetisation of foreign copper coins.	1868
– The dinar became legal tender; it was a 5 gram silver coin at par with the French franc (towards a 'limping gold standard of the LMU').	1873
– Dinar gold coins in circulation; government alone had the right to mint ('incomplete bimetallism').	1878
'Bimetallistic' paper money system	**1884–1914**
– Foundation of the NBS with domestic private capital and under strict state control; it was granted the privilege of note issue control.	1884
– Gold-backed dinar notes were issued.	1884–1885
– Silver-backed dinar notes were issued.	1885
An upper limit on the issue of the silver-backed notes was set to remove the agio.	1893–1914
Sovereign debt crisis and debt restructuring with no default.	1893–1895
Public finances under control.	1903
Austria-Hungary's annexation of Bosnia and Herzegovina caused a banking crisis. In response, the NBS stopped providing credit in gold.	1908
A new banking crisis erupted at the outbreak of the Balkan wars. The NBS stopped providing credit in gold and redeemed the gold-backed banknotes up to 25% for silver until the end of the year.	1912
First-time suspension of banknote convertibility both in gold and silver at the outbreak of WWI; ban on gold outflows.	1914
The NBS in exile.	1915–1919
The NBS was renamed National Bank of the Kingdom of Serbs, Croats and Slovenians.	1920

YUGOSLAVIA[12]

Following WWI, when the part of South Slavs united into a single state, the monetary system of Serbia became the base for the monetary system of the newly founded state. The Law on National

[12] Yugoslavia refers to the Kingdom of Serbs, Croats and Slovenians from 1918 to 1929, and the Kingdom of Yugoslavia from 1929 to 1945.

Bank passed on 26 January 1920 envisaged the transformation of the NBS into a central bank for the whole territory of the country and was named *Народна банка Краљевине Срба, Хрвата и Словенаца* (the National Bank of the Kingdom of Serbs, Croats and Slovenians). In line with the new name of the country from 1929, i.e. Kingdom of Yugoslavia, the bank changed once again its name into *Народна банка Краљевине Југославије* (the Bank of the Kingdom of Yugoslavia, NBY). Hereinafter, we will use the same abbreviation, i.e. NBY, for both of them.

Pursuant to the 1920 Law on the National Bank, the NBY was given the privilege of note issue, which covered the Kingdom's entire territory. The authorised capital was increased from 10 to 30 million dinars in gold. Although the NBY was founded as privately held joint-stock company, it was under the control of the government. The relations of the NBY with the government had been mainly along two lines: ensuring exchange policy stability and acting as the government's treasurer.

Upon the formation of Yugoslavia, it was necessary to preserve monetary stability, unify the monetary system and proclaim a single currency. The currency issue was resolved by agreement that the dinar should be the monetary unit and all other currencies should be withdrawn from circulation. The largest part concerned the Austrian crown notes[13] that were still printed abroad, in Vienna and Budapest, and thus their withdrawal was an urgent task. The replacement of the Austrian crowns with dinars started in February 1920. The exchange was made at the rate of 4 Austrian crowns for 1 dinar, which was reasonable due to the higher purchasing power of the dinar against the crown, the prevailing market exchange rate, the larger proportion of the dinar in the country's metallic reserves compared with the crown and the need to compensate the dinar's region for expropriation through an exchange rate applied by the Austro-Hungarian government during the war.[14]

Due to the replacement of the Austrian crowns, banknotes in circulation swelled by 1.28 billion dinars. For the same amount, government debt to the NBY also swelled, since the government borrowed that amount to finance monetary unification. High inflation was caused not only by the demonetisation of the Austrian crowns, but also by excessive government deficit financing by the bank. The burden of the country's reconstruction after war was heavy, taxes were poorly collected and government expenditures were financed by newly printed money. Only in 1922, when public finances were stabilised, borrowing from the NBY stopped, inflation was kept at bay and the dinar strengthened. In the following year, the NBY imposed credit restrictions in an attempt to further stabilise the currency and curb inflation. Over that time, foreign exchange policy was formulated by the Ministry of Finance and implemented by the bank. Excess demand for foreign exchange was controlled by imposing restrictions. Since December 1922, exporters had the obligation to bring into Yugoslavia export proceeds and sell one-third of them to the NBY. Importers were obliged to justify foreign currency purchases with relevant documents. The controls were aimed at building up gold and foreign exchange reserves and preventing speculative attacks on the dinar and foreign exchange outflows. The extremely restrictive monetary policy that the bank pursued in 1923 and 1924 yielded results soon.[15] From February 1923 to August 1925, the dinar strengthened continuously, from 5.12 Swiss francs to 9.17 against 100 dinars.

The renewal period lasted until 1925 and led to the *de facto* stabilisation of the dinar which was a pre-condition for the *de jure* stabilisation on 28 June 1931. Stabilising the currency *de jure* or legally meant establishing the value of the national currency against a certain quantity of gold. Such stabilisation required that the banknotes in circulation should be covered by a legally pre-

[13] The rest were dinars, Montenegrin perpers, Bulgarian leva and German marks.
[14] Mijatović (2014).
[15] Mijatović (2010).

scribed amount of gold and foreign exchange reserves. The central bank had the obligation to maintain the value of the national currency at par with other gold-currency countries by buying and selling foreign exchange at the gold parity.

Managing to maintain the exchange rate of the dinar fixed for a number of years ahead, Yugoslavia was amongst the last European countries to have *de jure* stabilised its currency. The dinar was actually stabilised in mid-1925, but legally only in 1931. In the meantime, concerns arose about the timing of stabilisation. The government initially intended to perform the legal stabilisation in 1928. In order to strengthen gold and foreign exchange reserves, it negotiated a large foreign loan with a banking consortium in London. However, the NBY took the view that all necessary pre-conditions had not been fulfilled; notably, government's fiscal position had not been sustainable (including the reduction of the government debt with the NBY) and therefore such decision should be postponed. In turn, the NBY called an extraordinary general meeting of the shareholders to adopt the necessary legislative proposals.[16] Nevertheless, the government's decision was postponed due to the fact that the loan agreement was not reached.

The stabilisation loan was eventually contracted on 8 May 1931 with a French banking consortium (1.025 million French francs in gold). Only on 28 June 1931, and when five years of the dinar's market stabilisation had passed, did the country join the gold-exchange standard by the Law on Money. The legal parity of the Yugoslav dinar was stipulated at 26.5 milligrams of fine gold or at 0.0912778 Swiss francs. The dinar was attached to the gold at its current value which was 9.1% of its pre-war value. The redemption of banknotes was made in gold bullion or, at the option of the NBY, in foreign exchange which was legally and freely convertible into gold. In the latter case, the delivery of the foreign exchange was made at a price which would not exceed the legal parity plus the costs of shipping gold. The NBY was obliged to redeem the banknotes with no upper limit to the amount, although the minimum amount for redemption in gold was 250,000 dinars. The NBY was also obliged to maintain reserves (both in gold and in foreign exchange) which were freely redeemable in gold at least 35% of its liabilities at sight and at the same time to maintain reserves in gold at least 25% of its liabilities at sight. Gold and foreign exchange outflows were free.

However, the gold-exchange standard in Yugoslavia lasted only 101 days. The international and European economic environment was not favourable at that time.[17] The financial crisis culminated in Europe in the summer of 1931. The failure of the Creditanstalt in Vienna in May caused a bank panic in Europe. Within few weeks, the banking crisis had spread to Germany and Eastern Europe. The collapse of Creditanstalt with direct and indirect substantial capital investment in Yugoslavia, triggered capital outflows of nearly 300 million dinars in the next two to three months.[18] With the Hoover moratorium, which ended the German obligation to pay war reparations, Yugoslavia was particularly affected with a cost of 450 million dinars in the expected net annual inflows. The British exit from the interwar gold standard in late September 1931 fed a new round of financial panic and a confidence crisis that affected the domestic banking system: about 2.1 billion or 15% of total savings were withdrawn from banks by the end of November.[19]

By imposing heavy restrictions on foreign exchange payments in an attempt to refrain gold losses and foreign exchange outflows, Yugoslavia abandoned the gold-exchange standard on 7 October 1931. It avoided imposing import quotas but introduced clearing agreements that accounted for

16 Monograph of the National Bank 1884–1934 (1935), pp. 197–200.
17 Lampe and Jackson (1982), p. 172.
18 Monograph of the National Bank 1884–1934 (1935), p. 222.
19 Monograph of the National Bank 1884–1934 (1935), p. 223.

over 77% of exports and 68% of imports in 1932. Over the years 1931 and 1932, the dinar exchange rate was falling against the Swiss franc, before being stabilised in January 1933. The NBY was forced to recognise a premium on foreign exchange (*прима*), which essentially reflected devaluation risk and implied that the widening spread between the official and market exchange rates could not be maintained. In August 1932, the premium was 5%, but in the following two months it increased to 20%. In January 1933, it stood at 28.5%. However, successive rises of the premium did not fully align the market and official exchange rates; the dinar market value remained slightly higher than its official value with a premium of 8% on average.

The spill-over effects of the interwar crisis appeared in Yugoslavia later than in other European countries and lasted from 1931 to 1935. The economic activity indicators confirm the effects on the domestic economy of the drop in international agricultural prices and the collapse of international capital markets. Prices, output, exports and imports all fell sharply. Restrictive monetary and fiscal policies contributed to a further decline in output. Consequently, the debt service burden increased. An additional complicated issue was the revalorisation of the remaining part of the pre-war loan in French francs the value of which increased five times in value in 1930, since the post-war paper French franc was worth 20% of the pre-war gold currency. Thus, by the end of 1932, debt service payments constituted one-third of the value of current exports. Given, however, that the service of the foreign loans in hard currency was covered only from a limited size of exports, the actual strain on the balance of payments was much heavier than the above-mentioned data imply and increased further with the large decline in foreign capital inflows and the sharp fall, after 1928, in the prices of primary products.

Against this background, the Yugoslav government decided in October 1932 to temporally suspend all payments in foreign currency and launched negotiations with foreign creditors on a reduction of the debt repayment burden. Under the Convention signed with foreign bondholders in July 1933, the government concluded a series of refinancing agreements receiving new loans to pay off the old ones. Under a new Convention signed with bondholders, funding bonds were re-issued in 1936. The last Convention was signed in 1938: it was agreed that 45% of the debt would be repaid in a two-year period, from October 1937 to October 1939, while the remaining debt was written off.

By the mid-1930s, recovery gathered momentum and the country recorded gains in economic activity which came close to or over the pre-crisis levels. Increasing the exports of industrial and processed agricultural products was the highest priority. To this end, the government took measures to encourage industry, consisting mainly of tariff exemptions. Peasants received some tax relief, harvest insurance, silo construction and credit for their cooperatives. The government also imposed controls on the imports of certain goods in an attempt to lower spending on imports. However, these controls were removed in 1938 as Germany was promoted as the country's principal trading partner.

The most surprising thing about the Yugoslav economy between the wars was that it managed to grow, which was in itself a miraculous achievement since the newly founded state had different parts of the country with different legal and institutional legacies. There were six customs areas, five currencies, five railway networks, twelve separate tax systems, three different banking systems, and a variety of legal and business codes. The unified economic system was only achieved in the mid-1930s, which was no mean achievement by any standard, considering how many different economic systems were in effect in the pre-war period.[20]

[20] Ahtik, Zrinka and Pilipović (2010), p. 15.

Upon the occupation of the country in 1941, the territory of Yugoslavia was divided. The NBY was placed in liquidation. New issuing institutions were created in the territory of Serbia and Croatia, i.e. the Serbian National Bank and the Croatian State Bank, respectively. The Axis occupation forces confiscated over 11 tonnes of gold from the NBY's vaults, while 53 tonnes were in a timely manner transferred to ally countries. The issuing activity in the remaining occupied parts was conducted by the central banks of the respective occupying countries. The German occupation money was in circulation in the Serbian monetary zone concurrently with the Serbian dinar.

TABLE 2 Yugoslavia: A Chronology of the major monetary events, 1918–1944

Creation of Yugoslavia.	**December 1918**
Foreign exchange controls.	1919–June 1931
The NBS was transformed into the NBY.	January 1920
Demonetisation of Austrian crowns with crown-dinar banknotes.	1920
Issuance of dinar banknotes without official convertibility to gold or to silver.	1920
Excessive monetisation of the government deficit.	1920–1921
Obligation of exporters to sell one-third of their bills of exchange to the NBY.	1922–June 1931
Restrictive monetary policy, disinflation and strengthening of the dinar.	1922–mid 1925
De facto stabilisation of the dinar.	1925–28 June 1931
Suspension of German reparation payments.	1930
De jure stabilisation of the dinar (101 days on gold).	28 June 1931
Suspension of the gold-exchange standard and imposition of foreign exchange controls.	7 October 1931
Widening spread between the official and the market exchange rates and recognition of a premium of 28.5% on foreign exchange.	1931–1933
Clearing agreements.	1932–1938
Sovereign debt crisis and restructuring.	1933–1939
Controls on imports.	1936–1938
The NBS in exile. It returned to Belgrade after liberation.	1941–1944

2 DEFINITION AND DESCRIPTION OF VARIABLES

The index tables present the list of monetary and other macroeconomic time series for Serbia and Yugoslavia from 1884 to 1940, or even earlier where possible. Most of the monetary and macroeconomic series for Serbia are available from 1884 to 1920 and for Yugoslavia from 1920 to 1940. Serbia switched to the Gregorian calendar on 15 January 1919. The data prior to that date refer to the Julian calendar.

Territorial changes of Serbia before WWI have no decisive effect on series' comparability and quality. Namely, the Serbian territory was extended twice. For the first time in 1878, when in the war with Turkey that started in 1876 and was waged in alliance with Russia in 1877 and 1878, Serbia won the rule over four southern districts (*niški, pirotski, topličkі* and *vranjski*). For the second time the Serbian territory was extended after the Balkan wars of 1912 and 1913 with the *Raška* district, *Kosovo*, a part of *Metohija* and *Macedonia*. Yugoslavia was established in 1918 and carried on its development within these boundaries until WWII. The statistical service provided data

for the country's entire territory. Nevertheless, the country's division into the *banovina* regions did not allow obtaining reliable data for entire Serbia, neither in the earlier nor in the present boundaries.

The key macroeconomic time series presented in the tables are classified in six groups: (1) monetary variables; (2) interest rates; (3) exchange rates; (4) government finances; (5) prices, production and labour; and (6) national accounts and population. In the index table for Serbia and Yugoslavia, we present the variables and their components, the time span, the time of frequency, the unit of account and the series' code. The time series shown comprise annual and monthly frequencies as well the date of change for some variables. All series both at annual and at monthly frequency are also included in the accompanied volume's CD.

The currency unit (the legal tender) in both Serbia and Yugoslavia was the dinar. All data figures are therefore expressed in dinars.

INDEX TABLE - Country: SERBIA *continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
1. MONETARY VARIABLES				**Table SE1**
Total reserves				
Total statutory reserves	1884–1920	annual	in thousands of dinars, end-of-period	SE1A_A
	July 1884–Dec.1913	monthly	in thousands of dinars, end-of-period	SE1A_M
Metallic holdings	1884–1920	annual	in thousands of dinars, end-of-period	SE1B_A
	July 1884–Dec.1913	monthly	in thousands of dinars, end-of-period	SE1B_M
Gold holdings	1884–1920	annual	in thousands of dinars, end-of-period	SE1C_A
	July 1884–Dec.1913	monthly	in thousands of dinars, end-of-period	SE1C_M
Silver holdings	1884–1920	annual	in thousands of dinars, end-of-period	SE1D_A
	July 1884–Dec.1913	monthly	in thousands of dinars, end-of-period	SE1D_M
Foreign exchange (foreign correspondents)	1884–1920	annual	in thousands of dinars, end-of-period	SE1E_A
	July 1884–Dec.1913	monthly	in thousands of dinars, end-of-period	SE1E_M
Monetary base (excluding metallic currency)				
Monetary base (excluding coins)	1884–1920	annual	in thousands of dinars, end-of-period	SE1F_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1F_M
Banknotes in circulation	1884–1920	annual	in thousands of dinars, end-of-period	SE1G_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1G_M
Gold-backed banknotes	1884–1920	annual	in thousands of dinars, end-of-period	SE1H_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1H_M
Silver-backed banknotes	1884–1920	annual	in thousands of dinars, end-of-period	SE1I_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1I_M
Giro accounts with central bank	1884–1920	annual	in thousands of dinars, end-of-period	SE1J_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1J_M
Other central bank liabilities at sight	1884–1920	annual	in thousands of dinars, end-of-period	SE1K_A
	July 1884–Dec. 1913	monthly	in thousands of dinars, end-of-period	SE1K_M
Effective cover ratio of total banknotes in circulation	1884–1920	annual	in per cent, end-of-period	SE1L_A
	July 1884–Dec. 1913	monthly		SE1L_M
2. INTEREST RATES				**Table SE2**
Central bank interest rates				
Discount rate (silver)	1884–1920	date of change	in per cent	SE2A_D
	1884–1920	annual	in per cent, period average	SE2A_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2A_M
Discount rate (gold)	1884–1920	date of change	in per cent	SE2B_D
	1884–1920	annual	in per cent, period average	SE2B_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2B_M

INDEX TABLE - Country: SERBIA *continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
2. INTEREST RATES				**Table SE2**
Central bank interest rates				
Lombard rate (silver)	1884–1920	date of change	in per cent	SE2C_D
	1884–1920	annual	in per cent, period average	SE2C_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2C_M
Lombard rate (gold)	1884–1920	date of change	in per cent	SE2D_D
	1884–1920	annual	in per cent, period average	SE2D_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2D_M
Discount rate for banks (silver)	1884–1920	date of change	in per cent	SE2E_D
	1884–1920	annual	in per cent, period average	SE2E_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2E_M
Discount rate for banks (gold)	1884–1920	date of change	in per cent	SE2F_D
	1884–1920	annual	in per cent, period average	SE2F_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2F_M
Lombard rate for banks (silver)	1884–1920	date of change	in per cent	SE2G_D
	1884–1920	annual	in per cent, period average	SE2G_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2G_M
Lombard rate for banks (gold)	1884–1920	date of change	in per cent	SE2H_D
	1884–1920	annual	in per cent, period average	SE2H_A
	July 1884–Dec. 1920	monthly	in per cent, period average	SE2H_M
Market interest rate	1894–1908	annual	in per cent, minimum and maximum rates	SE2I_A
3. EXCHANGE RATES				**Table SE3**
20 dinar gold coins	1892–1913	annual	in dinars, period average	SE3A_A
	Nov. 1891–Jan. 1914	monthly	in dinars, period average	SE3A_M
100 Austrian florins/	1895–1913	annual	in dinars, period average	SE3B_A
200 Austrian crowns	Feb. 1895–Jan. 1914	monthly	in dinars, period average	SE3B_M
4. GOVERNMENT FINANCES				**Table SE4**
Flows				
Government revenue	1880–1912	annual	in thousands of dinars	SE4A_A
Government expenditure	1880–1912	annual	in thousands of dinars	SE4B_A
Foreign public debt repayment (principal + interest)	1880–1912	annual	in thousands of dinars	SE4C_A
Stocks				
Foreign public debt	1867–1912	annual	in thousands of dinars	SE4D_A
Government debt to the central bank	1884–1920	annual	in thousands of dinars	SE4E_A
5. PRICES, PRODUCTION AND LABOUR				**Table SE5**
Prices of goods				
Wheat	1864–1910	annual	in dinars per 1 kilo	SE5A_A
Maize	1864–1910	annual	in dinars per 1 kilo	SE5B_A
Beans	1866–1908	annual	in dinars per 1 kilo	SE5C_A
Wheat flour	1864–1910	annual	in dinars per 1 kilo	SE5D_A
Bread	1864–1910	annual	in dinars per 1 kilo	SE5E_A
Mutton	1864–1910	annual	in dinars per 1 kilo	SE5F_A
Pork	1864–1910	annual	in dinars per 1 kilo	SE5G_A
Lard	1864–1910	annual	in dinars per 1 kilo	SE5H_A
Plum brandy	1866–1910	annual	in dinars per 1 liter	SE5I_A
Industrial production				
Milled flour and other items	1888–1908	annual	in thousands of kilos	SE5J_A
Beer	1888–1910	annual	in hectoliters	SE5K_A
Cement	1902–1938	annual	in tons	SE5L_A
Hard coal	1894–1939	annual	in tons	SE5M_A
Brown coal	1894–1939	annual	in tons	SE5N_A
Lignite	1894–1939	annual	in tons	SE5O_A

INDEX TABLE - Country: SERBIA

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
5. PRICES, PRODUCTION AND LABOUR				**Table SE5**
Labour force and daily wages				
Total active population	1866, 1893, 1895, 1896, 1900	annual	thousands of inhabitants	SE5P_A
Diggers	1863–1910	annual	in dinars, period average	SE5Q_A
Reapers	1863–1910	annual	in dinars, period average	SE5Q_A
Masons	1863–1910	annual	in dinars, period average	SE5R_A
Manual labourers	1863–1910	annual	in dinars, period average	SE5S_A
Average wage	Jan. 1894–Dec.1908	monthly	in dinars, period average	SE5T_M
6. NATIONAL ACCOUNTS AND POPULATION				**Table SE6**
Exports	1863–1912	annual	in thousands of dinars	SE5A_A
Imports	1863–1912	annual	in thousands of dinars	SE5B_A
Transit	1863–1912	annual	in thousands of dinars	SE5C_A
Population	1863–1920	annual	thousands of inhabitants	SE5D_A

Note: The code of each variable is generated by the country prefix (SE), 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 dates of change.

INDEX TABLE - Country: YUGOSLAVIA *continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
1. MONETARY VARIABLES				**Table YU1**
Total reserves				
Total statutory reserves	1920–1940	annual	in millions of dinars, end-of-period	YU1A_A
	Dec. 1920–Dec. 1940	monthly	in millions of dinars, end-of-period	YU1B_M
Metallic holdings	1920–1940	annual	in millions of dinars, end-of-period	YU1B_A
	Dec. 1920–Dec. 1940	monthly	in millions of dinars, end-of-period	YU1B_M
Gold holdings	1920–1940	annual	in millions of dinars, end-of-period	YU1C_A
	Dec. 1920–Dec. 1940	monthly	in millions of dinars, end-of-period	YU1C_M
Silver holdings	1920–1940	annual	in millions of dinars, end-of-period	YU1D_A
	Dec. 1920–Dec. 1940	monthly	in millions of dinars, end-of-period	YU1D_M
Foreign exchange	1920–1940	annual	in millions of dinars, end-of-period	YU1E_A
	Dec. 1920–Dec. 1940	monthly	in millions of dinars, end-of-period	YU1E_M
Monetary base (excluding metallic currency)				
Monetary base	1920–1940	annual	in thousands of dinars, end-of-period	YU1F_A
Monetary base (excluding coins)	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1G_M
Coins in circulation	1920–1941	annual	in thousands of dinars, end-of-period	YU1H_A
Banknotes in circulation	1920–1940	annual	in thousands of dinars, end-of-period	YU1I_A
	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1I_M
Gold-backed banknotes	1920–1940	annual	in thousands of dinars, end-of-period	YU1J_A
	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1J_M
Silver-backed banknotes	1920–1940	annual	in thousands of dinars, end-of-period	YU1K_A
	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1K_M
Giro accounts with central bank	1920–1940	annual	in thousands of dinars, end-of-period	YU1L_A
	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1L_M
Other central bank liabilities at sight	1920–1940	annual	in thousands of dinars, end-of-period	YU1M_A
	Dec. 1920–Dec. 1940	monthly	in thousands of dinars, end-of-period	YU1M_M
Effective cover ratio of gold	1931–1934	annual	in per cent, end-of-period	YU1N_A
	June 1931–Dec. 1934	monthly	in per cent, end-of-period	YU1N_M
Overall effective cover ratio	1931–1934	annual	in per cent, end-of-period	YU1P_A
	June 1931–Dec. 1934	monthly	in per cent, end-of-period	YU1P_M

INDEX TABLE - Country: YUGOSLAVIA *continue*

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
2. INTEREST RATES				**Table YU2**
Central bank interest rates				
Discount rate	1920–1940	date of change	in per cent	YU2A_D
	1920–1940	annual	in per cent, period average	YU2A_A
	Dec. 1920–Dec. 1940	monthly	in per cent, period average	YU2A_M
Lombard rate (securities)	1920–1940	date of change	in per cent	YU2B_D
	1920–1940	annual	in per cent, period average	YU2B_A
	Dec. 1920–Dec. 1940	monthly	in per cent, period average	YU2B_M
Lombard rate (warrants)	1920–1940	date of change	in per cent	YU2C_D
	1920–1940	annual	in per cent, period average	YU2C_A
	Dec. 1920–Dec. 1940	monthly	in per cent, period average	YU2C_M
Lombard rate (gold)	1920–1940	date of change	in per cent	YU2D_D
	1920–1940	annual	in per cent, period average	YU2D_A
	Dec. 1920–Dec. 1940	monthly	in per cent, period average	YU2D_M
Market interest rates				
Short-term lending rate for first-class bills	1924–1937	annual	in per cent, minimum and maximum rates	YU2E_A
Interest rate on sight deposits	1929, 1930; 1935–1937	annual	in per cent, period average	YU2F_A
Interest rate on term deposits	1929, 1930; 1935–1937	annual	in per cent, period average	YU2G_A
Government bond market prices and current yields				
Market price of Compensation for war damage	1923–1939	annual	in dinars, period average	YU2H_A
	Sept. 1923–Dec. 1939	monthly	in dinars, period average	YU2H_M
Market price of Investment loan	1923–1939	annual	in dinars, period average	YU2I_A
	Sept. 1923–Dec. 1939	monthly	in dinars, period average	YU2I_M
Market price of Agrarian bonds	1923–1939	annual	in dinars, period average	YU2J_A
	Sept. 1923–Dec. 1939	monthly	in dinars, period average	YU2J_M
Current yield on Compensation for war damage	1923–1939	annual	in per cent, period average	YU2K_A
	Sept. 1923–Dec. 1939	monthly	in per cent, period average	YU2K_M
Current yield on Investment loan	1923–1939	annual	in per cent, period average	YU2L_A
	Sept. 1923–Dec. 1939	monthly	in per cent, period average	YU2L_M
Current yield on Agrarian bonds	1923–1939	annual	in per cent, period average	YU2M_A
	Sept. 1923–Dec. 1939	monthly	in per cent, period average	YU2M_M
3. EXCHANGE RATES				**Tables YU3**
US dollar (New York)	1920–1940	annual	in dinars, period average	YU3A_A
	Dec. 1919–Dec. 1940	monthly	in dinars, period average	YU3A_M
French franc (Paris)	1920–1940	annual	in dinars, period average	YU3B_A
	July 1919–June 1940	monthly	in dinars, period average	YU3B_M
Swiss franc (Geneva-Zurich)	1920–1940	annual	in dinars, period average	YU3C_A
	July 1923–Dec. 1940	monthly	in dinars, period average	YU3C_M
Pound sterling (London)	1920–1940	annual	in dinars, period average	YU3D_A
	June 1923–Dec. 1940	monthly	in dinars, period average	YU3D_M
Italian lira (Milano)	1920–1940	annual	in dinars, period average	YU3E_A
	Oct. 1919–Oct. 1940	monthly	in dinars, period average	YU3E_M
Mark (Berlin)	1920–1940	annual	in dinars, period average	YU3F_A
	Jan. 1920–Dec. 1940	monthly	in dinars, period average	YU3F_M
Dinar in Zurich (100 dinars in Swiss francs)	1920–1940	annual	in dinars, period average	YU3G_A
	May 1920–Dec. 1940	monthly	in dinars, period average	YU3G_M
4. GOVERNMENT FINANCES				**Table YU4**
Total government revenue	1924–1939	annual	in millions of dinars	YU4A_A
of which direct taxes	1924–1939	annual		YU4B_A
of which indirect taxes and excises	1924–1939	annual		YU4C_A
of which state enterprises	1924–1939	annual		YU4D_A
Total government expenditure	1924–1939	annual	in millions of dinars	YU4E_A
of which pensions	1924–1939	annual		YU4F_A
of which public debt repayment (principal + interest)	1924–1939	annual		YU4G_A
Foreign public debt	1932	annual	in millions of dinars, end-of-period	YU4H_A
Government debt to the central bank	1920–1940	annual	in millions of dinars, end-of-period	YU4K_A

INDEX TABLE - Country: YUGOSLAVIA

List of Variables	Time Span	Data Frequency	Unit of account	Series Code
5. PRICES, PRODUCTION AND LABOUR				**Table YU5**
Prices				
Wholesale prices (1926=100)	1926–1939	annual	index	YU5A_A
	Dec. 1926–Dec. 1939	monthly	index	YU5A_M
Agricultural prices (1926=100)	1926–1939	annual	index	YU5B_A
	Dec. 1926–Dec. 1939	monthly	index	YU5B_M
Cattle prices (1926=100)	1926–1939	annual	index	YU5C_A
	Dec. 1926–Dec. 1939	monthly	index	YU5C_M
Minerals prices (1926=100)	1926–1939	annual	index	YU5D_A
	Dec. 1926–Dec. 1939	monthly	index	YU5D_M
Industrial prices (1926=100)	1926–1939	annual	index	YU5E_A
	Dec. 1926–Dec. 1939	monthly	index	YU5E_M
Export prices (1926=100)	1926–1939	annual	index	YU5F_A
	Dec. 1926–Dec. 1939	monthly	index	YU5F_M
Import prices (1926=100)	1926–1939	annual	index	YU5G_A
	Dec. 1926–Dec. 1939	monthly	index	YU5G_M
Industrial production				
Cement	1920–1939	annual	in tons	YU5H_A
Hard coal	1920–1939	annual	in tons	YU5I_A
Brown coal	1920–1939	annual	in tons	YU5J_A
Lignite	1920–1939	annual	in tons	YU5K_A
Labour force and daily wages				
Employment	1920–1940	annual	in thousands, period average	YU5L_A
Daily wages	1920–1940	annual	in dinars	YU5M_A
Daily wages	1920–1940	annual	index (1920=100)	YU5N_A
Nominal wages	1930–1940	annual	index (Dec. 1930=100)	YU5O_A
Real wages	1930–1940	annual	index (Dec. 1930=100)	YU5P_A
Cost-of-living	1930–1940	annual	index (Dec. 1930=100)	YU5Q_A
6. NATIONAL ACCOUNTS AND POPULATION				**Table YU6**
National income, nominal terns	1923–1939	annual	in millions of dinars, at current prices	YU6A_A
of which industry and mining	1923–1939	annual		YU6B_A
of which agriculture	1923–1939	annual		YU6C_A
National income, real terms	1923–1939	annual	in millions of dinars, at 1938 prices	YU6D_A
of which industry and mining	1923–1939	annual		YU6E_A
of which agriculture	1923–1939	annual		YU6F_A
Exports	1920–1939	annual	in millions of dinars	YU6G_A
Imports	1920–1939	annual	in millions of dinars	YU6H_A
Population	1918–1940	annual	thousands of inhabitants	YU6I_A

Note: The code of each variable is generated by the country prefix (YU), 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 dates of change.

This data group contains monetary variables, currency reserves and banknotes in circulation and also their main components, from 1884 to 1920 for Serbia and from 1920 to 1940 for interwar Yugoslavia.

2.1.1 Currency reserves

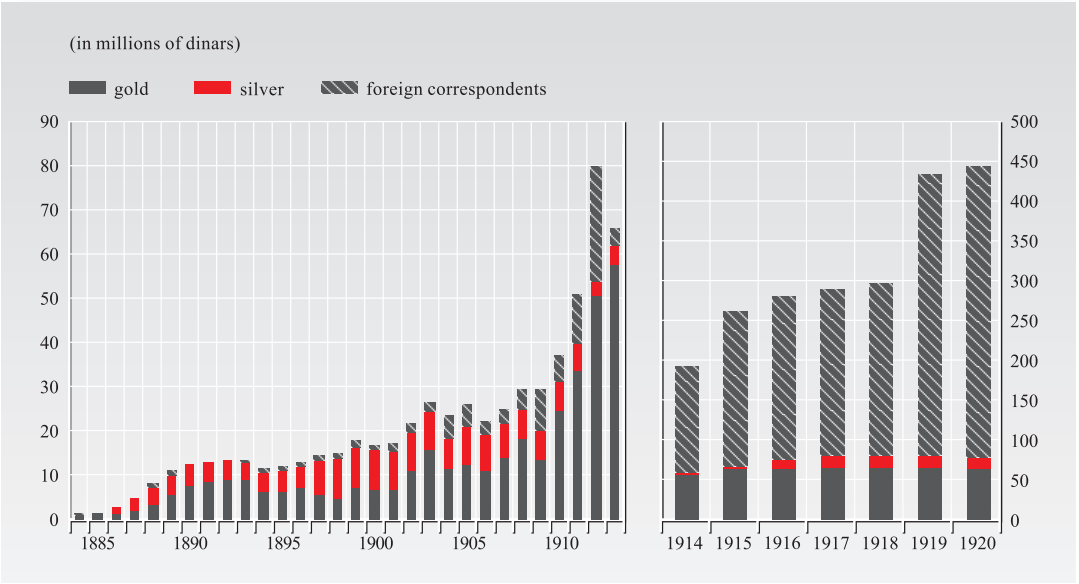
Regarding **Serbia**, total statutory reserves (*подлога*) were composed of three highly liquid and safe asset components: (a) gold (*злато*) holdings and (b) silver (*сребро*) holdings, as statutory

reserves in precious metal (*метална подлога*), and (c) banknotes and financial assets denominated in freely convertible foreign currencies as receivables from foreign correspondents (*страни коресподенти*). The time series on total reserves and their components are given as end-of-period figures, from July 1884 to December 1920. Data on gold and silver holdings on a monthly basis are available separately from the beginning of 1886.

In the NBS' balance sheet, the conversion of the gold, silver and foreign exchange holdings into dinars implied that the dinar exchange rate vis-à-vis the French franc was at par. However, the exchange rate of the dinar against all other currencies was established on the basis of the quantity of gold contained in one monetary unit.

Statutory reserves were needed to provide confidence in banknotes by ensuring that they would be exchangeable for gold or silver on demand. They were a key indicator, as the amount of the banknotes issued by the NBS was tied to the level of the reserves. The legally prescribed minimum coverage for banknotes in circulation amounted to 40%, which was viewed as a strong coverage ratio at that time.

FIGURE 1 Total Currency Reserves in Serbia, 1884–1920



Source: Privileged National Bank of the Kingdom of Serbia (1884–1920), Annual Reports.

At the start, the NBS formed currency reserves from its share capital. The payment of the authorised capital, which was 20 million dinars, was divided into two subscriptions of 10 million dinars each. The payment of the first subscription was carried out throughout almost three decades and was ended in 1912. At its inception the value of the share capital was 2.5 million. In addition, the NBS built up currency reserves not only from its share capital, but also through buying gold on the market with banknotes, primarily with silver-backed banknotes. The high government borrowing from the NBS resulted in an increase in banknote circulation which led to the appearance of an agio.

Metallic backing and money circulation were found to be disproportionate: gold dominated metallic backing, whereas silver-backed banknotes dominated circulation. Figure 1 shows the compo-

sition of the NBS's reserves by their main components. Until 1903, currency reserves consisted mainly of gold and silver holdings – their proportion was above 90%. Gold prevailed in the structure of backing, while silver banknotes accounted for around 95% of total circulation. The bank preferred to retain a 'prudent reserve' of gold to ensure that liabilities abroad could be met on demand. The proportion of foreign correspondents increased from 1904 onwards, reaching 30% in certain years.

Concerning Yugoslavia, the data on total statutory reserves (*подлога*) are displayed yearly in Table YU1_A and monthly in Table YU1.1_M. Total reserves consist of metallic reserves, i.e. gold (*злато*) and silver holdings (*сребро*), and foreign exchange (*девизе*) held in the bank's vault and deposits with correspondent banks abroad. However, the structure of foreign exchange reserves changed twice. As of June 1931, in accordance with the legal stabilisation of the dinar, silver was no longer included in reserves. Reserves contained only gold and claims against the gold standard countries (in the form of currency), bank deposits and securities. Further, in 1936, after the collapse of the Gold Bloc, reserves should only consist of foreign exchange readily and freely convertible into gold. Thus, foreign exchange reserves as of 30 September 1936 contained only gold held in the NBY's vault and abroad.

It should be noted that gold, silver and foreign exchange holdings were converted into 'conventional' or pre-war dinars until 1931. On its balance sheet, the NBY recorded the reserves at a 'conventional' rate, based in general on the pre-war gold dinar parity: one Swiss franc for one dinar; one dollar for 5 dinars; one pound sterling for 25 dinars, etc. Other currencies were exchanged for one dinar if their value was more than one dinar, and according to the exchange rate list if their value was less than one dinar.

As explained by the NBY, reserves' revaluation by this way was carried out primarily because of the need to balance the temporary exchange account of the government.[21] Although unrealistic, the NBY considered returns from reserves' revaluation at the pre-war parity as a useful defensive barrier against any further increase in banknote circulation. Otherwise, money printing and inflation would be the ultimate result.

For example, the value of the reserves for the year 1930, as assessed by the NBY in terms of the current dinar, which was 9.1% of the 'conventional' or the pre-war dinar, appeared as follows:

Table 3 Total reserves in 'conventional' and current dinars, 31 December 1930

	'Conventional' dinars (in millions)	Current dinars (in millions)
Metallic reserves:		
- Gold	98.58	1,077.58
- Silver	17.58	43.44
Foreign exchange	119.96	358.36
Total reserves	236.11	1,479.38

Source: Privileged National Bank of the Kingdom of Serbia (1884–1920), *Annual Reports.*

[21] Monograph of the National Bank 1884–1934 (1935), p. 156.

On 31 December 1930, total statutory reserves in the NBY's balance sheet amounted to 236.1 million dinars. This included gold, silver, foreign money and deposits abroad. Banknotes in circulation on the same date amounted to 5,396.5 million, giving a very low effective cover ratio of 4.38%. This, however, reckons statutory reserves in gold values and aggregate demand liabilities in paper values. Calculating reserves on the basis of the corresponding paper values raises total holdings to 1,479.4 million, in which case the effective cover is 27.4%. According to the 1920 Law on the National Bank, the prescribed minimum cover ratio amounted to 33.3%.

The NBY had successfully accumulated reserves, if not in gold, at least in foreign bills which could always be turned into gold. At that time as now, adequate holdings of foreign exchange reserves helped to maintain public confidence in the currency and allowed the central bank to intervene in the market in order to defend the value of the currency. Hence, adequate foreign exchange reserves were a pre-condition for the legal stabilisation of the dinar. It was partly achieved through the obligation imposed on exporters to sell one-third of their bills of exchange to the NBY. As early as in 1924, with the export revenues growth, the NBY had sufficient dinar funds to buy off a third of exporters' bills of exchange, which in turn could affect adversely its ability to intervene in the foreign exchange market. This was because in August 1925 a new interpretation of the legislation stipulated that the banknotes issued by the bank for the above-mentioned purposes were no longer encompassed by the regular banknote contingent.

In June 1931, Yugoslavia's foreign exchange reserves soared to 2,291.5 million chiefly due to the revaluation related to the legal stabilisation of the dinar, the stabilisation loan of 1,400 million and the exclusion of silver and foreign exchange which were no longer convertible into gold. Hence, June 1931 is the starting date of our data series on the effective gold cover ratio and overall effective cover ratio. Under the 1931 Law on Money, the NBY was required to maintain reserves up to 35% not only of the regular banknotes in circulation, but of all liabilities at sight (banknotes in circulation, giro accounts and other liabilities at sight). Further, the prescribed minimum gold coverage for all liabilities at sight amounted to 25%. On the day of the legal stabilisation (28 June 1931), total coverage of all liabilities amounted to 41.1% of which 27.6% in gold. At the end of the year, total coverage was 37.5% of which 31.5% in gold.

In our dataset on monetary base, December 1934 is the last month for which data on both the effective gold cover ratio and overall effective cover ratio are available. Namely, despite the devaluation of the dinar, in the NBY's balance sheet total reserves (i.e. gold holdings) were still valued in dinars at 'stabilisation'. Total reserves and corresponding cover ratios at current prices are shown in Table 4.

TABLE 4 Total reserves and cover ratios: calculations at current pries, 1935–1940

(in millions of dinars)	1935	1936	1937	1938	1939	1940
Total reserves with 'premium' of 28.5%	1,881.64	2,089.51	2,196.15	2,456.85	..	..
Cover ratio of total liabilities at sight	29.58	29.68	26.48	27.22	..	..
Total reserves in real value (*)	..	..	..	..	3,181.51	4,384.02
Cover ratio of total liabilities at sight	..	..	..	..	27.86	25.24

Note: (*) According to the Decree on reserve calculation adopted in October 1939.
Source: Privileged National Bank of the Kingdom of Serbia (1884–1920), *Annual Reports.*

2.1.2 Monetary aggregates

Monetary base in **Serbia** is measured as the sum of gold- and silver-backed banknotes in circulation and liabilities at sight, i.e. giro accounts with the central bank and other central bank liabilities payable on demand. Metallic currency in circulation is excluded from this definition, because of lack of data. Even after minting domestic currency coins, a lot of foreign coins were in circulation.

The time series for gold-backed and silver-backed banknotes in circulation were regularly reported for the period 1884–1913 on an annual and monthly basis (Table SE 1.2_A and Table SE 1.2_M); only the 1885 data monthly figures refer to the total. 1884 is the starting date of our data set since the NBS was granted the monopoly of note issue the same year of its establishment. The quantity of gold-backed banknotes in circulation was negligible compared to the silver-backed ones which grew from year to year (Figure 2).[22] On average, silver-backed notes made up 95% of money supply.

Since the budget constantly was in deficit (1878–1903), the government frequently resorted to borrowing from the NBS; borrowing from the central bank was conditional upon the circulation of the silver-backed banknotes, as seen in Figure 2.

Pursuant to the 1883 Law on the NBS, including the 1885 amendments thereto, the bank could at no time place into circulation more banknotes than 2.5 times the amount of gold and/or silver kept in its vault. In addition to this 40% of gold coverage, such banknotes were backed with 60% by 92-day maturity bills of exchange, short-term warranties, government and public loan coupons with maturity of no longer than 92 days, and government bonds in the amount of up to 75% of their market value. As already mentioned in the introduction, the law also prescribed that the National Bank should exchange on demand its 10-dinar banknotes against silver, and its 50, 100, 500 and 1000-dinar banknotes against gold, at full nominal value without discount.

The legally prescribed minimum coverage for banknotes in circulation was observed at all times. In years of economic instability and agricultural downturn, the backing for circulating banknotes was significantly higher than that prescribed by the law.[23] However, any rise in note circulation was usually followed by a rise in the agio. The NBS was severely criticised by both the government and the public that its excessive issue of silver-backed banknotes resulted in the agio's appearance.

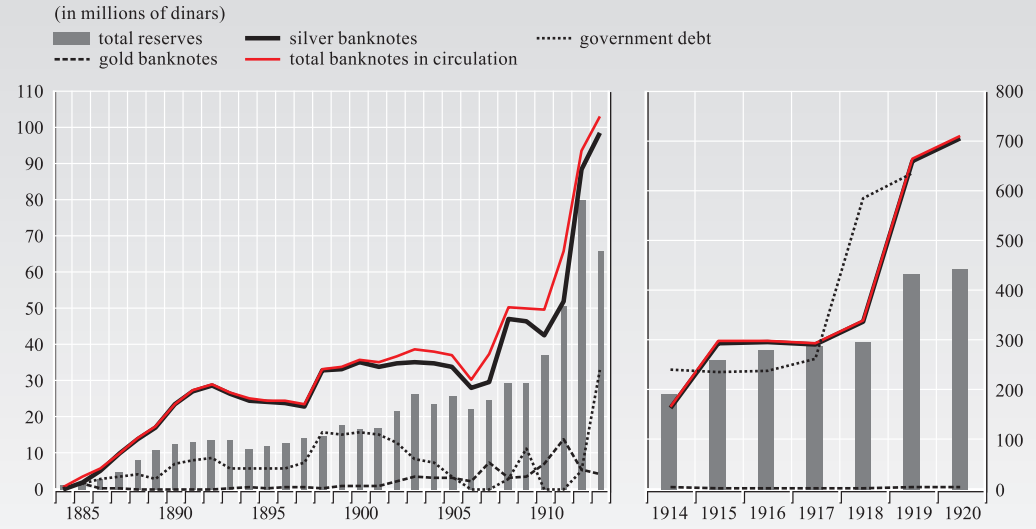
In fact, the NBS and the government adopted different interpretations of the legal provisions relating to metal backing. The NBS's view was that gold backing could be used for the issue of the silver-backed banknotes. As a result, metallic backing and currency in circulation came to stand in a completely inverse proportion: gold dominated backing, whereas silver-backed banknote circulation amounted to approximately 95% of total circulation. By contrast, the government maintained that gold could only be used for backing gold-backed banknotes, while silver-backed banknotes should be covered exclusively by silver. Therefore, silver-backed banknotes had to be withdrawn over a five-year period, and only a third of all banknotes could remain in circulation. This disinflationary policy took its toll on economic activity. In 1896, the government restored the ear-

[22] In the period 1891–1900, the share of the gold-backed banknotes in the money supply equalled mere 1.48%, whereas in 1901–1910, it rose to 8.48%. It reached its highest level in 1911 owing to the renewal of the trade agreement with the Austro-Hungarian Empire.

[23] After the Customs War with Austro-Hungary in late 1906, backing equalled 74%; during the First Balkan War in 1912 it was 86%, whereas in the first year of WWI, it reached as much as 116%.

lier practice according to which metal backing for silver-backed banknotes could be either in silver or in gold. Silver-backed banknotes, however, remained limited to 25 million, regardless of backing. The limit was raised to 30 million in 1898, but remained unchanged until 1908,[24] when the law extended the NBS's privilege for another 25 years and set the ratio of total circulation of silver-backed banknotes to the NBS's subscribed capital at 1 to 5. That year, the subscribed capital of the bank equalled 7.5 million dinars in gold, which meant that the circulation of silver-backed banknotes could equal 37.5 million dinars or 41.2 million if the government allowed a deviation of 10% above the maximum limit in view of extraordinary circumstances.

FIGURE 2 Currency Reserves and Banknotes in Circulation in Serbia, 1884–1920



Source: Privileged National Bank of the Kingdom of Serbia (1884–1920), Annual Reports.

As for **Yugoslavia**, monetary base is measured as the sum of banknotes in circulation and liabilities at sight, i.e. giro accounts with the central bank and other central bank liabilities payable on demand. Metallic currency in circulation is included only from 1931 onwards and on a yearly basis.

The 1920 Law on the National Bank granted the NBY the exclusive right to issue banknotes convertible into the legal metallic money. Given that convertibility had already been suspended, the question left to be resolved was whether the legal metallic money should be gold or silver. According to the law, the quantity of 'regular' banknotes in circulation was not to surpass the triple value of the NBY's gold and foreign exchange reserves. Therefore, the coverage ratio was reduced from 40% to 33.3%. However, the new law had retained two banknote contingents, the 'regular' and the 'irregular'. The latter could be used only for government needs.

2.2 INTEREST RATES

This section deals with the central bank interest rates and available short-term market interest rates in Serbia during the period 1884–1920, and in Yugoslavia during the period 1920–1940. Addi-

[24] In the context of the Customs War with the Austro-Hungarian Empire, the government had to allow the breach of the legal maximum from 1907 and permit the bank to issue an additional 4 million dinars in silver-backed banknotes.

tionally, we present data for Yugoslavia on government bond market prices and current yields as a benchmark for long-term interest rates.

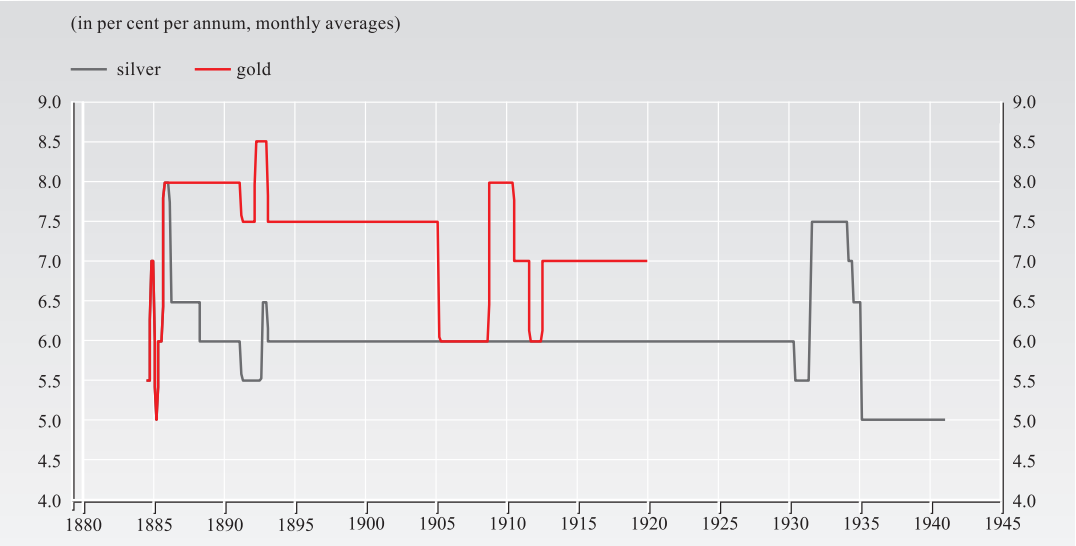
2.2.1 Short-term interest rates

Official interest rates: discount rate and Lombard rate

For **Serbia**, the reported official interest rates are the discount (*дисконтна*) and the Lombard (*ломбардна*) rates, both on gold and on silver. Both time series begin in 1884 and continue through the sample period, given that the NBS upon its inception placed banknotes into circulation by extending bills of exchange loans and lombard loans. The series are shown on a monthly and annual basis; the date of change is also shown. They are also available in two types: 'in general' (*општа*), and for banks (or 'for money bureaus', *за новчане заводе*) discount and Lombard rates given that commercial banks (as well as various exporting and industrial firms) enjoyed preferential treatment from the NBS from 1886 until end-1919.[25]

The NBS discounted only the most secure bills of exchange available in the market: short-term bills of exchange of banks, merchants, industrialists and craftsmen. In addition, the bills had to bear at least two authorised signatures. The creditworthiness of each signatory to the bill submitted for discount was closely scrutinised. Bills of exchange recorded only modest growth, while after 1908 they started to decline. This was due to several reasons. First, high-quality bills of exchange ('trading' bills of exchange) were scarce. Second, despite being offered a lower-than-market interest rate, traders and craftsmen rarely resorted to the NBS's credits, as the bank did not allow the

FIGURE 3 The Discount Rate, July 1884–December 1940



Source: Privileged National Bank of the Kingdom of Serbia (1884–1920), Annual Reports.

[25] For instance, they were granted credits at an interest rate which was around 1–2 percentage points lower than the prevailing market rates (although as of 1892 there were no facilities for borrowing in gold). The bank, in fact, wanted to enhance financial intermediation and economic development. Over time, the original aim of the money bureaus, which was mutual credit to members and, subsequently, to non-members (though at a somewhat higher interest rate), was abandoned and the bureaus, as private joint-stock companies, grew into genuine credit institutions.

bills of exchange to be repaid in instalments, but redeemed in full. On the other hand, banks accepted repayment in instalments. Traders and craftsmen, therefore, frequently opted for borrowing at higher rate, in return for easier terms of repayment. And third, the NBS's was subject to a legal upper limit on the amount of credits provided to the trade and craftsmanship sectors. Due to the limit set on the quantity of silver-backed banknote issue, the NBS always found itself faced with the same problems during the agricultural products season export when money demand was at peak. As the bank could not breach that limit, it had to suspend the discounting of the bills of exchange precisely at the time when the demand for silver-backed banknotes was very high.

Lombard loans were extended for a maximum of three months, against collateral in gold or silver, or in Serbian state bonds, government-guaranteed bonds and state Treasury coupons with a maturity of no longer than 92 days. They could equal no more than 75% of the market price of the collateral. As the only collateral accepted by the NBS were government bonds, which were almost fully sold abroad, and government guaranteed bonds, which were very scarce, collateralised loans made up only a very small portion of the bank's total assets.

In 1886, the NBS decided to allow banks to use current accounts against coverage in bills of exchange equalling 125% of the loan. The loan had to be settled at end-quarter. The maximum credit amount that a bank was allowed to provide should not be more than one half of its subscribed capital. The NBS approved current account loans to healthy trading firms against coverage in bills of exchange equalling 133% of the loan. Current accounts were particularly important, as they functioned as giro accounts which the NBS did not maintain at the time. Movements in current account overdrafts were aligned with the development of the banking institutions in the country. In the first years of the NBS's operation, the number of banking institutions was low but growing. Current account loans followed suit: in 1887, they barely exceeded 80 thousand dinars, while in 1908 they reached 12 million.

The movements in the NBS's discount rate and the market lending rate over time reveal that the discount rate on silver loans ranged between 5.5% and 6.5% (most often standing at 6%), while the market rate varied widely and was sometimes as much as double the NBS's rate. This leads us to the question why the NBS kept its interest rate practically unchanged for so long (1891–1920). The NBS by itself provides an explanation: 'When setting the discount rate, the bank's management had to take into account the effects of an increase or a decrease of the official interest rate could bring about, as well as it should be concerned with the protection of the bank's metallic reserves and provide favourable terms for attracting short-term foreign investments. Further, the bank's management had to pay attention to the nascent domestic money market and, in line with its legal mandate, strive to keep the average market rate as low as possible. Due to the special features of the domestic money market, the credits provided by the note issuing bank had to be cheaper than those provided by other monetary agents. This is the reason why the official rate of the bank could be neither equivalent nor higher than the average market rate'.[26]

On several occasions, the NBS had to suspend the granting of both discount and collateralised loans with a maturity longer than one to three months. Silver loans were suspended for two reasons: first, the legal limitation on the issue of banknotes and, second, the high government debt with the bank. Gold loans, on the other hand, were suspended at times of drastic reductions in the bank's metallic backing which threatened to fall below the legally prescribed minimum rate. In 1908, political unrest, caused by the annexation of Bosnia and Herzegovina, led to a massive gold

[26] Monograph of the National Bank, 1884–1934 (1935), p. 59.

outflow and deposits withdrawal, and consequently to a suspension of gold loans until June 1910.

The times series on official interest rates in **Yugoslavia** report the discount rate (*дисконтна стопа*) and the Lombard rate (*ломбардне стопе*) on securities, warrants and gold; they are shown in two formats, namely as values by the date of change and on a monthly and yearly basis.

Only commercial bills were eligible for rediscount, i.e. bills resulting from business transactions and not bills drawn up purely for the purpose of obtaining money. Since the commercial bills could be only submitted for discount by banks, large merchants and manufacturers, the bulk of the NBY's credits went to them.

As seen in Figure 3, the discount rate, for the first time after WWI, changed in May 1930, from 6.0% to 5.5%. It was subsequently increased to 6.5% and further to 7.5% in June and July 1931, respectively. With the end of the Great Depression, it was reduced to 7.0% in February 1934, followed by a new reduction to 6.5% in July 1934. It was reduced again to 5.0% in February 1935 and remained at that level until the end of 1940. The Lombard rate was increased from 7% to 8% in June 1931. This was followed by a further rise to 9.0% in July 1931. In February 1934, it was reduced to 8.0%, followed by a new reduction to 7.5% in July 1934 and finally to 6.0% in February 1935.

From the very beginning, the NBY was criticised for its unprincipled monetary policy, namely for keeping its discount rate unchanged while economic conditions had changed. The discount rate remained at 6.0% during the 1920s, same as it was before the war. In the NBY's *Annual Report for 1922* it was mentioned that the discount rate had no longer the same importance as in normal circumstances when it affected money circulation. There was a great disparity between the market and the official discount rates, so any change in the official discount rate would not affect lending conditions, since the NBY's share in total credit (12 billion) was only 1.5 billion dinars.

Market interest rates

Market interest rates of private banks in **Serbia** (SE2I_A) are available only for the years for which we have data from the *Statistical Yearbook of the Kingdom of Serbia*. They were shown as minimum and maximum rates without exactly specifying their type. We suppose that minimum rates were sight deposit rates and that maximum rates were short-term lending rates. It is known that market interest rates fluctuated, often exceeding double the NBS rates. From the NBS's reports and documents we know that the interest rate on prime bills of exchange ranged from 9% to 11% at the outset of the NBS's operations, but declined gradually over the subsequent years to 6–8% in Belgrade and 8–10% in the rest of Serbia. As of 1895, the free market interest rate picked up again to range from 8% to 10% in Belgrade and from 10% to 12% elsewhere in Serbia. With occasional exceptions, it remained within this latter range up until World War I.

In an effort to lower the market interest rate, the NBS also resorted to administrative measures. Thus in 1891, the NBS made lending to banks conditional upon their setting their interest rates at the following maximum levels: 8% if they had been operating for three years, 9% if they had been operating for two years and 10% if they had been operating for one year. Such measures, however, failed to yield the desired results. A similar thing happened in 1908, when, in a bid to bring interest rates down, the government enacted a law on the extension of privilege, requesting banks to set their interest rates at no more than 3 percentage points above the NBS's interest rate if they wished to use NBS loans. Out of 84 banks with which the NBS operated at the time,

only 44 consented to such limitation of the interest rate level. As a consequence, in late 1909 the NBS did business with only 54 banks, or 30 less than in 1908. The market interest rate remained unchanged, while a large number of banks found it more profitable to borrow from larger Belgrade banks or abroad, at a higher interest rate than that offered by the NBS, but with no limitations regarding the interest rates charged on their customers.

For **Yugoslavia**, short-term market lending rates for first-class bills are shown, as minimum and maximum rates (YU2E_A), and market interest rates on sight deposits (YU2F_A) and term deposits[27] (YU2G_A) as well. Those interest rates were analysed in the *Monograph of the National Bank 1884–1934* (1935) and the NBY's *Annual Reports* when it started regularly to report on macroeconomic developments.

As in the most other Southeast European countries, market interest rates in Yugoslavia had been high. The behaviour of the short-term market lending rates was different across different sub-periods: from 1920 to 1922 they varied between 7% and 12%; from 1922 to 1925 they reached their highest level, i.e. 20%–30% and even higher; from 1925 to 1931 they continuously decreased; and finally, in the post-1931 period the high interest rates that prevailed during the Great Depression were followed by a period of moderate reduction.

The farmers and the peasants, however, as well as the artisans, were altogether without access to cheap credit. They had to go to the small provincial banks and private lenders. While the former granted credits to peasants at 20% to 30%, private lenders charged far more, the rate sometimes being such as to be ruinous. The small provincial banks with small savings deposits had to apply for credits to the larger banks in the towns. The interest rate on the credit they obtained in this way was practically about 10%–15% and consequently they in turn had to charge a high rate of interest.

Another problem was a constant lack of capital for long-term loans. The banks, having succeeded in making their funds liquid, were reluctant to provide loans with maturities longer than three months. Money was often withheld because lenders feared that in the case of legal proceedings they might not recover their loans, owing to the fact that the imperfect functioning of the administrative machinery made legal action slow and costly. For this reason, sound undertakings could not often obtain money unless they were in the hands of propertied persons who could give satisfactory guarantees. The flow of foreign capital into the country, however, remained slow, and such capital as did come in was not as cheap as to have any great influence on the interest rate.

In order to bring about a general reduction of the interest rates, the NBY in its bank refinancing policy always investigated the interest rate paid by the banks on savings deposits and charged on loans and discounts. In 1924, the NBY took the initiative to secure an agreement among banks on reducing the interest rate paid on loans and charged on deposits. Such an act was interpreted that the bank intended to lay down the rate of private interest. The NBY, however, explained that it neither intended nor ought to do so. Moreover, it pointed out the interest rate could not be lowered by decrees or laws, but only by an increase in the funds available for business. Nevertheless, the bank considered that it had the right to refuse credit to those intermediaries which, by setting high rates, prevented their customers from prospering. This policy was assessed by the NBY as having positive effects: competition for savings deposits was reduced to a minimum which in turn allowed banks to decrease their interest rates on loans.

[27] I.e. deposits with any kind of withdrawal restrictions.

Trying to reduce the market interest rate, the NBY demanded from banks that from 1 July 1926 they should moderate the interest rate on discounts, since it was clear that there was plenty of available money in the country. In dealing with the question of interest rates, the bank went one step further and placed a statutory upper limit on interest rates charged on loans in 1934 and 1936 (the upper limit remained unspecified in the available NBS's reports).

2.2.2 Long-term interest rates

Fixed-rate government bonds: market prices and current yields

We could not derive reliable data series on market prices and yields of the Serbian government bonds from available sources. We have only daily reports of Serbian newspapers on the prices of bonds traded on the European stock exchanges (*Српске новине*), but they are not complete.

Serbian long-term government bonds were placed on the European capital market by foreign banks domiciled in Vienna, Paris and Berlin. Those banks bought bonds from the Serbian government in advance and undertook the risk of [re-]selling those bonds on the European stock exchanges. Such risk was implicitly built into the effective interest rates, which were higher than the nominal ones because government loans were generally issued below par. The fact that from 1881 to 1913 the Serbian government borrowed nominally 1,354 million dinars (French francs) and received effectively 1,113 million dinars, meaning that the cost of borrowing was 18% higher than it was nominally agreed.

The government's relatively low creditworthiness in the European capital markets was primarily attributed to the large government budget deficits. The 1895 sovereign debt crisis made things even worse. The prices of Serbian government bonds started to rise only after foreign debt servicing was centralised within the Independent Monopoly Directorate. Moreover, fiscal consolidation after 1902 produced budgetary surpluses from 1904 onwards, which had a positive effect on the prices of government bonds. The average effective interest rate on foreign government loans issued below par fell from 6.5% in the period 1881–1903 to 5.7% in the period 1904–1912 (see Table 5).

TABLE 5 Interest rates on the Serbian foreign long-term government loans issued below par

	Nominal amount borrowed (in thousands of dinars)	Effective amount received (in thousands of dinars)	Nominal interest rate in %	Effective interest rate in %
Period of large budget deficits (1881–1903)	398,936.500	308,198.300	5.0%	6.5%
Period of stability (1904–1912)	305.0	240.8	4.5%	5.7%

Source: Gnjatović (2009).

The long-term interest rates in Yugoslavia are proxied by the data on the market prices and current yields on the three most important fixed-rate government bonds traded on the Belgrade Stock Exchange. The market price of the bond Compensation loan for war damage (*рента за ратну штету*) was quoted in dinars per nominal 1,000 dinars (YU2H_A), the price of the Investment loan (*инвестициони зајам*) in dinars per nominal 100 dinars (YU2I_A) and the price of the Agrarian bonds (*аграрне обвезнице*) in dinars per nominal 100 dinars (YU2J_A). From 1932, the prices

are calculated at a new way of quoting whereby the rate does not include accrued interest, which simplifies the calculation of the yield. However, for the previous period, the yields are not adjusted for the coupon (which is included in the quoted price).

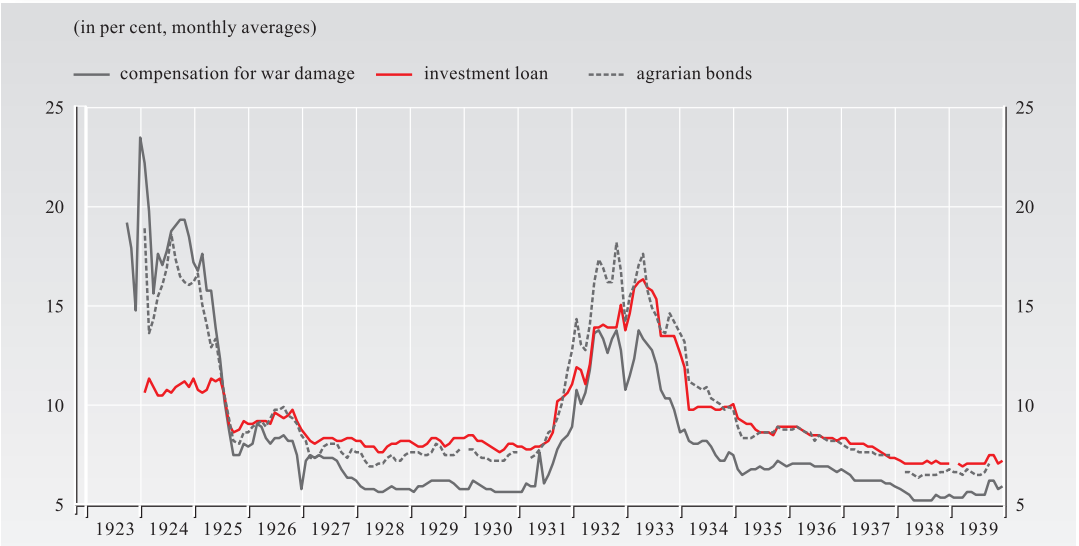
Current yield is measured by the ratio of the annual interest payment and the bond's current market price as a percentage of the latter; it therefore refers to the yield of the bonds at the current moment, not the total return over the life of the bond. All Serbian bonds were trading at a discount, i.e. the current yield was higher than the coupon yield.

TABLE 6 Serbian government bonds quoted in the Belgrade Stock Exchange

Bond name	Year of issue	Amount (in millions of dinars)	Coupon rate	Maturity (years)
Compensation for war damage	1923–1925	4,916.6	2.5%	50
Investment loan	1921	500.0	7.0%	50
Agrarian bonds	1921	130.0	4.0%	30

Source: Monograph of the Ministry of Finance of the Kingdom of Yugoslavia, 1918–1939 (1939).

FIGURE 4 Current Yields of Government Bond Loans in Yugoslavia, September 1923–December 1939



Source: Belgrade Stock Exchange (2004) and authors' own calculations.

2.3 EXCHANGE RATES

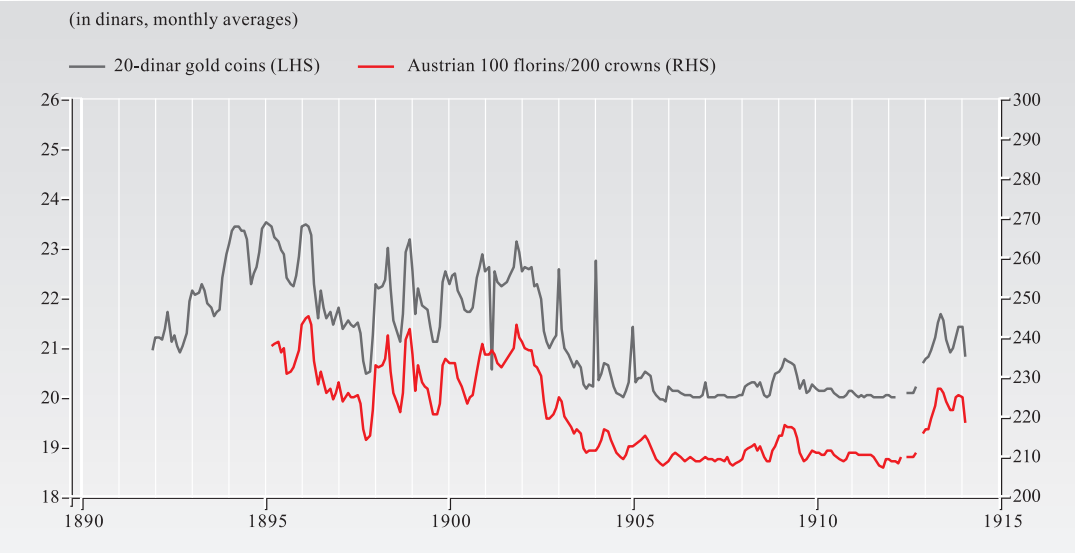
The exchange rate data for **Serbia** include the nominal exchange rate of the silver dinar per 20-dinar gold coin and the rate of the silver dinar per 100 Austrian florins/200 Austrian crowns. The 20-dinar gold coin is the Serbian equivalent of the 20-French franc gold coin (or the Napoleon

d'Or) which was the most widely used in trade transactions in 19th century Europe. In Southeast Europe, Serbia is probably the only country reporting a price for coins (expressed in domestic paper money). Most countries used to report the domestic price for bills of exchange drawn on foreign banks abroad.

The data series of the exchange rate of the dinar against the 20-dinar gold coin (expressed in domestic paper currency) and the Austrian florin/Austrian crown are available from November 1891 and February 1895, respectively. They have been constructed based on the official exchange rates prevailing in Belgrade. For the period prior to 1899 and after 1908, we used the mid-day rate published in Serbian newspapers. Year averages are derived from monthly averages.

The dinar complied with the coinage requirements of the Latin Monetary Union: the exchange rate of the dinar versus the French franc was at par as both currencies had the same content of gold. However, due to the limited domestic production capacity and the widening budget deficit and government foreign debt, the country's gold reserves could not sustain any more the convertibility of the domestic currency in gold at a fixed parity. Exchange from one currency to another involved an additional charge, namely the agio. Defined as the difference between domestic money (silver-backed 10-dinar banknotes) and gold which was used for the settlement of the country's international obligations, the agio was actually an indicator of the depreciation of the dinar against gold.

FIGURE 5 Exchange Rates in Belgrade, November 1891–January 1914



Source: Authors' own calculations based on daily data published in "Serbian Newspapers" for the two periods before 1899 and after 1908; For the period 1899–1908 see Statistical Yearbook of the Kingdom of Serbia (1913).

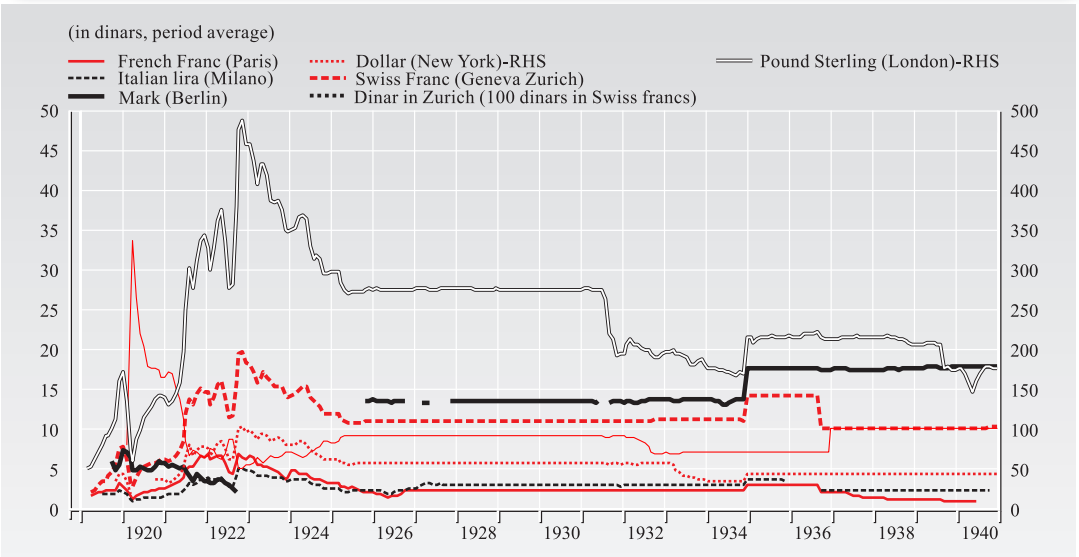
The agio varied in the course of the year. Due to its predominantly agrarian character, domestic economic activity picked up in the second half of the year. During the export season gold flowed into the country; its supply was larger and the agio declined as a result. By contrast, in the first half of the year, as exports weakened and money supply was not reduced, banknotes which were redeemable in silver, squeezed out banknotes which were redeemable in gold and thus the agio went up. The NBS could not eliminate the agio by direct interventions through trade in gold, but it could ease its fluctuations. The bank purchased gold during the autumn season, when there was

enough of it in circulation, and sold gold usually in March, when it was scarce and the agio went up. During the 1880s, the agio equalled 3–4%, which was somewhat lower than in the preceding period.[28] It peaked between 1893 and 1903, when the silver-backed 10-dinar banknote dominated circulation. The agio was significantly lower from 1903 onwards, when public finances were put in order and goods exports and capital inflows gathered pace. Attempts to curtail the agio by limiting the amount of the silver-backed banknotes induced a slowdown in economic activity and the appearance of a 0.5% disagio in the course of 1905, i.e. an additional charge on gold had to be paid from time to time all the way until 1908.

Considering the exceptionally difficult circumstances, the dinar was relatively stable throughout the period before World War I (see Figure 6). The price for a 20-dinar gold coin ranged from 20 to 23.5 dinars. The price for 100 Austrian florins increased from 210 to 240 dinars, that is from 103 to 113 dinars for 100 Austrian crowns after 1909; the new exchange rate was half the old one: 1 Austrian florin = 2 Austrian crowns. The Austrian crown replaced the Austrian florin in 1900, but the Belgrade Stock Exchange continued to quote the old unit of account (100 Austrian florins) until 1909.

The exchange rate data for **Yugoslavia** include the spot nominal exchange rate of the dinar vis-à-vis the US dollar, the French franc, the Swiss franc, the pound sterling, the Italian lira and the mark (until 1923)/Reichsmark (1924–1948) on the Belgrade Stock Exchange. Prices for foreign exchange are presented in dinars per one unit of foreign currency. Both yearly and monthly time series refer to period averages. During interwar, the Yugoslav currency was quoted in all major world stock exchanges (New York, Zurich, Paris, London, Prague and Berlin). The Belgrade Stock Exchange regularly reported on the dinar exchange rate in Zurich (100 dinars in Swiss francs). Series YU3G_A and series YU3G_M present the data on an annual and a monthly basis, respectively. The sharp decline of the dinar from 1920 onwards was induced by the monetisation of budget

FIGURE 6 Dinar Exchange Rates at the Belgrade Stock Exchange, February 1919–December 1940



Source: Belgrade Stock Exchange (2004) and the Monograph of the National Bank 1884–1934 (1935).

[28] During the 1860s and the 1870s, the agio reached 6% and 5%, respectively.

deficits and the replacement of the former Austrian crowns. From October 1920 to January 1923, the exchange rate of the dinar fell from 20.41 to 3.69 Swiss francs per 100 dinars. At the same time, this was the lowest exchange rate of the dinar recorded in the Swiss money markets between the two world wars.

The gradual rise of the dinar started in 1923, when Yugoslavia finally managed to increase exports. The NBY stopped issuing banknotes for the account of the government; banknote issue for its own account was also limited. Within the framework of the foreign exchange rate policy determined by the Ministry of Finance, the bank was mandated to achieve exchange rate stability. In the next years, it intervened in the foreign exchange market in order to stabilise the value of the dinar: it sold foreign exchange bills whenever the demand for the dinar was high and bought foreign exchange especially during the export season when the supply was high. Ultimately, *de jure* stabilisation came in 1931; the legal parity of the dinar was defined at 26.5 milligrams of fine gold or at 0.0912778 Swiss francs. However, the gold-exchange standard lasted only 101 days. After abandoning gold, the country switched to floating rates and the dinar started to depreciate. During the Great Depression, it lost 28.5% of its value against the Swiss franc; its market value was slightly higher than its official value with a premium of 8%, on average.

2.4 GOVERNMENT FINANCES

Key fiscal data series for Serbia are presented in Table SE 4_A. All series are in dinars and refer to realised values. The data series for Yugoslavia are shown in Table YU 4_A. They are presented in more detail (by main category of budget revenues and expenditures) and also refer to realised values (in dinars).

2.4.1 Flows: revenue and expenditure

For **Serbia**, government revenue (series SE4A_A) and government expenditure (series SE4B_A) refer to central government and cover the period from 1880 to 1912. Government revenue and expenditure were recorded on a cash basis, meaning that they were recognised when collected or paid, respectively. The fiscal year started on 1 November and ended on 31 October of the next year. In order to align the fiscal year with the calendar year, the simple rule was used: 1879/1880 fiscal year is 1880 calendar year, 1880/1881 fiscal year is 1881 calendar year, and so on.

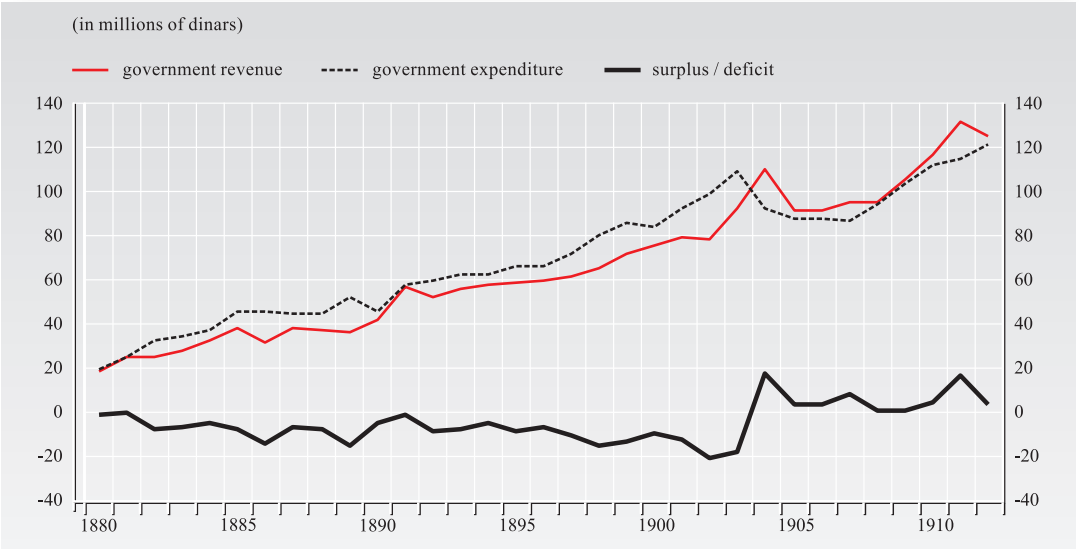
Revenues were shown by source or type, such as various taxes, fees and charges. Expenditures were shown by function and object. Also, at the time a distinction was made between ordinary and extraordinary budget items. However, this distinction was rather conventional, e.g. certain spending items called *'издаци ван буџета'* were outside the ordinary budget. In fact, 'extraordinary' items were far from exceptional or infrequent and were among the largest budget items. For this reason, extraordinary items are included in the series presented here.

Given their regularity, foreign public debt repayment, principal and interest (series SE4C_A), are included in ordinary expenditures. According to modern budget accounting, only interest payments should be included in ordinary expenditures. Our data sources do not allow a breakdown of debt service expenditures into their principal and interest components.

During the 1880s and the 1890s the budget was permanently in deficit, as seen in Figure 7. It was almost impossible to achieve a balance between insufficient revenues and ordinary and extraordinary expenditures. The 1884 tax reform failed to produce the expected results. Furthermore, rigid

budget structures limited the scope for adjusting expenditures. Foreign debt repayment and military expenditures accounted for two-thirds of government expenditures. The state monopolies on tobacco, railroad exploitation and salt were the most significant sources of government revenue and were pledged for securing foreign loans. They picked up in the early 1890s. In 1895, the government signed an agreement on debt conversion with representatives of the three creditor banks: the Ottoman Bank in Paris, the Berlin Trade Company and Lender bank from in Vienna. Debt conversion by lowering the interest rate and extending repayment ultimately facilitated debt service at annual level.

FIGURE 7 Government Revenue and Expenditure in Serbia, 1880–1912



Source: Gnjatović (2009).

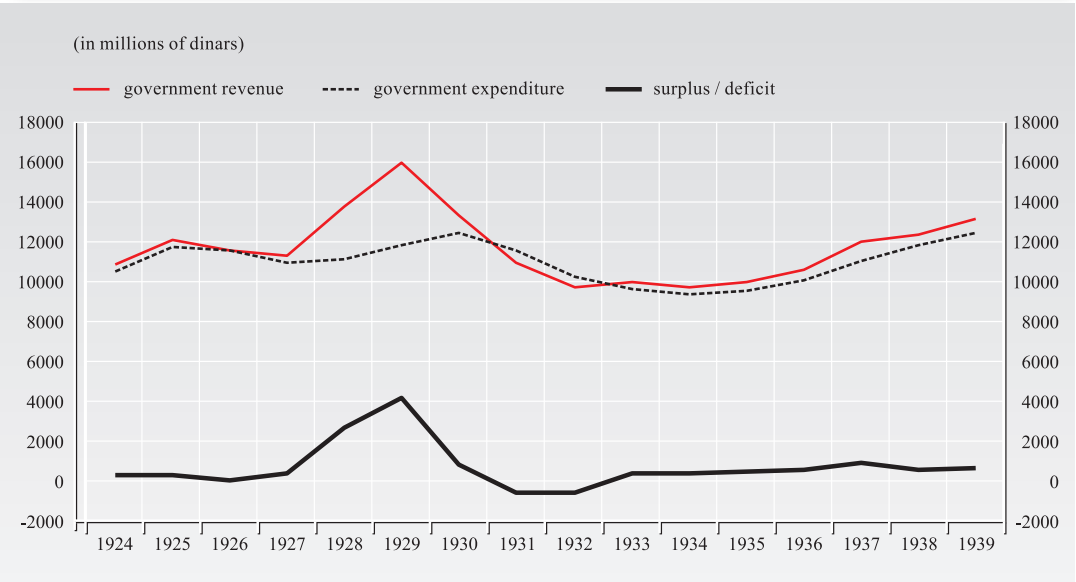
Even though government revenues were gradually improving, primarily due to more timely tax collection and to the state monopolies, they were not sufficient to cover high spending. The tax system, which was heavily dependent on personal taxation, was a key issue. In line with the European practice at the time, the tax reform in the mid 1880s introduced different types of taxation and strengthened the tax base. Since 1902, the strict supervision of all budget receipts and outlays implemented by the National Assembly, which used to discuss the state budget item by item, helped in fiscal consolidation. 1903 was the last year in a row which ended with a budget deficit for Serbia; from 1906 to 1910, it recorded a budget surplus. However, the sound fiscal position was soon disturbed by high military expenditures (Balkan Wars and World War I).

In interwar **Yugoslavia**, there were 20 different budget periods with respect to duration and the method of budgeting in line with certain economic and political circumstances. In the early postwar years, Yugoslavia's budgeting was largely of an extraordinary character: budget planning did not exist until 1923/1924 fiscal year. Therefore, our budget data begin with that fiscal year. They refer to central government and are recorded on a cash basis. Government revenue (series SE4A_A) and expenditure (series SE4B_A) start from 1924 and run through to 1939. Fiscal year started on 1 April, and ended on 31 March of the next year. In order to convert fiscal to calendar year, the simple rule was used: 1923/1924 fiscal year is 1924 calendar year, 1924/1925 fiscal year is 1925 calendar year and so on.

Additionally shown are the most important items of revenues: direct taxes (series YU4B_A), indirect taxes and excises (series YU4C_A) and state enterprises (series YU4D_A), as well as the most important items of expenditures: pensions (series YU4F_A) and public debt repayment (series YU4G_A). The last item includes repayments of principal and interest on both foreign and domestic loans. According to modern national accounting, only interest payments should be included in ordinary expenditures. Again, our data sources do not allow a breakdown of debt service expenditures into their principal and interest components.

The 1923/1924 fiscal year halted the growth of the budget deficit (see Figure 8). Expenditures were realistically projected, taking into account all state needs, whereas revenues were strengthened thanks to the tax policy and the introduction of a new temporary tax, i.e. the excise tax on land. Fiscal policy focused on maintaining an annually balanced budget. Between the 1923/1924 and the 1929/1930 fiscal years government expenditure grew relatively slowly. At the same time, revenue generated from all sources, both from direct and indirect taxes and from the state economy, grew similarly. The structure of government revenue did not change significantly. Revenues generated from direct and indirect taxes accounted for almost two-thirds of total government revenues, while revenues from the state enterprises constituted around one third. The new large government loans, both domestic and foreign, were not taken into account until 1931.

FIGURE 8 Government Revenue and Expenditure in Yugoslavia 1924–1939



Source: Federal Statistical Office (1989).

During the Great Depression, the government tried to achieve balanced budgets by cutting spending given the sharp drop in revenues. Once the crisis was overcome and revenue started growing again in 1933/34, the budget ended with a small deficit.

2.4.2 Stocks: public debt

Budget deficits compelled the **Serbian** government to seek additional sources of finance through borrowing at home and abroad, the former referring mainly to borrowing from the NBS. There-

fore, our public debt data comprises the series on the gross outstanding foreign public debt of central government (SE4D_A) and the government debt to the NBS (SE4E_A) as proxy for domestic public debt.

Public debt of **Yugoslavia** is also presented by the gross outstanding foreign public debt of the central government (series YU4H_A), but only for one year (1932), and by the government debt to the NBY (series YU4K_A) for the period 1920–1940. It should be noted that government borrowing from the bank (series YU4J_A) is not a proxy for the public domestic debt because an important part of it was sovereign bonds.[29] The government issued bonds to compensate individuals for war damages and finance the agrarian reform (i.e. to compensate the former landowners in Bosnia and Herzegovina, Dalmatia and southern and northern parts of the country in order to eliminate the last remnants of the feudal order). They were also placed on the domestic money market to finance the reconstruction of damaged infrastructure across the country and, after the Great Depression, the liquidation of peasant debts.

Foreign public debt

The data series on foreign public debt of **Serbia** represents the gross outstanding debt issued by the central government, denominated in dinars (i.e. French francs) over the period from 1867 to 1912 (series SE4D_A of Table SE4_A).[30] From 1878, when it was internationally recognised as an independent state, until WWI Serbia concluded 23 long-term foreign government bond loans. The high borrowing requirements of the Serbian government reflected the need to finance military spending and investment in infrastructure. Consequently, foreign debt service was a significant burden on the country's budget.

After World War I, **Yugoslavia** took over 10 old Serbian foreign loans in a total amount of 815.3 million dinars in gold (with an outstanding repayment amount of 45.9 million dinars in gold). It also took over the government loans of Montenegro (17.0 million dinars in gold), a part of the pre-war Austro-Hungarian government debt (43.6 million French francs and 110.3 million dinars in gold) and the government debt of the provinces which were parts of the Austro-Hungarian monarchy before the war (336.0 million Austrian crowns in gold). The post-war reconstruction of the country (railway network, roads and factories) was carried out thanks to both foreign and domestic borrowing. However, the Great Depression stopped abruptly capital inflows.

Detailed data on foreign public debt are only available for 1932. Gross outstanding foreign public debt amounted 32.8 billion dinars; 32.9% was denominated in French francs in gold, 22.1% in pound sterling, 22% in dollars, 16.5% in paper French francs, 6.4% in Reichsmark (6.4%) and only 0.1% in dinars. The foreign debt to national income ratio was 89.8%.

Domestic public debt

One of the main tasks of the NBS was to finance the steadily rising budget deficits through the discount of three-month state coupons and collateralised loans. The government repaid only the interest and not the principal. In 1886, two years after the NBS's inception, government debt rose to 2.9 million dinars, which represented a half of all banknotes issued (50.9%).

[29] For example, in 1932 the government debt to the NBY was 2.4 billion dinars and the debt from government bond issue was 6.0 billion.

[30] Only two foreign government bond loans were issued at par, namely the 1882 and the 1890 Salt Loans. See Gnjatović (2009).

In 1890, government debt to the NBS with respect to collateralised loans, coupons and the NBS's share in government loans abroad came close to 6 million dinars. Moreover, the bank also approved the so-called intermediate loans in a total amount of 1 million dinars against government guarantees (to individual ministries, state institutions, railways directorate, the monopoly on tobacco, salt, public institutions, etc.). The next year, direct and indirect government loans rose to 8 million dinars.

Up to 1898, the government borrowed from the bank pursuant to an agreement with the NBS's management. Thereafter, however, since borrowing from abroad was not possible, the government forced the NBS to lend to it 10 million dinars, in addition to all other already existing loans. Silver-backed banknotes issued in respect to this loan had metallic backing in the same proportion as provided for all other banknotes, but they were not included in the maximum allowed contingent of banknotes in circulation (25 million dinars). Government debt to the NBS was already significant, but in 1889 it doubled to 15.9 million dinars. In 1900, another loan of 2 million dinars was concluded on the same terms as applied to the loan of 10 million. The NBS's dissatisfaction with the situation is evident from the following quote: 'Once a high-handed approach has been adopted, it was difficult to reverse the trend. This legal solution too was enacted without requesting the opinion or consent of the bank's management… This and similar laws and legal solutions only further eroded the NBS's independence, leaving it to choose between a rock and a hard place: either to breach the laws, enacted without its consent and thereby expose itself to forced measures, … or to bend its head and apply the laws and decisions, and yet protest against them. In the general interest, the bank opted for the second option, giving way before force'.[31]

The relations between the NBS and the government remained strained until 1904. Lending to government became occasional and short-term in character, as can be seen from the data: in 1904, the outstanding government debt to the NBS was 7.5 million, in 1905 it was 3.4 million, while in the subsequent two years, 1906 and 1907, the government ran no debt with the central bank at all.[32]

However, the Customs War with the Austro-Hungarian Empire, and the 1908 Annexation Crisis in particular, brought about a financial crisis. The government was given the option of additional borrowing from the NBS, i.e. the right to use temporary, three-month advances based on extraordinary coupons worth up to 10 million dinars. However, it did not fully use this option until the outbreak of the Second Balkan War in 1913. A special type of lending to the government was also introduced, the so-called temporary exchange (*привремена размена*). Under this arrangement, the government could exchange gold in unlimited amounts with the NBS against an appropriate amount of silver-backed banknotes and vice versa, and exchange silver-backed banknotes against gold without any deductions whatsoever. The banknotes issued in respect of temporary exchange were not included in the contingent with a backing of 40%. This enabled the government to exchange gold against silver-backed banknotes without any losses on the agio. As it later proved, this type of exchange enabled, above all, simple financing of budget expenditure in extraordinary circumstances.

The progress achieved from 1909 to 1911 paved the way for the stabilisation of the state finances, not disrupted even by the First Balkan War of 1912. However, economic upswing came to a halt

[31] See the Monograph of the Privileged National Bank of the Kingdom of Serbia 1884–1909 (1909), p. 130.

[32] This is best illustrated by a detachment from the speech of the Minister of Finance, Lazar Paču, in the 1904 Assembly debate: '…the National Bank should not be a source of government revenue. It may become such a source only indirectly: by creating conditions for even development and providing viable credit arrangements, which will in return upgrade economic activity and trade, thus strengthening the primary sources of revenue to the state Treasury' (Monograph of the Privileged National Bank of the Kingdom of Serbia 1884–1934, 1935, p. 38).

in 1913 as a consequence of war distress and downturn in crop yields. Budget revenue declined, and the government stepped up its borrowing from the central bank. High budget expenditures during World War I were financed with NBS funds as well.

Lending money to the government was also one of the main functions of the central bank in inter-war **Yugoslavia**. Almost immediately upon its return to the country, the NBS financed the huge budget expenditures of the new state. In addition, due to the replacement of the former Austrian crowns by dinars, the government debt to the NBY swelled by 1.28 billion dinars. Further, the bank extended loans to the government under a 'temporary exchange clause', but in fact without 'exchange'. Printing money and inflation were the ultimate result.

Financing budget expenditures through inflation lasted until mid-1922, when the upper limit of extraordinary government debt to the NBY was reached. Namely, the Law on the NBY stipulated that government borrowing from the NBS could be based on bills of exchange worth up to 1 billion dinars and the maximum amount of extraordinary loans was set at 2 billion. In order to stabilise the dinar, the government and the NBS agreed on the liquidation of the government debt to the bank. Indeed, the government reduced its debt from 1922 to June 1931, when legal stabilisation of the dinar was in place, although not in the amounts agreed upon. According to the agreement, the government loan of 1 billion worth would be settled in full amount every year, but this never happened until June 1931. Contrary to the agreement, the extraordinary loans remained unchanged. Only the 'state debt without interest on crown notes' was reduced from 1.28 billion in 1921 to 897.8 million in June 1931.

2.5 PRICES, PRODUCTION AND LABOUR

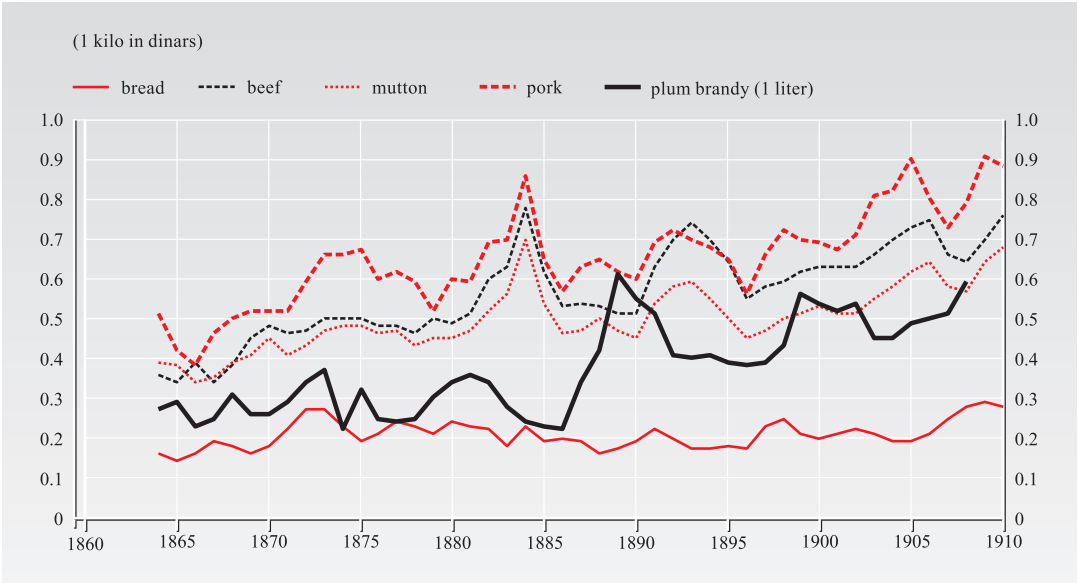
Prices indices were not compiled in Serbia before WWI. They are approximated by the prices of the main foodstuffs. For Yugoslavia, the wholesale price index and the import and export price indices are available from 1927 onwards. Industrial production is approximated by the production of selected industrial products (1888–1939) for both Serbia and Yugoslavia. Labour data series include series on employment and wages.

2.5.1 Prices

The collection of data on prices in **Serbia** started in 1862. The prices were presented in groš currency values (in the *State Statistics of Serbia*), but also in dinars (in *the Statistical Yearbooks of the Kingdom of Serbia*, published from 1893). The data series captures the changes in the prices of main agricultural items, livestock and foodstuffs, in major places of Serbia (see Figure 9). The guidelines for the collection of data on prices did not differ substantially from the common definitions and methods used today. The prices were collected by court servants and referred to for the average produce quality at the products' placement on the market. An analysis of the prevailing price trends, the price parity for certain major goods (e.g. wheat, flour and bread), and even comparisons with the price trends in the European countries were also reported.

The data collection process was continuous. As the territory of Serbia expanded, the number of towns where the prices were collected increased. Therefore, in the *1905 Statistical Yearbook of the Kingdom of Serbia*, product prices from 42 towns were published. Table SE5.1_A displays the average annual prices for the main agricultural items at the time. The time span is from 1864 to 1910; and from 1866 to 1910 for beans and plum brandy.

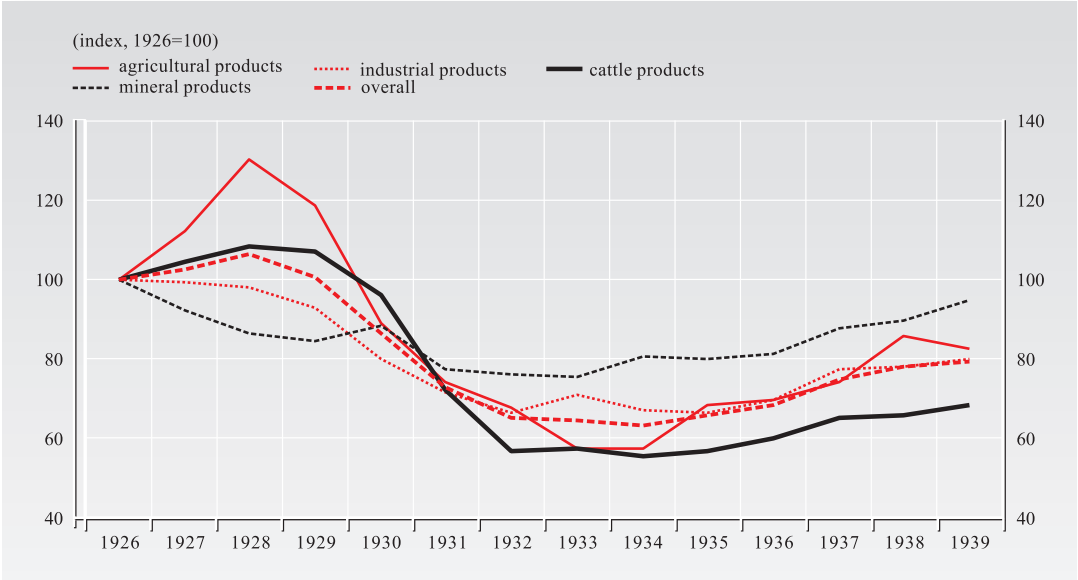
FIGURE 9 Prices of the Main Foodstuffs in Serbia, 1864–1910



Source: Two Centuries of Serbian Development (2008).

The wholesale price index (*индекс цена на велико*) was calculated for the first time in 1927 in Yugoslavia. Namely, the economic studies division of the NBY, founded in 1928, laid the methodological foundations for the calculation of price indices. The wholesale price index was based on the wholesale prices of 55 major products (both domestic and imported): 14 agricultural products, 12 cattle products, 6 mineral products and 23 industrial products. The prices were collected from

FIGURE 10 Indices of Wholesale Prices in Yugoslavia, 1926–1939



Source: Statistical Yearbook of the Kingdom of Yugoslavia.

the main domestic wholesale markets and included production costs, taxes, transport and wholesalers' earnings. The index was calculated by applying a unweighted geometric mean. Series YU5A_A to series YU5G_A of Table YU5.1_A display the general index of the wholesale prices as well as the sub-indices of agricultural, cattle, minerals and industrial prices from 1926 to 1939 with 1926 as base year. A special group of wholesale price indices shown in Table YU5.1_A are import (series YU5F_A) and export prices (series YU5G_A). They were calculated on the basis of a list of 20 items for each index. The data on the prices of 17 items that had more importance for external trade were compiled separately.

Before the Great Depression, inflation in Yugoslavia was quite moderate, following a trend similar to Western European countries. However, during the interwar crisis a sharp drop in the prices of almost all goods and services occurred. According to the official statistics, from 1928 to 1934, wholesale prices fell by 40.5%, as seen in Figure 10.

2.5.2 Production

Statistical data on total industrial production do not exist for the pre-WWII period.[33] Data series on the production of selected industrial products in both Serbia and Yugoslavia are only available.

The first official statistics in **Serbia** date from 1888 and relate to the production of two products, i.e. beer and flour. It was only in 1893 when the basket of goods became larger. Between the wars, data releases became more frequent, and mining and ore processing industries were presented in more detail. Table SE5.2_A show annual data from 1888 to 1939 on the production, in volume terms, of several selected products in Serbia: milled flour and other items (series SE5J_A), beer (series SE5K_A), cement (series SE5L_A), hard coal (series SE5M_A), brown coal (series SE5N_A) and lignite (series SE5O_A). However, there is much data missing for some years. Regarding **Yugoslavia**, Table YU5.2_A reports data series on the same mining products. They can also be used for the assessment of the overall industrial production since mining products were important inputs in the country's industry (about 90% of total mining production was domestically used).

As part of national accounts, gross national income of industry and mining is shown in Table YU6_A (series YU6B_A). The data suggest that interwar Yugoslavia went through three distinctive periods: the 1920s, the Great Depression and the 1930s, with annual growth rates of 5.7%, –8.4% and 8.0%, respectively.[34]

2.5.3 Labour and wages

Employment

Labour force statistics were established only after WWI. For the period before the war, an insight into employment in **Serbia** is only possible through the censuses of population after 'occupation' was introduced in questionnaires and thus it was possible to extract 'active population' out of 'total'. The 1866 census may be regarded as the 'first modern' and complete census conducted in the country. Before then, the data collected were less reliable. Series SE5T_A in Table SE5.3_A presents

[33] The only data source available for this period is some descriptive statistics presented by Kukoleča. (1941).
[34] Stajić (1959), pp. 60–61.

the estimated data on economically active population in 1866, 1893, 1895, 1896 and 1900. The estimation was performed by the Statistical Office of the Republic of Serbia.[35] The largest part (85%–90%) of the active population earned income from agriculture and about 6% from industry and crafts. Up to the 1900 census, the growth of employment was evident for the active population of all occupation groups, except in 1895 when employment decreased due to the changed age structure of population relative to other periods; a difference was resulted from the smaller enumeration figures for the population aged 15 to 65. Although the 1905 and 1910 censuses were implemented, the data figures were not found.

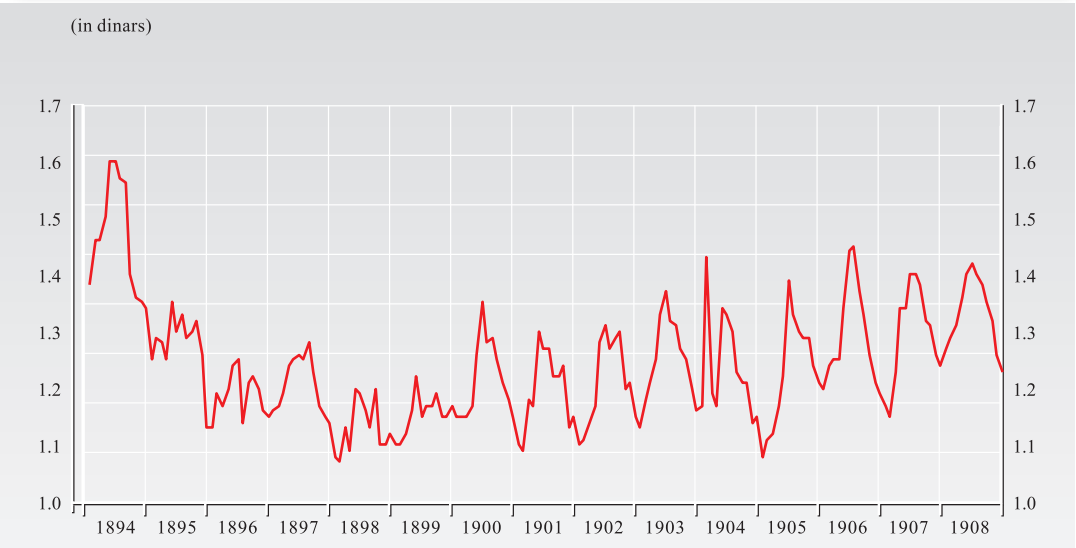
After WWI, the statistics on employment were based on the records of social insurance. Series YU5L_A in Table YU5.3_A shows employment in **Yugoslavia** from 1920 to 1940. However, it is unknown whether the data refer to the end of the year or the year average. In any event, these data on employment must be interpreted with caution because they were only announced by employment agencies and did not capture some jobs which were found without the mediation of such an agency. Nor did they encompass employees in the private agricultural sector, transport and other services.

As official figures show, the number of employed persons declined from 824,000 in 1929 to 775,000 in 1934. From then until the beginning of World War II, the number of persons employed gradually increased, surpassing one million in 1940. This was mainly due to the extensive public works which the government initiated in 1935 in an attempt to boost employment.

Wages

In Serbia, the data on wages began to be collected simultaneously with the data on prices. They referred to certain money amounts received by the workers. Court servants were in charge of col-

FIGURE 11 Average Daily Wage in Serbia, January 1894–December 1908



Source: Statistical Yearbook of the Kingdom of Serbia (1913) and Two Centuries of Serbian Development (2008).

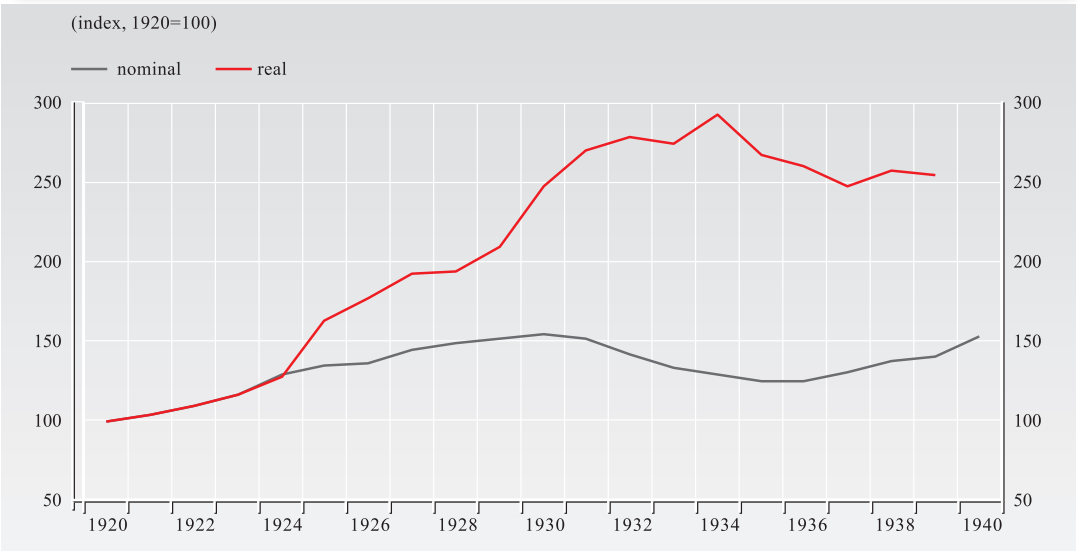
[35] See Two Centuries of Serbian Development (2008).

lecting daily wages on four types of day labourers: diggers, reapers, masons and general manual labourers. The data were published in the *State Statistics of Serbia*, for individual towns and for the whole country. Based on this data input, annual average data were calculated and published first in the *State Statistics of Serbia* and later in the *Statistical Yearbooks*.

Table SE5.3_A displays the time series for diggers (series SE5P_A), reapers (series SE5Q_A), masons (series SE5R_A) and manual labourers (series SE5S_A). All series cover the period from 1863 to 1910. The data on average daily wages payable to diggers for the period 1863–1879 were recalculated from groš into dinars. Average total daily wages are reported for a shorter period that is from 1894 to 1908, and at monthly frequency (see Table SE5_M; series SE5T_M; Figure 11).

From 1920 to 1940 social insurance offices produced the statistics on wages. They provided data on the average wage of employees, by activity and gender, and covered the entire territory of the country (see Table YU5.3_A).

FIGURE I2 Nominal and Real Wages in Yugoslavia, 1920–1940



Source: Federal Statistical Office (1989).

To draw attention to the interwar deflation effect on wages, a real wages index was obtained as the ratio of the nominal wages index and the implicit prices index (see Table YU5.3_A; series YU5P_A) since a consumer price index is not available for the period prior to 1940.[36] The implicit prices index was derived from the data input on national income for the period 1923–1939. As seen in Figure 12, prices fell more rapidly than nominal wages over the crisis years 1930–1934.

2.6 NATIONAL ACCOUNTS AND POPULATION

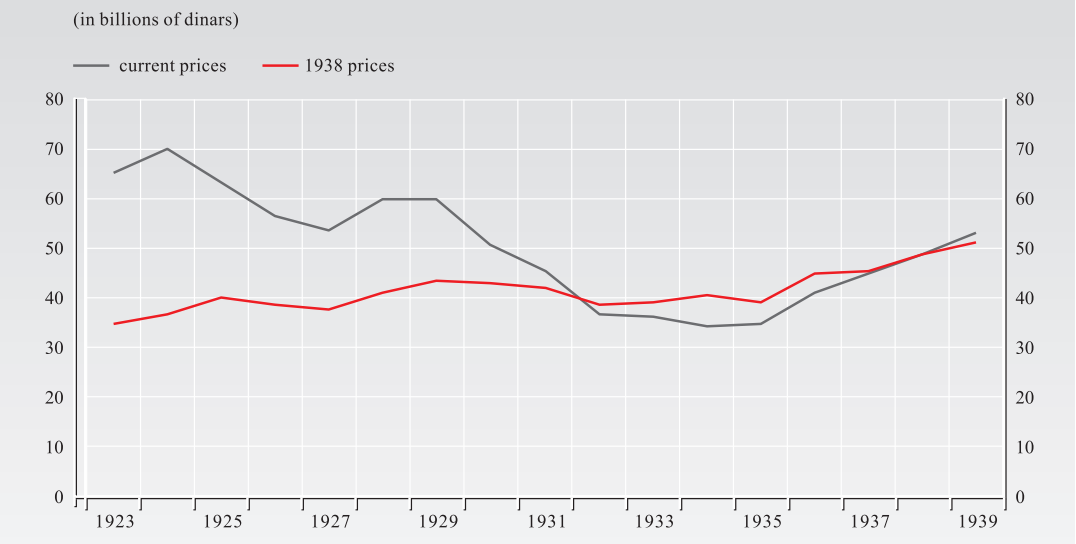
This group contains data on the gross national income (only for Yugoslavia), foreign trade and population.

[36] Two Centuries of Serbian Development–Statistical Review (2008), p. 85.

2.6.1 Gross national income

In pre-WWI **Serbia**, calculations of gross domestic product and national income were not conducted. Thus, due to lack of data, reliable estimations do not exist. Calculations of gross national income for **Yugoslavia** were first carried out by Stevan Stajić after WWI.[37] Based on the material product concept, he defined national income as the sum of the income accrued by the following sectors: industry and mining, agriculture, forestry, construction, transportation, trade and crafts. He computed national income at current and constant 1938 prices for the period 1923–1939 (see Table YU6_A; series YU6A_A and series YU6D_A).

FIGURE 13 National Income of Yugoslavia, 1923–1939



Source: Stajic (1959).

Table YU6_A also contains the most important components of Stajic's statistics: income from industry and mining at current (series YU6B_A) and constant (series YU6E_A) prices and income from agriculture (without forestry) at current (series YU6C_A) and constant (series YU6F_A) prices for the period from 1923 to 1939. Agriculture formed the largest sector of the domestic economy until 1939. The agricultural production share in national income did decline over time, albeit slightly, and in no case this decline may signal significant structural changes at the time.[38] As seen in Figure 13, nominal income dropped strongly during the Great Depression, from 70 billion dinars in 1924 to just 34 billion in 1934. However, real income even increased, chiefly due to the sharp drop in prices.

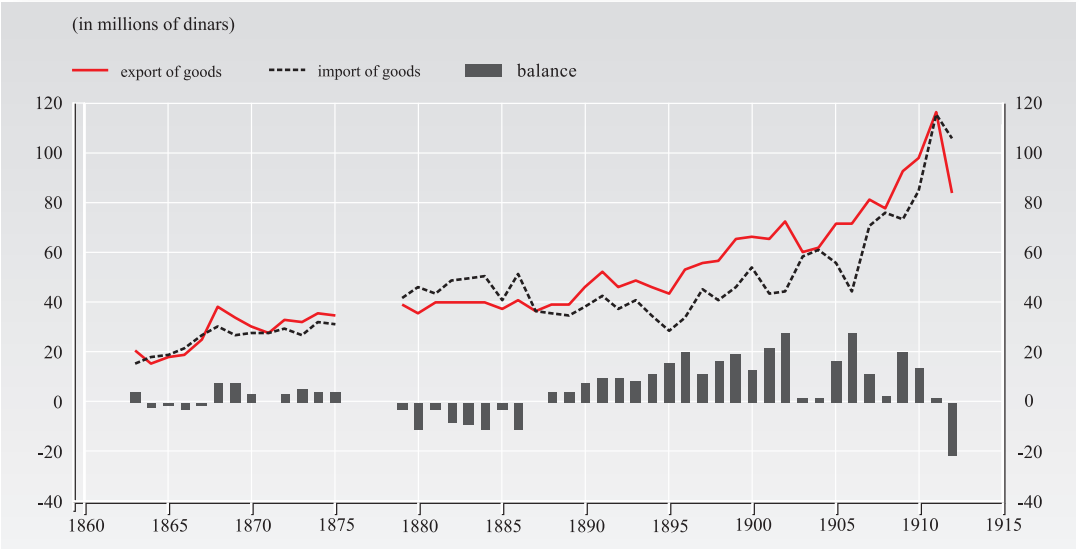
2.6.2 Foreign trade

The statistics on the **Serbian** foreign trade were first published in 1844 and related to 1842/1843. Afterwards, the data were only compiled, but not published. The regular publication of foreign trade statistics started in 1863 in the first release of the *State Statistics of Serbia*. Table SE6_A reports annual data on foreign trade of goods for the period 1863–1912; services are not included

[37] See Stajić (1959).
[38] See Lampe and Jackson (1982), pp. 325–326.

(see Figure 14). The trade statistics registered all goods that crossed the borders and passed through customs: exports (*извоз*) (series SE6A_A), imports (*увоз*) (series SE6B_A) and transit (*провоз*) (series SE6C_A). Customs declarations served as the basis for the statistics compilation. The goods were classified according to the general customs tariff. The volume was recorded gross or net depending on what was used for the payment of customs duty. The value of traded goods was recorded in f.o.b. terms, i.e. as the market value of goods at the customs frontier of Serbia. It included the transaction value of the goods and the value of services performed to deliver the goods to the customs frontier of Serbia. Goods imports were recorded by country of origin (*земља порекла*) and exports by country of last known destination (*земља опредељења*).

FIGURE 14 Serbian Foreign Trade, 1863–1912



Source: Statistical Yearbook of the Kingdom of Serbia (various issues) and Two Centuries of Serbian Development (2008).

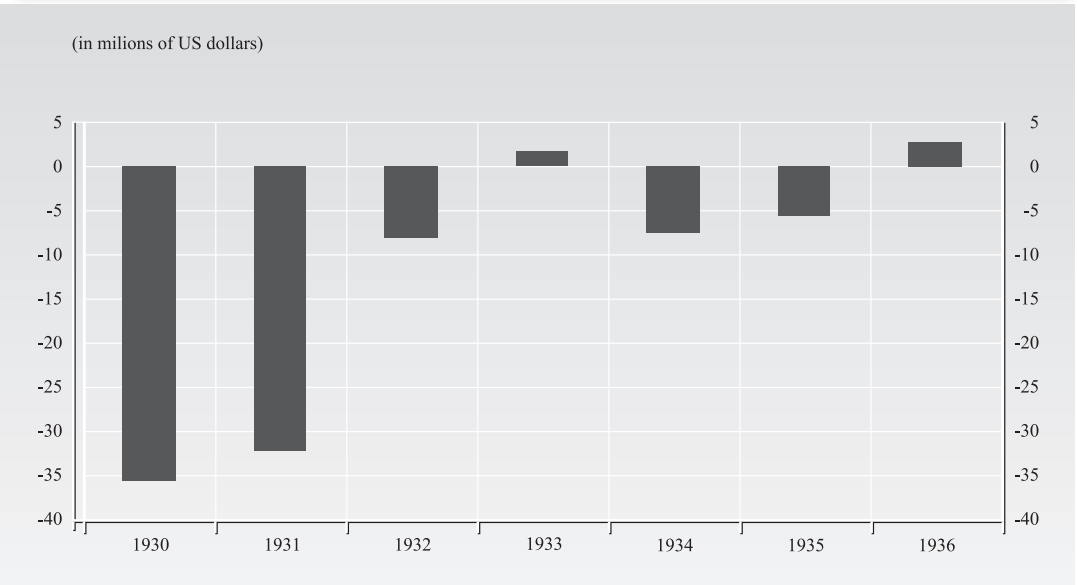
Austria-Hungary, Romania and Turkey were the three neighbouring countries of Serbia. Austria-Hungary was the largest importer of Serbian goods and the intermediary in exporting Serbian goods to other Central and Western European countries. For the years 1876, 1877 and 1878 foreign trade data are not available since statistics on foreign trade were not kept during the war for independence (1876–78). After the war, Serbia started intensive trade with Bosnia and Bulgaria. From 1884 onwards, it also started trade with the US, the UK, Belgium, Italy, Germany, France and Switzerland. Austria-Hungary remained the main trading partner for as long as until 1906, when it declared 'the customs war' that remained in force until 1911. As far as the structure of commodities is concerned, Serbia mostly exported raw materials (especially livestock) and imported processed goods. Data for Serbia are not available after WWI.

For **Yugoslavia**, trade data are shown in Table YU6_A. Customs declarations were the primary data source for compiling export and import data series at the Statistical Office of the Ministry of Finance. Series YU6G_A and series YU6H_A list the annual value of exports (f.o.b.) and imports (c.i.f.) of goods in dinars. Data on exports refer to all exported products, including those that were first imported as intermediate products and then exported as final products of Yugoslav origin. Export prices were controlled according to the official price list that was published twice a month. Data on imports included all imported goods on which a tariff was imposed and paid.

Recorded values denominated in foreign currency were converted in dinars using the current market exchange rate in effect at the transaction date, while clearing (bilateral) trade values were converted using the official exchange rate with the addition of a premium. During the interwar crisis, Yugoslavia signed bilateral clearing agreements with Austria, Czechoslovakia, Belgium, Luxembourg, Italy, France, Switzerland and Germany. International trade was facilitated by these clearing agreements. In 1929, the total value of exported goods amounted to 7.9 billion dinars, with the total value of imported goods reaching 7.6 billion, implying a trade surplus of 327 million. During the following three years, the value of trade sharply decreased; after 1932, it started to rise again. However, it did not reach its previous highest level until 1939.

Between 1930 and 1932, the current account balance in Yugoslavia was in deficit despite a surplus in foreign trade balance. The ratio of the current account deficit in the national income was relatively high, reaching 4%, while in the next six years it was positive and remained at about 1% (Figure 15).

FIGURE 15 Current Account Balance of Yugoslavia, 1930–1936



Source: Federal Statistical Office (1989).

2.6.3 Population

The first population census in **Serbia** was carried out in 1834 and encompassed the overall population (678,192 inhabitants). Since then, 15 population censuses were conducted in different time intervals up to WWI. The reliability of the results of the 1841, 1843, 1850 and 1863 censuses, which were conducted for the purpose of identifying/recording taxpayers according to the new fiscal law, is called in question. The 1866 census can be considered the first census that was properly done and delivered true data (see Table SE6_A).

The war with Turkey in 1877 and 1878 and the post-war political situation prevented the planned 1880 census from being conducted. The following population census took place only at the end of 1884. In the meantime, the political independence of the enlarged territory of Serbia was recog-

nised at the Berlin Congress of 1878. A partial census was conducted in 1879 in the so-called new regions alone.

The recommendations of the stipulated that census should have been conducted via questionnaires for every household. The 1890 census used household-level questionnaires, in line with the recommendations of the International Statistical Congress held in St. Petersburg in 1872, and represents an important break in the development of the country's population statistics: population would henceforth be counted every five years, on 31 December of the census year.

The data on population were published in the volumes of the *State Statistics of Serbia* and the *Statistical Yearbooks of the Kingdom of Serbia*. Occasionally revised and corrected by the statistical department, there were discrepancies between the data published in subsequent publications and those published first, for which none explanation was provided.

Data on total population of **Yugoslavia** are based on the two population censuses between wars (1921 and 1931). They were carried out according to the concept of 'present population'.[39] The 1921 census was partially processed because the part of the Dalmatia region was still under Italian occupation at that time. Population in Dalmatia was calculated by using the results of the 1910 Austro-Hungarian census. The 1931 census which was the last for that period is more realistic. The General State Statistics computed the yearly data entries on 31 December using a geometric progression scheme (series YU6G_A). The data which were reported in the *Statistical Yearbook of the Kingdom of Yugoslavia for the year 1940* (book 10) differ from the previously published one due to the correction made to the rate of the natural population growth for the period after 1931.

3 DATA SOURCES

SERBIA

The NBS's *Balance Sheets* and its *Annual Reports* are the main primary sources of data on monetary variables. In the annual and semi-annual *Balance Sheets*, the data refer to outstanding stocks as at end-December and end-June respectively. The *Annual Reports*, produced by the Shareholders' Committee (in Serbian only), contain observations on a weekly, monthly and yearly basis (as at the last day of the period). The maximum and the minimum values as well as the monthly and yearly averages are sometimes reported. The contents of *Annual Reports* are more or less standardised and encompass notes to the accounts, reports of the Governing and Supervisory Councils and Shareholders' Committee meeting minutes. The *Annual Reports* referring to the wartime years from 1914 to 1919 and January 1920 were adopted by the Shareholders' Committee and published in 1920. All *Annual reports* (in Serbian only) for the period 1884–1920 are digitised and available on the NBS website (http://www.nbs.rs/internet/cirilica/10/10_2/10_2_2/pretraga/index.html). Additional useful source on monetary data are the two monographs of the NBS published in 1909 and 1935.

The dates of change in the NBS's discount rate and the Lombard rate (general rates and rates for banks) are taken from the monograph of the NBS published in 1935. The monthly data have been calculated as the average of the daily values, and the yearly data as the average of the monthly

[39] Census counts, like estimates, refer to *de facto* (physically present) population, not to the *de jure* (usual resident) population.

values. The data on the market interest rates are from the *Statistical Yearbook of the Kingdom of Serbia* (various issues).

The data figures on the dinar nominal exchange rates in Belgrade, both at annual and monthly frequency, are taken from the *Statistical Yearbook of the Kingdom of Serbia*, book 12, 1907 and 1908 (in Serbian and French), for the period from 1899 to 1908. However, for the period before 1899 and after 1908, the only available data source is the Serbian Newspapers (*Српске новине*). The daily data published in it were the basis for the calculation of the average exchange rates for those years that are missing in the *Statistical Yearbooks*. The *Serbian Newspapers* from the period 1834–1919 are also digitised and available on the NBS website (in Serbian only) (http://www.nbs.rs/internet/cirilica/10/10_2/10_2_2/pretraga/index.html).

The data on government finances (government revenue and expenditure, stock and repayment of foreign public debt) are from Gnjatovic (2009), where they are derived and summarised based on the primary data sources, i.e. the *Statistical Yearbook of the Kingdom of Serbia* (various issues), the *Final Accounts of the State Revenue and Expenditure of the Kingdom of Serbia* (various issues) (*Завршни рачуни државних прихода и расхода Краљевине Србије*), Collection of Laws, *Contracts and Agreements on Loans Disbursed by the Kingdom of Serbia (1899*) and *Collection of Laws*, *Contracts and Agreements on Consolidated Debt of the Kingdom of Serbs, Croats and Slovenes* (1924). The data on the government debt to the central bank are taken from the NBS's *Annual Reports*.

Price data for the major foodstuffs are available from the primary sources: the *State Statistics of Serbia (Државопис Србије*) and the *Statistical Yearbooks of the Kingdom of Serbia* from 1893 onwards. The data on prices from these sources are summarised and presented in *Two Centuries of Serbian Development* (2008). The data series on the production of selected industrial products are from the *Two Centuries of Serbian Development* (2008) and Sundhaussen (1989). The data on labour force (total active population and average daily wages for selected occupations) are also from the *Two Centuries of Serbian Development* (2008). The primary sources of the data on total active population are the *State Statistics of Serbia*, the *Statistical Yearbook of the Kingdom of Serbia* (various issues) and the *Censuses of Population of the Kingdom of Serbia*. The primary data source for the average daily wages for selected occupations is the *Statistics of Prices of Agricultural and Other Produce in the Kingdom of Serbia* and the *Statistical Yearbook of the Kingdom of Serbia*. The average daily wages on monthly basis are taken from the *Statistical Yearbook of the Kingdom of Serbia* (various issues).

The data series on the value of the imports, exports and transit in nominal terms are taken from the *Statistical Yearbook of the Kingdom of Serbia* (various issues) and the *Two Centuries of Serbian Development* (2008), whose data are based on the *External Trade Statistics of the Kingdom of Serbia* (various issues). Data on population are from the *Two Centuries of Serbian Development* (2008) and Sundhaussen (1989). Various primary sources have been used: the *State Statistics of Serbia*, the *Censuses of Population of the Kingdom of Serbia*, the *Statistical Yearbook of the Kingdom of Serbia*, and the *General Demographic Data on the Kingdom of Serbia* (1928).

YUGOSLAVIA

As in the case of the NBS, the NBY's *Balance Sheets and its Annual Reports* are the main primary sources for the data on monetary variables. In the annual and the semi-annual *Balance Sheets*, the data refer to the end-June and the end-December outstanding stocks. The *Annual Reports*, pro-

duced by the Shareholders' Committee (in Serbian), contain observations on a weekly, monthly and yearly basis (as at the last day of the period).

All *Annual Reports* from the period 1820–1940 are digitised and are available on the NBS website (http://www.nbs.rs/internet/cirilica/10/10_2/10_2_2/pretraga/index.html). An additional useful source of monetary data is the *Monograph of the National Bank 1884–1934* (1935).

The dates of change in the NBY's discount rate and the Lombard rate are taken from the *Monograph* (1935) and from the *NBY's Annual Reports*. The monthly data are calculated as the average of the daily values and the yearly data as the average of the monthly values. The data on the market interest rates (lending and deposit rates) are retrieved from the NBY's *Annual Reports* and its *Monograph* (1935). The data on the market prices of the government bonds traded on the Belgrade Stock Exchange are taken from the Belgrade Stock Exchange (2004) that contains copies of preserved *Annual Reports of the Belgrade Stock Exchange* dating back to 1904. The current yields on government bonds are calculated using the reported market prices and additional information on bonds provided in the *Monograph of the Ministry of Finance of the Kingdom of Yugoslavia 1918–1939* (1939).

The data on the dinar nominal exchange rates in Belgrade and Zurich, both at annual and monthly frequency, are taken from the *Belgrade Stock Exchange* (2004) and the *Monograph of the National Bank 1884–1934* (1935).

The data on government finances (government revenue and expenditure as well as their main components) are from the *Federal Statistical Office* (1989) which used data from the *Statistical Yearbooks of the Kingdom of Yugoslavia* (in Serbian and French) and the *Final Accounts of the State Revenue and Expenditure of the Kingdom of Yugoslavia*. The data on the ggovernment debt to the central bank are taken from the NBY's *Annual Reports*. The data on the foreign public debt are from the *Statistical Yearbook of the Kingdom of Yugoslavia*.

The data on the wholesale price indices, both at annual and monthly frequency, are collected from the *Statistical Yearbook of the Kingdom of Yugoslavia* (various issues). Apart from the general index of wholesale prices, there were also published sub-indices of the wholesale prices for selected products, as well as export and import prices. The data on industrial production of selected industrial products are taken from the *Two Centuries of Serbian Development* (2008) which used data from the *Statistics of Mining and Ore Processing of the Kingdom of Yugoslavia* (various issues) edited by the Ministry of Forests and Mines. The data on employment are from the *Federal Statistical Office* (1989) and are based on the records of social insurance. The data on nominal and real wages and the cost-of-living index are also taken from the *Federal Statistical Office* (1989).

The data series on the national income at current and constant 1938 prices for the period 1923–1939 are from Stajić (1959). The data on the external trade are from the *Statistical Yearbook of the Kingdom of Yugoslavia* (various issues) and Sundhaussen (1989). The data on population are from the *Statistical Yearbook of the Kingdom of Yugoslavia for 1940*, book 10.

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

Serbia

Table SE1.1_A Total reserves, 1884–1920

(in thousands of dinars, end-of-period)

Year	Total statutory reserves SE1A_A	Metallic holdings SE1B_A	Gold holdings SE1C_A	Silver holdings SE1D_A	Foreign exchange (foreign correspondents) SE1E_A
1884	1231.7	875.4	874.5	0.8	356.3
1885	1554.9	1246.9	1208.5	38.4	308.0
1886	3038.0	2673.2	1224.4	1448.8	364.8
1887	4903.2	4598.8	1817.5	2781.3	304.4
1888	7952.8	7443.8	3409.7	4034.1	509.0
1889	11014.6	10230.6	5802.7	4427.9	784.0
1890	12722.3	12365.9	7917.3	4448.6	356.4
1891	13098.1	12882.4	8690.5	4191.9	215.7
1892	13460.2	13303.3	9188.3	4115.0	156.9
1893	13494.2	13030.1	9024.2	4005.8	464.1
1894	11373.2	10732.5	6441.6	4290.9	640.7
1895	11880.0	10907.6	6235.1	4672.5	972.4
1896	12804.4	12065.8	7160.3	4905.6	738.6
1897	14234.3	13318.4	5978.4	7340.0	915.9
1898	14758.5	13907.7	4677.7	9230.0	850.7
1899	17681.7	16156.4	7171.8	8984.6	1525.3
1900	16646.5	15774.9	6807.9	8967.0	871.5
1901	17126.3	15590.6	6623.3	8967.2	1535.7
1902	21471.3	19771.6	10973.0	8798.7	1699.6
1903	26312.0	24520.0	15850.2	8669.8	1792.0
1904	23646.8	18411.9	11632.3	6779.6	5234.9
1905	25964.7	21084.9	12413.9	8670.9	4879.8
1906	22360.3	19347.6	11100.2	8247.4	3012.7
1907	24915.1	21532.5	14097.5	7435.0	3382.6
1908	29484.0	24984.5	18065.3	6919.2	4499.5
1909	29245.2	20013.3	13375.4	6637.9	9231.9
1910	36959.1	31120.1	24388.4	6731.8	5839.0
1911	50777.6	40181.7	33659.9	6521.9	10595.9
1912	80061.6	53971.8	50435.6	3536.2	26089.8
1913	65751.1	62114.4	57842.5	4271.9	3636.8
1914	193401.5	59371.1	57170.3	2200.8	134030.4
1915	261144.7	67133.5	64148.5	2985.1	194011.2
1916	280466.7	73754.3	63837.1	9917.2	206712.4
1917	287979.9	79322.6	63781.1	15541.5	208657.3
1918	297293.9	79320.0	63760.0	15560.0	217973.9
1919	434478.6	78919.7	63383.9	15535.8	355558.9
1920 (*)	442520.7	78868.1	63332.3	15535.8	363652.6

Note: (*) The data figures for the year 1920 refer to 31 January.

Table SE1.2_A Monetary base (excluding coins), 1884–1920

(in thousands of dinars, end-of-period; cover ratio in per cent, legal minimum rate 40%)

Year	Monetary base (excluding coins) SE1F_A	Banknotes in circulation SE1G_A	Gold-backed banknotes SE1H_A	Silver-backed banknotes SE1I_A	Giro accounts with central bank SE1J_A	Other central bank liabilities at sight SE1K_A	Effective cover ratio of total banknotes in circulation, in % SE1L_A
1884	817.0	781.8	781.8	..	35.2	..	157.5
1885	3709.3	3500.0	1568.7	1931.3	209.3	..	44.4
1886	5782.6	5738.9	437.6	5301.3	43.7	..	52.9
1887	10041.2	10037.8	182.2	9855.6	3.4	..	48.8
1888	14107.9	14078.4	141.4	13937.0	29.5	..	56.5
1889	17427.9	17335.5	102.0	17233.5	92.4	..	63.5
1890	23635.2	23475.4	82.3	23393.1	159.8	..	54.2
1891	28067.0	27271.5	122.6	27148.9	795.5	..	48.0
1892	30902.9	28874.5	160.5	28714.0	2028.4	..	46.6
1893	28469.2	26766.4	195.6	26570.9	1702.8	..	50.4
1894	26825.0	25063.6	548.0	24515.6	1761.4	..	45.4
1895	25451.2	24589.9	422.0	24168.0	861.2	..	48.3
1896	25808.0	24461.2	659.2	23802.0	1346.8	..	52.3
1897	25414.1	23660.7	794.8	22865.9	1753.4	..	60.2
1898	34167.3	33144.6	364.2	32780.4	1022.7	..	44.5
1899	36321.7	34007.1	839.9	33167.2	2314.5	..	52.0
1900	36909.8	35878.6	849.2	35029.5	1031.2	..	46.4
1901	35910.8	35058.7	1117.0	33941.7	852.1	..	48.9
1902	40400.7	36813.5	2123.8	34689.7	3587.3	..	58.3
1903	45432.1	38851.2	3685.0	35166.2	6580.9	..	67.7
1904	39493.3	38017.2	3142.2	34875.0	1476.1	..	62.2
1905	39456.5	37085.2	3104.1	33981.2	2371.3	..	70.0
1906	32791.3	30230.8	2278.7	27952.1	2560.5	..	74.0
1907	40012.1	37363.6	7556.6	29807.1	2648.5	..	66.7
1908	55374.4	50411.9	3373.8	47038.0	1584.6	3377.9	58.5
1909	58113.8	49848.1	3464.5	46383.6	8265.7	0.0	58.7
1910	54295.8	49654.6	7037.3	42617.4	1421.2	3220.0	74.4
1911	76050.6	65823.2	13981.3	51841.9	3587.4	6640.0	77.1
1912	150845.0	93625.3	5336.4	88288.9	11179.7	46040.0	85.5
1913	139404.4	103438.6	4285.3	99153.3	1315.9	34649.9	63.6
1914	387988.6	167261.1	3665.1	163596.0	2932.7	217794.8	115.6
1915	533332.3	297751.4	3415.6	294335.7	7983.5	227597.4	87.7
1916	519438.9	298992.7	3335.9	295656.8	10545.8	209900.4	93.8
1917	562280.2	294892.7	3164.0	291728.7	11149.1	256238.4	97.7
1918	599506.1	340569.3	3094.8	337474.5	6353.7	252583.1	87.3
1919	1067231.9	664007.5	4239.6	659767.8	15413.8	387810.7	65.4
1920 (*)	1120974.7	711448.4	4331.3	707117.2	20600.4	388925.9	62.2

Note: (*) The data figures for the year 1920 refer to 31 January.

Table SE2.1_D Central bank interest rates, 1884–1920

(in per cent, date-of-change)

Year	Month	Day	Discount rate (silver) SE2A_D	Discount rate (gold) SE2B_D	Lombard rate (silver) SE2C_D	Lombard rate (gold) SE2D_D	Discount rate for banks (silver) SE2E_D	Discount rate for banks (gold) SE2F_D	Lombard rate for banks (silver) SE2G_D	Lombard rate for banks (gold) SE2H_D
1884	July	2	5.5	5.5	6.5	6.5	5.5	5.5	6.5	6.5
1884	Oct.	16	7.0	7.0	8.0	8.0	7.0	7.0	8.0	8.0
1885	Jan.	2	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
1885	Feb.	12	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
1885	Apr.	18	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
1885	Aug.	19	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
1885	Sep.	7	8.0	8.0	8.5	8.5	8.0	8.0	8.5	8.5
1886	Jan.	1	8.0	8.0	8.0	8.0	7.5	7.5	8.0	8.0
1886	Feb.	24	6.5	8.0	6.5	8.0	6.0	7.5	6.5	8.0
1886	Nov.	1	6.5	8.0	6.5	8.0	5.5	7.0	6.5	8.0
1888	Apr.	1	6.0	8.0	6.0	8.0	5.0	7.0	6.0	8.0
1889	Jan.	1	6.0	8.0	6.5	8.5	5.0	7.0	6.5	8.5
1889	Nov.	20	6.0	8.0	6.0	8.0	5.0	7.0	6.0	8.0
1891	Mar.	6	5.5	7.5	5.5	7.5	4.5	6.5	5.5	7.5
1892	Mar.	9	5.5	7.5	5.5	7.5	4.5	7.5	5.5	7.5
1892	Mar.	18	5.5	8.5	5.5	8.5	4.5	8.5	5.5	8.5
1892	Aug.	31	6.5	8.5	6.5	8.5	5.5	8.5	6.5	8.5
1893	Jan.	11	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5
1905	Mar.	2	6.0	6.0	6.0	6.0	5.0	5.0	6.0	6.0
1908	Sep.	24	6.0	8.0	6.0	8.0	5.0	8.0	6.0	8.0
1910	June	24	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0
1911	Aug.	5	6.0	6.0	6.0	6.0	5.0	5.0	6.0	6.0
1912	June	27	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0

Table SE2.1_A Central bank interest rates, 1884–1920

(in per cent, period averages)

Year	Discount rate (silver) SE2A_A	Discount rate (gold) SE2B_A	Lombard rate (silver) SE2C_A	Lombard rate (gold) SE2D_A	Discount rate for banks (silver) SE2E_A	Discount rate for banks (gold) SE2F_A	Lombard rate for banks (silver) SE2G_A	Lombard rate for banks (gold) SE2H_A	Market interest rate (*) SE2I_A
1884	6.1	6.1	7.1	7.1	6.1	6.1	7.1	7.1	.
1885	6.5	6.5	6.6	6.6	6.5	6.5	6.6	6.6	.
1886	6.7	8.0	6.7	8.0	6.1	7.4	6.7	8.0	.
1887	6.5	8.0	6.5	8.0	5.5	7.0	6.5	8.0	.
1888	6.1	8.0	6.1	8.0	5.1	7.0	6.1	8.0	.
1889	6.0	8.0	6.4	8.4	5.0	7.0	6.4	6.2	.
1890	6.0	8.0	6.0	8.0	5.0	7.0	6.0	8.0	.
1891	5.6	7.6	5.6	7.6	4.6	6.7	5.6	7.6	.
1892	5.8	8.3	5.8	8.3	4.8	8.1	5.8	8.3	.
1893	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	.
1894	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	4–12
1895	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	5–12
1896	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	5–12
1897	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	4–12
1898	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	4–12
1899	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	4–12
1900	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	3–12
1901	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	.
1902	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	4–12
1903	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	.
1904	6.0	7.5	6.0	7.5	5.0	7.5	6.0	7.5	6–12
1905	6.0	6.3	6.0	6.3	5.0	5.4	6.0	6.3	6–12
1906	6.0	6.0	6.0	6.0	5.0	5.0	6.0	6.0	.
1907	6.0	6.0	6.0	6.0	5.0	5.0	6.0	6.0	7.5–12
1908	6.0	6.5	6.0	6.5	5.0	5.8	6.0	6.5	7.5–13
1909	6.0	8.0	6.0	8.0	5.0	8.0	6.0	8.0	.
1910	6.0	7.5	6.0	7.5	5.0	7.0	6.0	7.5	.
1911	6.0	6.6	6.0	6.6	5.0	5.6	6.0	6.6	.
1912	6.0	6.5	6.0	6.5	5.0	5.5	6.0	6.5	.
1913	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1914	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1915	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1916	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1917	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1918	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1919	6.0	7.0	6.0	7.0	5.0	6.0	6.0	7.0	.
1920	6.0	..	6.0	..	5.0	..	6.0	..	.

Note: (*) minimum and maximum rates.

Table SE3_A Exchange rates, 1892–1913

(in dinars, period averages)

Year	20-dinar gold coins SE3A_A	100 Austrian florins/ 200 Austrian crowns SE3B_A	Year	20-dinar gold coins SE3A_A	100 Austrian florins/ 200 Austrian crowns SE3B_A
1892	21.35	.	*1903*	20.80	215.84
1893	22.15	.	*1904*	20.40	212.92
1894	23.10	.	*1905*	20.24	211.64
1895	22.89	236.30	*1906*	20.09	209.94
1896	22.19	232.51	*1907*	20.03	209.24
1897	21.28	223.13	*1908*	20.26	211.92
1898	22.95	232.36	*1909*	20.43	213.72
1899	21.79	227.93	*1910*	20.11	210.70
1900	22.21	230.58	*1911*	20.03	209.90
1901	22.38	236.56	*1912*	20.23	211.24
1902	21.90	228.29	*1913*	21.24	223.66

Table SE4_A Government Finances, 1867–1920 *(continue)*

(in thousands of dinars, end-of-period)

Year	Government revenue SE4A_A	Government expenditure SE4B_A	Foreign public debt repayment (principal+interest) SE4C_A	Foreign public debt SE4D_A	Government debt to the central bank SE4E_A
1867	.	.	.	2350.0	..
1868	.	.	.	2303.0	..
1869	.	.	.	2256.0	..
1870	.	.	.	2209.0	..
1871	.	.	.	2162.0	..
1872	.	.	.	2115.0	..
1873	.	.	.	2068.0	..
1874	.	.	.	2021.0	..
1875	.	.	.	1974.0	..
1876	.	.	.	7252.0	..
1877	.	.	.	7093.0	..
1878	.	.	.	6935.0	..
1879	.	.	.	6776.0	..
1880	19145.4	19520.5	536.9	6618.0	..
1881	25682.5	25714.5	536.9	139459.0	..
1882	25688.3	32611.2	7586.9	152244.0	..
1883	28315.0	34469.9	8571.9	150740.0	..

Table SE4_A Government Finances, 1867–1920

(in thousands of dinars, end-of-period)

Year	Government revenue SE4A_A	Government expenditure SE4B_A	Foreign public debt repayment (principal+interest) SE4C_A	Foreign public debt SE4D_A	Government debt to the central bank SE4E_A
1884	32641.6	37291.2	8571.9	189507.0	304.2
1885	38746.1	45968.6	10651.9	257937.0	1538.5
1886	32168.7	46000.0	14485.7	280533.0	2918.9
1887	38229.1	44460.0	16187.8	278152.0	3512.9
1888	37625.5	44635.5	16187.8	306771.0	4064.0
1889	36863.7	51870.0	18537.8	303591.0	2873.9
1890	41970.8	46196.9	18537.8	327076.0	6958.3
1891	56840.3	57527.1	20573.7	322253.0	7916.4
1892	51868.4	60110.6	20573.7	316170.0	8699.0
1893	55652.6	62719.8	20573.7	340693.0	5738.8
1894	57786.2	62623.9	21119.7	362453.0	5828.7
1895	58458.0	66603.3	20100.6	413104.0	5803.8
1896	59633.2	66026.6	20100.6	411795.0	5750.1
1897	61646.9	72125.3	20100.6	410538.0	7331.8
1898	65840.2	80687.5	20100.6	407404.0	15943.6
1899	72096.0	85477.0	19565.6	424224.0	15152.3
1900	75306.2	84419.5	20686.6	420799.0	15857.4
1901	79698.0	92089.0	20337.7	417140.0	15085.3
1902	78638.0	99414.0	19802.7	414854.0	12835.6
1903	92025.0	109333.0	23102.7	471450.0	8528.9
1904	110238.0	92062.0	23102.7	467857.0	7517.2
1905	91817.0	87676.0	23102.7	464264.0	3430.7
1906	91270.4	87335.6	23102.7	460671.0	0.0
1907	94824.1	86689.9	27902.7	552078.0	0.0
1908	95293.8	93877.3	27902.7	547960.0	3020.9
1909	105130.5	103682.5	27902.7	543842.0	11307.6
1910	116581.1	111633.5	35402.7	689724.0	0.0
1911	131280.1	114733.5	35402.7	684706.0	0.0
1912	125200.0	120900.0	35402.7	679838.0	5000.9
1913	.	.	.	.	34649.9
1914	.	.	.	.	170276.9
1915	.	.	.	.	240846.4
1916	.	.	.	.	236883.7
1917	.	.	.	.	238575.7
1918	.	.	.	.	263053.5
1919	.	.	.	.	585916.8
1920	.	.	.	.	636414.0

Table SE5.1_A Goods prices, 1864–1910

(in dinars per 1 kilo, except SE5J_A: in dinars per 1 liter)

Year	Wheat SE5A_A	Maize SE5B_A	Beans SE5C_A	Wheat flour SE5D_A	Bread SE5E_A	Mutton SE5F_A	Pork SE5G_A	Lard SE5H_A	Plum brandy SE5I_A
1864	0.11	0.11	.	0.14	0.16	0.39	0.51	1.22	.
1865	0.10	0.08	.	0.12	0.14	0.38	0.42	1.08	.
1866	0.13	0.09	0.25	0.15	0.16	0.34	0.38	1.03	0.27
1867	0.14	0.12	0.33	0.18	0.19	0.35	0.46	1.16	0.29
1868	0.13	0.09	0.28	0.15	0.18	0.39	0.50	1.16	0.23
1869	0.11	0.07	0.14	0.14	0.16	0.41	0.52	1.12	0.25
1870	0.13	0.09	0.14	0.16	0.18	0.45	0.52	1.09	0.31
1871	0.17	0.13	0.17	0.20	0.22	0.41	0.52	1.17	0.26
1872	0.22	0.16	0.21	0.26	0.27	0.43	0.59	1.50	0.26
1873	0.22	0.15	0.25	0.26	0.27	0.47	0.66	1.57	0.29
1874	0.17	0.15	0.26	0.21	0.23	0.48	0.66	1.64	0.34
1875	0.14	0.11	0.25	0.17	0.19	0.48	0.67	1.43	0.37
1876	0.15	0.09	0.17	0.19	0.21	0.46	0.60	1.39	0.22
1877	0.19	0.13	0.20	0.22	0.24	0.47	0.62	1.39	0.32
1878	0.18	0.13	0.21	0.20	0.23	0.43	0.59	1.39	0.25
1879	0.17	0.12	0.21	0.20	0.21	0.45	0.52	1.11	0.24
1880	0.20	0.16	0.26	0.23	0.24	0.45	0.60	1.34	0.25
1881	0.18	0.11	0.25	0.21	0.23	0.47	0.59	1.18	0.30
1882	0.16	0.12	0.27	0.19	0.22	0.52	0.69	1.41	0.34
1883	0.14	0.10	0.17	0.16	0.18	0.56	0.70	1.25	0.36
1884	0.15	0.11	0.20	0.19	0.23	0.70	0.86	1.44	0.34
1885	0.13	0.10	0.13	0.17	0.19	0.54	0.65	1.09	0.28
1886	0.15	0.10	0.14	0.18	0.20	0.46	0.57	1.03	0.24
1887	0.14	0.10	0.18	0.17	0.19	0.47	0.63	1.23	0.23
1888	0.11	0.09	0.25	0.14	0.16	0.50	0.65	1.30	0.22
1889	0.12	0.09	0.24	0.14	0.17	0.47	0.62	1.29	0.34
1890	0.13	0.10	0.21	0.16	0.19	0.45	0.60	1.18	0.42
1891	0.16	0.11	0.25	0.19	0.22	0.54	0.69	1.26	0.61
1892	0.12	0.09	0.18	0.16	0.20	0.58	0.72	1.17	0.55
1893	0.10	0.07	0.11	0.13	0.17	0.59	0.70	1.12	0.51
1894	0.10	0.09	0.11	0.13	0.17	0.55	0.68	1.10	0.41
1895	0.11	0.11	0.15	0.14	0.18	0.50	0.65	1.17	0.40
1896	0.10	0.07	0.16	0.13	0.17	0.45	0.56	0.94	0.41
1897	0.16	0.10	0.17	0.20	0.23	0.47	0.66	1.17	0.39
1898	0.18	0.11	0.17	0.23	0.25	0.50	0.72	1.51	0.38
1899	0.14	0.08	0.11	0.18	0.21	0.51	0.70	1.26	0.39
1900	0.11	0.09	0.12	0.14	0.20	0.53	0.69	1.19	0.43
1901	0.13	0.10	0.13	0.16	0.21	0.51	0.67	1.17	0.56
1902	0.14	0.11	0.15	0.17	0.22	0.51	0.71	1.44	0.54
1903	0.12	0.12	0.18	0.16	0.21	0.55	0.81	1.73	0.52
1904	0.14	0.13	0.22	0.17	0.19	0.58	0.82	1.65	0.54
1905	0.14	0.14	0.29	0.18	0.19	0.62	0.90	1.77	0.45
1906	0.12	0.10	0.24	0.22	0.21	0.64	0.80	1.47	0.45
1907	0.15	0.11	0.19	0.24	0.25	0.58	0.73	1.16	0.49
1908	0.17	0.12	0.18	0.29	0.28	0.57	0.79	1.38	0.50
1909	0.18	0.12	.	0.30	0.29	0.64	0.91	1.69	0.51
1910	0.16	0.10	.	0.28	0.28	0.68	0.88	1.63	0.59

Table SE5.2_A Industrial production, 1888–1939

(production of selected industrial products)

Year	Milled flour and other items (in thousands of kilos) SE5J_A	Beer (in hectoliters) SE5K_A	Cement (in tons) SE5L_A	Hard coal (in tons) SE5M_A	Brown coal (in tons) SE5N_A	Lignite (in tons) SE5O_A
1888	30559	42055	.	.	.	.
1889	34097	38971	.	.	.	.
1890	33191	45744	.	.	.	.
1891	37858	43046	.	.	.	.
1892	46869	49975	.	.	.	.
1893	50813	55205	.	.	.	.
1894	47879	65701	.	2065	55958	26104
1895	56064	61362	.	1426	41008	19537
1896	57790	55378	.	11948	50635	24705
1897	56562	55010	.	21309	48791	20964
1898	44381	68421	.	13057	54077	26390
1899	47055	69672	.	21584	69684	25948
1900	52252	70754	.	55559	77644	22492
1901	62027	62860	.	44275	99053	26713
1902	61074	70776	2095	35888	89254	28612
1903	78284	76199	4698	40962	92567	26298
1904	82156	75665	5250	43520	108585	31076
1905	79069	68479	.	47848	105647	30906
1906	90198	81852	9236	63508	134391	39608
1907	116583	89558	7044	53139	172795	42382
1908	125026	108398	11074	61133	179098	55894
1909	.	112336	13464	51132	162176	78992
1910	.	127048	12655	40109	158929	77652
1911	.	.	.	31714	191660	80995
1912	.	.	.	.	.	.
1913	.	.	.	.	.	.
1914	.	.	.	.	.	.
1915	.	.	.	.	.	.
1916	.	.	.	.	.	.
1917	.	.	.	.	.	.
1918	.	.	.	.	.	.
1919	.	.	968	20674	35637	32388
1920	.	.	400	65885	176817	92068
1921	.	.	14926	74916	231681	91445
1922	.	.	23831	96014	309304	162551
1923	.	.	29600	134644	375747	224844
1924	.	.	29248	128904	346944	214436
1925	.	.	36395	177192	364974	229262
1926	.	.	27409	185369	437176	245993
1927	.	.	.	258429	452693	219898
1928	.	.	.	329103	549901	257842
1929	.	.	.	376614	609402	223056
1930	.	.	.	314845	641375	259990
1931	.	.	58291	355750	600912	275682
1932	.	.	42004	317309	581789	322530
1933	.	.	30952	325598	532493	261947
1934	.	.	31290	325628	569673	320412
1935	.	.	33422	330051	594457	299930
1936	.	.	32931	361268	611344	233559
1937	.	.	44290	372771	701161	289606
1938	.	.	89832	392884	728283	362650
1939	.	.	.	406735	767010	417608

Table SE5.3_A Labour force and daily wages, 1863–1910

(in dinars, period averages; SE5T_A in thousands)

Year	Total active population SE5T_A	Diggers SE5P_A	Reapers SE5Q_A	Masons SE5R_A	Manual labourers SE5S_A
1863	..	1.09	1.54	1.77	1.08
1864	..	1.30	1.75	1.76	1.11
1865	..	1.46	1.72	1.90	1.15
1866	1215	1.13	1.55	2.06	1.14
1867	..	1.34	1.93	2.28	1.29
1868	..	1.53	2.22	3.34	1.48
1869	..	1.97	2.28	2.48	1.63
1870	..	1.93	2.64	2.64	1.73
1871	..	1.96	2.49	2.68	1.76
1872	..	2.08	2.29	2.69	1.65
1873	..	1.76	2.69	2.53	1.61
1874	..	1.74	2.14	2.47	1.56
1875	..	1.93	2.34	2.38	1.61
1876	..	1.91	2.66	2.32	1.58
1877	..	1.56	2.54	2.42	1.53
1878	..	2.03	2.35	2.48	1.56
1879	..	1.72	2.74	2.55	1.60
1880	..	1.44	2.65	2.65	1.47
1881	..	1.76	3.13	2.82	1.69
1882	..	1.85	2.15	2.09	1.72
1883	..	2.31	3.29	3.17	2.05
1884	..	2.08	2.93	3.21	1.95
1885	..	1.68	2.24	2.64	1.61
1886	..	1.62	2.19	2.78	1.58
1887	..	.	2.06	2.68	1.39
1888	..	1.27	1.77	2.60	1.28
1889	..	1.22	1.91	2.38	1.19
1890	..	1.24	1.83	2.33	1.15
1891	..	1.30	2.19	2.63	1.32
1892	..	1.47	2.17	2.65	1.42
1893	1183	1.56	2.30	2.80	1.52
1894	..	1.48	2.23	2.84	1.46
1895	1044	1.31	1.85	2.72	1.28
1896	1269	1.18	1.92	2.55	1.19
1897	..	1.21	1.92	2.61	1.21
1898	..	1.07	1.90	2.57	1.13
1899	..	1.08	1.68	2.56	1.15
1900	1411	1.15	1.95	2.50	1.22
1901	..	1.14	1.83	2.50	1.19
1902	..	1.10	1.91	2.50	1.21
1903	..	1.13	1.89	2.59	1.24
1904	..	1.15	2.02	2.60	1.24
1905	..	1.22	2.01	2.71	1.23
1906	..	1.20	2.03	2.83	1.29
1907	..	1.26	2.00	2.95	1.30
1908	..	1.21	2.16	3.03	1.33
1909	..	1.42	2.12	3.13	1.40
1910	..	1.45	2.51	3.39	1.61

Table SE6_A National accounts and population, 1863–1920

(in thousands of dinars: SE6D_A thousands of inhabitants)

	Exports	Imports	Transit	Population
Year	SE6A_A	SE6B_A	SE6C_A	SE6D_A
1863	20229.4	15777.6	2704.1	1155.1
1864	15428.8	17729.0	4135.0	1175.2
1865	17901.6	19185.8	2625.3	1195.5
1866	18798.1	21677.7	5329.0	1216.3
1867	24812.2	26451.3	7980.8	1232.7
1868	37824.2	29962.7	7629.7	1249.4
1869	33863.7	26659.5	7192.9	1266.2
1870	30595.4	27911.4	5430.4	1283.3
1871	27627.4	27715.2	7069.4	1300.6
1872	32858.2	29493.6	7249.3	1318.1
1873	31711.2	26675.6	5866.9	1335.9
1874	35381.4	31788.2	7480.5	1353.9
1875	35014.9	31219.2	5957.9	1372.1
1876	.	.	.	1390.6
1877	.	.	.	1409.4
1878	.	.	.	1428.4
1879	38880.8	41567.6	1184.1	1750.7
1880	35212.3	46095.6	1246.1	1779.9
1881	40127.1	43173.8	983.4	1809.6
1882	40334.1	48451.3	584.7	1839.8
1883	40232.5	49716.6	413.7	1870.5
1884	39968.7	50947.2	598.7	1901.7
1885	37625.3	40473.0	551.1	1942.8
1886	40718.7	51694.4	414.5	1984.8
1887	36130.0	36479.0	969.4	2027.7
1888	38909.1	35183.9	5780.9	2071.5
1889	39065.9	34843.4	7989.9	2116.2
1890	45840.6	38044.7	13905.7	2162.0
1891	52279.8	42805.7	18367.9	2191.3
1892	46451.7	37069.6	20790.9	2221.0
1893	48910.4	40922.6	16348.0	2251.1
1894	46023.2	34881.2	18037.4	2281.6
1895	43390.5	28239.7	24868.9	2312.5
1896	53386.0	33447.9	16844.0	2347.5
1897	55940.0	45313.8	13801.0	2383.0
1898	56991.5	41101.9	14845.4	2419.1
1899	65744.4	46428.6	16917.9	2455.7
1900	66522.0	54027.2	17723.4	2492.9
1901	65685.7	43835.4	22997.4	2530.9
1902	72123.7	44820.8	25282.6	2569.5
1903	59967.4	58235.3	32734.4	2608.6
1904	62156.1	60926.4	42685.5	2648.4
1905	71996.3	55600.6	39872.4	2688.7
1906	71604.1	44328.6	48645.9	2731.9
1907	81491.3	70583.3	55963.7	2775.8
1908	77749.1	75635.1	46511.5	2820.4
1909	92981.8	73535.1	49998.1	2865.7
1910	98388.0	84695.6	57764.9	2911.7
1911	116916.4	115425.4	54087.4	3068.5
1912	84221.3	106093.5	63271.6	3052.8
1913	.	.	.	3003.6
1914	.	.	.	2971.7
1915	.	.	.	2799.5
1916	.	.	.	2741.3
1917	.	.	.	2693.5
1918	.	.	.	2607.4
1919	.	.	.	2665.8
1920	.	.	.	2724.8

Yugoslavia

Table YU1.1_A Total reserves, 1920–1940

(in millions of dinars, end-of-period)

Year	Total statutory reserves YU1A_A	Metallic holdings YU1B_A	Gold holdings YU1C_A	Silver holdings YU1D_A	Foreign exchange YU1E_A
1920	431.4	79.7	64.2	15.5	351.6
1921	401.3	90.9	74.2	16.7	310.4
1922	349.3	80.6	64.0	16.6	268.7
1923	437.4	86.1	68.8	17.3	351.2
1924	474.4	89.8	72.4	17.5	384.5
1925	460.1	93.4	75.9	17.5	366.7
1926	438.9	103.6	86.1	17.5	335.3
1927	452.7	106.3	88.8	17.6	346.4
1928	339.1	108.6	91.0	17.5	230.5
1929	380.0	112.1	94.5	17.6	267.9
1930	236.1	116.2	98.6	17.6	120.0
1931	2096.8	1758.4	1758.4	..	338.4
1932	1968.1	1760.8	1760.8	..	207.3
1933	1906.2	1795.0	1795.0	..	111.2
1934	1905.5	1784.6	1784.6	..	120.9
1935	1464.3	1431.5	1431.5	..	32.8
1936	1626.1	1626.1	1626.1	..	..
1937	1709.1	1709.1	1709.1	..	..
1938	1909.6	1909.6	1909.6	..	..
1939	1988.4	1988.4	1988.4	..	..
1940	2740.0	2740.0	2740.0	..	..

Table YU1.2_A Monetary base, 1920–1940 *(continue)*

(in millions of dinars, end-of-period; cover ratio in per cent)

Year	Monetary base YU1F_A	Coins in circulation YU1H_A	Banknotes in circulation YU1I_A	Giro accounts with central bank YU1J_A	Other central bank liabilities at sight YU1K_A	Effective cover ratio of gold (*) YU1L_A	Overall effective cover ratio (*) YU1M_A
1920	3601.5	.	3344.1	115.2	142.2	..	..
1921	5059.8	.	4688.4	235.4	136.0	..	..
1922	6007.6	.	5039.9	252.7	715.1	..	..
1923	6444.5	.	5790.2	198.9	455.4	..	..
1924	6676.4	.	6001.5	307.0	368.0	..	..
1925	6817.4	.	6062.7	366.6	388.1	..	..
1926	6547.0	.	5811.8	347.0	388.2	..	..

Table YU1.2_A Monetary base, 1920–1940

(in millions of dinars, end-of-period; cover ratio in per cent)

Year	Monetary base YU1F_A	Coins in circulation YU1H_A	Banknotes in circulation YU1I_A	Giro accounts with central bank YU1J_A	Other central bank liabilities at sight YU1K_A	Effective cover ratio of gold (*) YU1L_A	Overall effective cover ratio (*) YU1M_A
1927	6930.5	.	5743.4	721.0	466.2	..	..
1928	6617.0	.	5528.2	493.2	595.6	..	..
1929	7373.6	.	5818.0	1250.1	305.5	..	..
1930	6249.4	.	5396.5	667.2	185.7	..	..
1931	5755.3	166.5	5172.3	326.3	90.2	31.5	37.5
1932	5949.8	479.2	4772.7	384.7	313.1	32.2	36.0
1933	6318.2	960.0	4327.2	474.4	556.6	33.5	35.6
1934	6243.7	993.9	4384.0	531.9	333.9	34.0	36.3
1935	7145.8	870.1	4890.0	689.7	696.0	..	..
1936	7902.4	864.6	5408.5	651.2	978.1	..	..
1937	9127.4	839.8	5834.1	1390.6	1063.0	..	..
1938	9792.4	778.4	6920.7	1080.0	1013.3	..	..
1939	12399.2	983.1	9697.9	899.1	819.1	..	..
1940	18490.7	1125.6	13833.9	1182.9	2348.4	..	..

Note: (*) excluding coins.

Table YU2.1_D Central bank interest rates, 1920–1940

(in per cent, date-of-change)

Year	Month	Day	Discount rate YU2A_D	Lombard rate (securities) YU2B_D	Lombard rate (warrants) YU2C_D	Lombard rate (gold) YU2D_D
1920	throughout		6.0	6.0	..	..
1922	June	22	6.0	7.0	..	..
1924	Oct.	26	6.0	8.0	..	..
1930	May	29	5.5	7.0	..	..
1931	June	29	6.5	8.0	8.0	8.0
1931	July	20	7.5	9.0	9.0	9.0
1932	Oct.	30	7.5	9.0	7.5	9.0
1933	Oct.	2	7.5	9.0	7.5	7.5
1934	Feb.	9	7.0	8.0	7.0	7.0
1934	July	16	6.5	7.5	6.5	6.5
1935	Feb.	1	5.0	6.0	5.0	5.0
1940	throughout		5.0	6.0	5.0	5.0

Table YU2.1_A Central bank and market interest rates, 1920–1940

(in per cent, period averages)

Year	Discount rate YU2A_A	Lombard rate (securities) YU2B_A	Lombard rate (warrants) YU2C_A	Lombard rate (gold) YU2D_A	Short–term market lending rate for first-class bills (*) YU2E_A	Market interest rate on sight deposits YU2F_A	Market interest rate on term deposits YU2G_A
1920	6.0	6.0	..	..	7–12	.	.
1921	6.0	6.0	..	..	7–12	.	.
1922	6.0	7.0	..	..	7–12	.	.
1923	6.0	7.0	..	..	20–30	.	.
1924	6.0	7.2	..	..	18–30	.	.
1925	6.0	8.0	..	..	18–30	.	.
1926	6.0	8.0	..	..	.	.	.
1927	6.0	8.0	..	..	.	.	.
1928	6.0	8.0	..	..	12–18	.	.
1929	6.0	8.0	..	..	9–12	6.0	10.0
1930	5.7	7.4	..	..	8–11	5.0	7.0
1931	6.5	8.0	8.8	8.8	.	.	.
1932	7.5	9.0	8.7	9.0	.	.	.
1933	7.5	9.0	7.5	8.6	9–13	.	.
1934	6.8	7.9	6.8	6.8	9–11	.	.
1935	5.1	6.1	5.1	5.1	8–10	4.0	5.0
1936	5.0	6.0	5.0	5.0	7–10	4.0	5.0
1937	5.0	6.0	5.0	5.0	7–10	4.0	5.0
1938	5.0	6.0	5.0	5.0	.	.	.
1939	5.0	6.0	5.0	5.0	.	.	.
1940	5.0	6.0	6.0	5.0	.	.	.

Note: (*) minimum and maximum rates.

Table YU2.2_A Government bond market prices and current yields, 1923–1939 *(continue)*

(market prices in dinars quoted on the Belgrade Stock Exchange, current yields in per cent; period averages)

Year	Market price of Compensation for war damage (*) YU2H_A	Market price of Investment loan (*) YU2I_A	Market price of Agrarian bonds (*) YU2J_A	Current yield on Compensation for war damage YU2K_A	Current yield on Investment loan YU2L_A	Current yield on Agrarian bonds YU2M_A
1923	123.8	.	.	20.2	.	.
1924	136.4	64.9	24.8	18.3	10.8	16.2
1925	236.0	70.4	37.4	10.6	10.0	10.7
1926	306.6	75.9	43.5	8.2	9.2	9.2
1927	360.4	85.1	52.2	6.9	8.2	7.7
1928	436.3	88.3	55.6	5.7	7.9	7.2
1929	419.6	86.5	52.6	6.0	8.1	7.6
1930	438.3	87.9	54.0	5.7	8.0	7.4

Table YU2.2_A Government bond market prices and current yields, 1923–1939

(market prices in dinars quoted on the Belgrade Stock Exchange, current yields in per cent; period averages)

Year	Market price of Compensation for war damage (*) YU2H_A	Market price of Investment loan (*) YU2I_A	Market price of Agrarian bonds (*) YU2J_A	Current yield on Compensation for war damage YU2K_A	Current yield on Investment loan YU2L_A	Current yield on Agrarian bonds YU2M_A
1931	376.5	81.0	45.0	6.6	8.6	8.9
1932	207.1	53.4	26.2	12.1	13.1	15.3
1933	222.3	48.1	26.8	11.2	14.5	14.9
1934	320.6	70.2	37.9	7.8	10.0	10.5
1935	368.0	79.2	46.8	6.8	8.8	8.5
1936	363.9	82.8	47.8	6.9	8.5	8.4
1937	407.2	90.4	52.7	6.1	7.7	7.6
1938	469.3	99.5	61.6	5.3	7.0	6.5
1939	450.6	99.1	60.1	5.5	7.1	6.7

Note: (*) From 1932 onwards prices are calculated at a new way of quoting in which the rate does not include accrued interest.

Table YU3_A Exchange rates at the Belgrade Stock Exchange, 1920–1940

(in dinars, period averages)

Year	Dollar (New York) YU3A_A	French franc (Paris) YU3B_A	Swiss franc (Geneva-Zurich) YU3C_A	Pound sterling (London) YU3D_A	Italian lira (Milano) YU3E_A	Mark (Berlin) YU3F_A	Dinar in Zurich (100 dinars in Swiss francs) YU3G_A
1920	33.7	2.1	5.2	114.0	1.5	5.6	21.5
1921	46.4	3.4	8.1	179.9	2.0	5.1	13.7
1922	75.2	6.1	14.2	330.2	3.5	3.3	7.1
1923	93.8	5.7	17.2	431.4	4.3	.	5.9
1924	78.5	4.1	14.3	346.4	3.4	.	7.0
1925	58.8	2.8	11.4	284.2	2.3	.	8.8
1926	56.6	1.8	11.0	275.3	2.2	13.5	9.1
1927	56.8	2.2	11.0	276.4	2.9	13.4	9.1
1928	56.8	2.2	10.9	276.8	3.0	13.6	9.1
1929	56.7	2.2	11.0	275.9	3.0	13.5	9.1
1930	56.4	2.2	11.0	274.9	3.0	13.5	9.1
1931	56.5	2.2	11.0	257.8	3.0	13.5	9.1
1932	56.7	2.2	11.0	199.8	2.9	13.5	8.3
1933	46.3	2.3	11.1	191.4	3.0	13.7	7.0
1934	34.2	2.3	11.1	173.8	3.0	13.6	7.0
1935	43.6	2.9	14.3	215.0	3.6	17.6	7.0
1936	43.4	2.7	13.2	217.4	2.3	17.6	7.0
1937	43.3	1.8	10.0	215.4	2.3	17.5	10.0
1938	43.4	1.3	10.0	213.7	2.3	17.6	10.0
1939	44.2	1.1	10.0	196.8	2.3	17.8	10.0
1940	44.5	0.9	10.1	170.3	2.2	17.8	10.0

Table YU4_A Government finances, 1920–1940

(in millions of dinars, nominal terms)

Year	Total government revenue YU4A_A	of which direct taxes YU4B_A	of which indirect taxes and excises YU4C_A	of which state enterprises YU4D_A	Total government expenditure YU4E_A	of which pensions YU4F_A	of which public debt repayment (principal+ interest) YU4G_A	Foreign public debt (*) YU4H_A	Government debt to the central bank YU4K_A
1920	.	.	.	.	.	.	.	.	3283
1921	.	.	.	.	.	.	.	.	4418
1922	.	.	.	.	.	.	.	.	4518
1923	.	.	.	.	.	.	.	.	4524
1924	10838	1377	5917	3452	10540	.	.	.	4521
1925	12064	1737	6597	3637	11777	.	.	.	4467
1926	11606	1828	6106	3582	11593	626	584	.	4414
1927	11319	1754	5981	3540	10983	717	664	.	4338
1928	13796	1774	5058	6875	11147	1026	860	.	4202
1929	15962	2393	5521	6944	11817	1014	873	.	4153
1930	13312	2094	5366	4836	12470	1015	1097	.	4021
1931	10964	1785	4420	4207	11530	1089	919	.	1799
1932	9681	1793	4015	3533	10286	1103	1010	32763	2409
1933	10015	2104	3855	3525	9651	1158	797	.	2316
1934	9758	2199	3994	3440	9379	1193	686	.	2287
1935	9989	2196	4151	3523	9562	1210	678	.	2271
1936	10572	2390	4651	3381	10059	1219	718	.	2248
1937	11987	2705	5241	3917	11083	1267	971	.	2238
1938	12385	2762	5522	3941	11814	1135	1008	.	2228
1939	13118	2992	5659	4352	12463	1110	1141	.	3625
1940	.	.	.	.	.	.	.	.	9162

Note: (*) On 1 July.

Table YU5.1_A Prices, 1926–1939 *(continue)*

(index, 1926=100)

Year	Wholesale prices YU5A_A	Agricultural prices YU5B_A	Cattle prices YU5C_A	Minerals prices YU5D_A	Industrial prices YU5E_A	Export prices YU5F_A	Import prices YU5G_A
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	102.6	112.4	104.3	92.2	99.3	107.1	97.3
1928	106.2	130.1	108.6	86.4	98.0	114.6	96.0
1929	100.6	118.6	107.2	84.4	92.6	114.3	91.4
1930	86.6	89.3	96.3	88.2	80.3	93.5	79.8

Table YU5.1_A Prices, 1926–1939

(index, 1926=100)

Year	Wholesale prices YU5A_A	Agricultural prices YU5B_A	Cattle prices YU5C_A	Minerals prices YU5D_A	Industrial prices YU5E_A	Export prices YU5F_A	Import prices YU5G_A
1931	72.9	74.3	72.2	77.2	71.4	72.8	69.0
1932	65.2	67.5	56.6	76.3	66.2	60.9	68.3
1933	64.4	57.2	57.1	75.5	70.8	58.4	74.3
1934	63.2	57.4	55.4	80.8	67.4	59.1	70.1
1935	65.9	68.2	56.6	79.7	66.7	63.6	69.3
1936	68.4	69.7	60.0	81.0	69.7	64.8	71.1
1937	74.7	74.1	65.1	87.5	77.6	72.6	74.1
1938	78.3	85.8	65.8	89.9	78.2	76.2	71.2
1939	79.3	82.5	68.7	94.9	79.8	77.2	79.7

Table YU5.2_A Industrial production, 1920–1939

(production of selected industrial products in tons)

Year	Cement YU5H_A	Hard coal YU5I_A	Brown coal YU5J_A	Lignite YU5K_A
1920	400	65885	176817	92068
1921	14926	74916	231681	91445
1922	23831	96014	309304	162551
1923	29600	134644	375747	224844
1924	29248	128904	346944	214436
1925	36395	177192	364974	229262
1926	27409	185369	437176	245993
1927	.	258429	452693	219898
1928	.	329103	549901	257842
1929	.	376614	609402	223056
1930	.	314845	641375	259990
1931	58291	355750	600912	275682
1932	42004	317309	581789	322530
1933	30952	325598	532493	261947
1934	31290	325628	569673	320412
1935	33422	330051	594457	299930
1936	32931	361268	611344	233559
1937	44290	372771	701161	289606
1938	89832	392884	728283	362650
1939	.	406735	767010	417608

Table YU5.3_A Labour force and wages, 1920–1940

(period averages)

Year	Employment in thousands YU5L_A	Daily wages in dinars YU5M_A	Daily wages (1920=100) YU5N_A	Nominal wages (Dec. 1930=100) YU5O_A	Real wages (Dec. 1930=100) YU5P_A	Cost-of-living (Dec. 1930=100) YU5Q_A
1920	500.2	17.3	100.0	.	.	.
1921	528.9	18.0	104.4	.	.	.
1922	559.7	18.8	109.0	.	.	.
1923	619.2	20.2	117.1	.	.	.
1924	612.0	22.2	128.5	.	.	.
1925	642.5	23.4	135.2	.	.	.
1926	664.2	23.5	136.1	.	.	.
1927	709.2	25.0	144.9	.	.	.
1928	781.4	25.8	149.4	.	.	.
1929	824.2	26.3	152.3	.	.	.
1930	816.7	26.6	153.7	100.0	100.0	100.0
1931	779.6	26.2	151.6	99.5	105.7	94.0
1932	741.5	24.6	142.2	91.2	111.4	81.7
1933	713.9	23.2	134.4	86.4	120.1	71.8
1934	775.0	22.2	128.7	78.7	114.2	68.9
1935	802.9	21.7	125.3	77.8	109.9	70.9
1936	872.6	21.7	125.5	79.5	108.9	73.1
1937	924.1	22.7	131.4	83.1	105.5	71.7
1938	960.6	23.6	136.8	85.1	105.1	80.9
1939	972.6	24.3	140.5	92.2	103.0	89.6
1940	1032.3	26.4	152.5	102.9	130.8	78.6

Table YU6_A National accounts and population, 1918–1940 *(continue)*

(in millions of dinars; YU6I_A thousands of inhabitants)

Year	National income at current prices YU6A_A	of which industry and mining YU6B_A	of which agriculture YU6C_A	National income at 1938 prices YU6D_A	of which industry and mining YU6E_A	of which agriculture YU6F_A	Exports YU6G_A	Imports YU6H_A	Population YU6I_A
1918	.	.	.	.	.	.	.	.	11621
1919	.	.	.	.	.	.	.	.	11794
1920	.	.	.	.	.	.	1321	3466	11970
1921	.	.	.	.	.	.	2461	4122	12149
1922	.	.	.	.	.	.	3691	6442	12330
1923	65223	8765	34414	34470	5866	16177	8049	8310	12514

Table YU6_A National accounts and population, 1918–1940

(in millions of dinars; YU6I_A thousands of inhabitants)

Year	National income at current prices YU6A_A	of which industry and mining YU6B_A	of which agriculture YU6C_A	National income at 1938 prices YU6D_A	of which industry and mining YU6E_A	of which agriculture YU6F_A	Exports YU6G_A	Imports YU6H_A	Population YU6I_A
1924	70080	9179	37343	36515	6064	17079	9539	8222	12701
1925	63282	9110	32483	40147	6517	19129	8905	8753	12891
1926	56156	8312	28916	38709	6722	17682	7818	7632	13088
1927	53328	9002	25582	37624	7156	15743	6400	7286	13279
1928	59629	10146	29155	41079	7987	17311	6445	7835	13477
1929	59966	9593	29714	43471	8162	18712	7922	7595	13678
1930	50418	8775	23351	43062	8280	18595	6780	6960	13883
1931	45100	7809	21238	42071	7674	19352	4801	4800	14077
1932	36481	6074	17426	38333	6266	18689	3056	2860	14271
1933	36117	7128	16727	38945	7261	18593	3378	2883	14468
1934	34066	6872	15429	40398	7435	19682	3878	3573	14666
1935	34602	7000	15610	39271	7348	18554	4030	3700	14863
1936	40744	8085	19778	44885	8184	22532	4376	4077	15073
1937	45027	9308	20328	45122	8728	21070	6272	5234	15280
1938	48476	9860	22531	48476	9860	22531	5047	4975	15490
1939	52784	10895	24275	50988	10747	23509	5521	4757	15708
1940	.	.	.	.	.	.	.	.	15919