
IX

Turkey: from 1923 to 1947

Yüksel Görmez¹ and Serkan Yiğit²
Central Bank of the Republic of Turkey

I MAJOR MONETARY EVENTS

I.1 FOUNDATION OF THE REPUBLIC OF TURKEY

Analysing the monetary history of Turkey the interested reader needs to pay special attention to the initial conditions that the young Republic had to face when it came into existence in the early 1920s. The collapse of the Ottoman Empire at the beginning of the 20th century with long-running but unsuccessful re-trials of recovery in an attempt to sustain its past super-power position caused a loss in human capital, chiefly arising from the sufferings of both local conflicts and World War I. There was not much to inherit from the demised Ottoman Empire. Instead, a high foreign public debt was transferred as a burden to the new Republic, which was eventually repaid in the mid-20th century. The Ottoman Empire was blamed for having opportunities to rapidly raise productivity in view of the technology advances following the industrial revolution. As the country had failed to create a strong capital base, stimulate sustainable development and increase welfare, the economic gap between the Ottoman Empire and the other economies of the time was widening further. The decaying Empire's continuous losses in territory as well as widespread corruption and an ineffective public administration were the key causes of backwardness. Another reason given by Kazgan (1997) concerns the Empire's misjudgement of the key importance of banking and finance for sustainable welfare gains in the long-run. Kazgan argued that the unlawful practices followed by the Empire, sometimes by taking even the lives of rich people with forged accusations in order to take over their wealth whenever there was a budget deficit, prevented the capital accumulation process.

Therefore, the monetary history of Turkey began almost from scratch and might be best described as a build-up story of survival. Compared with neighbouring countries, Asia Minor was underdeveloped, lacking public infrastructures such as railways, roads and schools. Moreover, primary health services were inadequate due to the scarcity of doctors and the lack of treatment facilities. Manufacturing was underdeveloped too, and agriculture dominated national output. Hence, weather conditions were the main determinant of output volatility.

Almost immediately after gaining its independence in 1923, after the fall of the Ottoman Empire, the key priority of the Turkish government was to build political, financial and administrative institutions for improving governmental capacity. During those years, hard currency foreign exchange

^{1,2} *Research and Monetary Policy Department*. 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 would like to thank all SEEMHN DCTF participants for their useful comments and suggestions on how to present long-run historical economic time series in a consistent and harmonised way, and report methodologies applied to different time intervals and different individual series. The views expressed herein are strictly those of the authors and do not necessarily reflect the views of the Central Bank of the Republic of Turkey. The authors alone are responsible for any remaining errors.

Email to: yuksel.gormez@tcmb.gov.tr; serkan.yigit@tcmb.gov.tr

TABLE I Chronology of Major Monetary Events in Turkey

1920	A floating exchange rate regime was established.
1923	The Ottoman gold-backed banknote (140 million Turkish liras) and the Ottoman coins (10 million liras) became the legal tender.
1923	Tight monetary policies were pursued to maintain price stability.
1925	Law no 701 was enacted regarding the exchange of the Ottoman banknotes for the new legal tender, i.e. the Turkish lira, until the end of 1928.
1926	Preparations were undertaken to set up a national central bank.
1927	The first Turkish lira banknotes were issued.
1930	Law no 1567 was enacted regarding the protection of the value of the Turkish currency.
1930	Law no 1715 on the establishment of the Central Bank of the Republic of Turkey was enacted.
1932	The Central Bank was founded in October 1931 and started operations in January 1932.
1933	Law no 2243 on the protection of bank deposits was enacted.
1937	With law no 3290 the Turkish banknotes issued by the newly established Central Bank became the country's new legal tender.

Source: Authors' compilation.

reserves were extremely limited and money capital was scarce. There was no central bank either, and financial stability was outsourced to the Ottoman Bank, which had already provided central banking services during the era of the Ottoman Empire. However, it was not a central bank under state control or state ownership. This pragmatic approach turned out to be successful and prevented a banking and financial crisis that could have arisen from the lack of capital during the first years of the Republic.

In the early years of the new State, economic performance was extremely poor. Governmental policies mostly focused on providing for the basic needs of the society. In the 1920s, the domestic economy had not much to offer in foreign trade; exports consisted only of agricultural produce such as dried grapes and nuts. Hard currency inflows were quite limited; nevertheless, the trade balance was in surplus, chiefly due to the very low level of imports. At the same time, adverse international conditions did not allow the new State to follow an export-led recovery strategy because of the weak foreign demand for Turkish goods and services. The country also faced serious difficulties in its access to international capital markets. In this unfavourable economic setting, the government concentrated on introducing law and order and developing public infrastructure. However, the country's efforts faced a turbulent world environment shaped by excess economic instability in Europe as well as discussions on war reparations. Furthermore, the United States was heading to the worst depression of its history. Overall, the developed world of the time pursued contractionary economic policies and counter-productive devaluations supported by strict capital controls. World trade had declined and the global monetary transmission mechanism was not effective any more.

Without accumulating effective and efficient human capital to engineer a jump-start for fast recovery and sustainable growth, the Turkish Republic also faced many challenges in finding resources to repay its high foreign debt. To sustain sound monetary conditions, an option was to make a deal with the Ottoman Bank which was founded in 1856 as a joint venture between British interests, the Banque de Paris et des Pays-Bas of France, and the Ottoman government. Since the domestic currency was not fully backed by gold or hard currency foreign exchange, any potential finan-

cial stress would be prevented by extending the Ottoman bank's license. This policy option did prevent large-scale banking and financial crises from arising in the early years of the new State and seemed quite successful in the country's financial deepening.

After the War of Independence and the proclamation of the Republic of Turkey, the regulation of the relations with the new State was set up on 10 March 1924. The name of the bank was changed, from Imperial Ottoman Bank to Ottoman Bank. The bank's role as a state-owned bank maintained; it was however extended on a temporary basis due to the government's intention to establish its own central bank, which was finally realised in 1931. In 1933, the Ottoman Bank turned into a purely commercial bank.

Financial deepening in the late Ottoman period was poor. Most of the banks suffered massive capital losses and therefore went bankrupt. Apparently, the environment was not favourable for financial growth to translate into stronger economic growth, since money transactions were low, banking services were limited and trade was largely based on barter. Foreign banks formed the domestic banking system, whereas a couple of local banks with few branches emerged, albeit at a slow pace. However, the establishment of a strong financial infrastructure held a lower place on the policy agenda of the early governments of the young Republic, after hunger prevention and poverty reduction.

After the Republic was founded, the main purpose of the government was to establish economic, financial, juridical, military and cultural independence, and free speech, as well. In the second half of the 1920s, nationalisation motives against foreign capital were strong, further intensified by the bad experience in the Ottoman years. Nevertheless, foreign banks did not close down and continued to operate, as they had a strong capital base and could provide cheap and long-term lending. Between 1923 and 1932, more than 20 domestic banks went bust mostly because of the adverse impact of the Great Depression. Until the creation of a national central bank in 1930, there were around 22 small domestic and 13 big foreign banks with a total of 419 branches.

1.2 FOUNDATION OF THE CENTRAL BANK OF THE REPUBLIC OF TURKEY

As mentioned above, the Ottoman Empire never had a national central bank based on domestic capital. The privilege of note issue was instead granted to a French entity in 1863. The Ottoman Bank (*Osmanlı Bankası*), formerly Imperial Ottoman Bank (*Bank-ı Osmani-i Şahane*) carried out the functions of a central bank during the period of the Ottoman Empire. It was founded as a joint venture between British and French interest and the Ottoman government and retained its privilege of note issue from 1863 until the collapse of the Empire in 1923. After the declaration of the Republic of Turkey, preparations for a new national central bank started in 1926. The Law on the Central Bank of the Republic of Turkey (*Türkiye Cumhuriyet Merkez Bankası, TCMB*) was eventually enacted in 1930, and the monopoly of note issue was transferred to the new bank, which ultimately started operations in 1932.

Monetary policy during the 1930s was based on a discount facility, which largely portrays the country's central banking activity of the time as a growth stimulator. The government tried to boost industrialisation, and therefore the monetary policy pursued was accommodative. However, short-term advances to the Treasury were not allowed. Even though public finances were not in order because of the lack of a strong tax base, public deficits were not monetised. This was because the TCMB put an upper limit on the monetisation of the public deficit in an attempt to safeguard monetary and price stability.

The main characteristics of the economic policy pursued in the 1930s and 1940s were strict controls imposed on foreign trade, manipulation of interest rates and exchange rate devaluation. Real interest rates stood at positive figures, however. A fixed exchange rate regime had been introduced before the country joined Bretton Woods and became a member of the International Monetary Fund. In 1946, the government devalued heavily the lira (by 54% against the US dollar), seeking to gain a comparative advantage in terms of competitiveness before its entry into the Bretton Woods system.

It may be worth mentioning the smooth transfer of the central banking activities from a privately-owned foreign institution, i.e. the Ottoman Bank, to a national central bank, the TCMB. This transfer took place in an environment where global trade shrank and the supply-side-effects of the competitive devaluations were still at work. Worse than that, the young Republic had to rely exclusively on domestic resources for growth without any access to foreign capital markets. Against this backdrop, the smooth transfer of the central banking functions of the Ottoman Bank to the newly established TCMB with only subdued inflationary pressures and financial stability can be considered successful.

Closely related to the country's choice of founding a new central bank was also its choice of an exchange rate regime. Görmez and Yılmaz (2007) provide evidence that the TCMB thoroughly weighed the advantages and disadvantages of alternative monetary regimes to find out which regime fitted best its policy objectives. This is because it is not always possible to identify straightforward rules or criteria: a particular regime might be appropriate for a given macroeconomic structure in a certain period of time. Additionally, a specific regime choice might not be the best option forever because of various external and internal shocks. More importantly, a country's choice would also be influenced by the prevailing international monetary system or the global monetary and financial outlook.

In the 1920s, Turkey followed a floating rate regime, and the foreign exchange market was managed by the Ottoman Bank. Obviously, exchange rate volatility was not so high, because cover rules required the bank to back at least one third of notes in circulation by gold. This regime thus effectively limited the free floating of the exchange rate. As shown in Görmez and Yılmaz (2007), in the early 1930s after the establishment of the TCMB that regime switched to fixed rates. However, in times of heightened pressure on foreign exchange, capital controls were imposed and the state-owned banks directly intervened in the market. Moreover, in 1930 a law on defending the value of the lira was enacted.

The period of a low exchange rate volatility ended abruptly with the beginning of the Great Depression in 1929. Domestic monetary authorities reacted by funding a 'banks consortium' after the enactment of the 1930 law on defending the value of the lira. Buying and selling foreign exchange was strictly regulated. At the same time, capital controls were imposed. On 1 January 1932, the banks consortium's mission to defend the value of the currency was transferred to the TCMB, and keeping exchange rate stability was now one of its main responsibilities. In 1933, the lira's convertibility was eventually suspended. Up to 1938, the international price of the lira was kept stable chiefly through the imposition of extensive exchange and capital controls.

From 1939 onwards, however, the supposedly 'golden age' of the lira ('stable lira') started crumbling. In the wake of WWII, even the price of the bread was controlled and the continuation of strong and wide-ranging capital controls was unavoidable in order to defend the value of the currency. As expected, after the war, the lira started to depreciate heavily. This was the reason why the Turkish authorities decided to capture a competitive advantage by devaluing the lira in 1946,

well before the country's participation in the Bretton Woods agreement. This policy response might be viewed as a regime shift from fixed rates to an adjustable peg system.

The monetary policy pursued in the TCMB's first years of operation was not really complicated, since banking and finance had a limited impact on the domestic economy, which was characterised by a relatively weak financial depth. Banks' deposit base was rather limited, as the capital accumulation process went at a slow pace and the low saving rate could not support the emergence of a strong and healthy banking system. The lack of financial deepening itself led to low deposit rates and implied that the TCMB was the main credit provider. Selective credits for keeping domestic credit expansion under control were among the main monetary policy tools in the context of a heavily regulated system. There was a strong intention to direct scarce resources to the sectors that produced basic social goods, thereby supporting the survival of the population and economic development.

During the second half of the 1940s, several small private banks suffered from capital inadequacy and ultimately failed. On the other hand, as documented by Akgüç (1989), many privately- and domestically-owned banks started to emerge; their number reached 30 by the late 1950s. The government had successfully directed private capital flows to the financial sector in an attempt to accelerate its development which had remained poor for many decades in the past.

2 DEFINITION AND DESCRIPTION OF VARIABLES

The accompanying index table shows the list of variables (unit, frequency, time span and variable's code) reported. Namely, six groups of variables are presented. The first group refers to monetary variables. Total reserves (based on our assessments) consist of gold holdings held by the TCMB in its vault and in foreign banks (*ecnebi bankalar*), as well as domestic correspondent accounts (*dahildeki muhabirler*) and clearing accounts (*kliring bakiyeleri*). Data on banknotes in circulation (*tedavülde bulunan banknotlar*), bank deposits (*tevdia*) and narrow and broad monetary aggregates are also presented. The second group refers to interest rates, namely the short-term official discount rate and short- and long-term deposit interest rates (*tevdia faizleri*). Monthly exchange rates (*aylık kambiyo fiyatları*) against the pound sterling, the French franc, the Reichsmark and the US dollar come next. Government finances include government tax revenues (*devlet varidatı, vergiler*) and expenditures (*devlet masrafları*) as well as foreign and domestic public debt. Prices, production and labour include data series on the consumer price index, industrial production, labour force and school enrolment. The last group of the data set includes national accounts and population, i.e. nominal and real GNP, exports and imports, and mid-year population estimates.

INDEX TABLE - Country: TURKEY

continue

List of Variables	Time Span	Data Frequency	Unit of Account	Series Code*
1. MONETARY VARIABLES				
<i>Total reserves</i>	1932–1947	annual	in Turkish lira (thous.), end-of-period	TR1A_A
<i>Gold (cash)</i>	1932–1947	annual	in Turkish lira (thous.), end-of-period	TR1B_A
<i>Gold (in foreign banks)</i>	1932–1947	annual	in Turkish lira (thous.), end-of-period	TR1C_A
<i>Gold (domestic correspondent accounts)</i>	1932–1947	annual	in Turkish lira (thous.), end-of-period	TR1D_A
<i>Other FX and Clearing accounts balances</i>	1932–1947	annual	in Turkish lira (thous.), end-of-period	TR1E_A

INDEX TABLE - Country: TURKEY

List of Variables	Time Span	Data Frequency	Unit of Account	Series Code*
1. MONETARY VARIABLES				
<i>Banknotes in circulation</i>	1924–1947	annual	in Turkish lira (thous.), end-of-period	TR1F_A
<i>Sight deposits (TL)</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1G_A
<i>Time deposits (TL)</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1H_A
<i>Savings deposits</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1I_A
<i>M1</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1J_A
<i>M2</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1K_A
<i>M3</i>	1933–1947	annual	in Turkish lira (thous.), end-of-period	TR1L_A
2. INTEREST RATES				
<i>Short-term official discount rate</i>	1932–1947	annual	in per cent, end-of-period	TR2A_A
<i>Short-term deposit interest rate</i>	1934–1947	annual	in per cent, end-of-period	TR2B_A
<i>Long-term deposit interest rate</i>	1934–1947	annual	in per cent, end-of-period	TR2C_A
3. EXCHANGE RATES				
<i>Pound sterling</i>	1923–1947	annual	in pound sterling, period average	TR3A_A
	Jan.1923–Dec.1947	monthly		TR3A_M
<i>French franc</i>	1923–1947	annual	in French francs, period average	TR3B_A
	Jan.1923– Feb.1941	monthly		TR3B_M
<i>(German) mark (Reichsmark)</i>	1928–1940	annual	in German marks, period average	TR3C_A
	Jan.1932–Dec.1940	monthly		TR3C_M
<i>US dollar</i>	1923–1947	annual	in US dollars, period average	TR3D_A
	Jan.1923– Dec.1947	monthly		TR3D_M
4. GOVERNMENT FINANCES				
<i>Flows</i>				
<i>Total government tax revenue</i>	1923–1947	annual	in Turkish lira (thous.)	TR4A_A
<i>Government expenditure</i>	1923–1947	annual	in Turkish lira (thous.)	TR4B_A
<i>Stocks</i>				
<i>Foreign public debt</i>	1934–1947	annual	in Turkish lira (thous.)	TR4C_A
<i>Domestic public debt</i>	1934–1947	annual	in Turkish lira (thous.)	TR4D_A
5. PRICES, PRODUCTION AND LABOUR				
<i>Consumer price index (1923=100)</i>	1923–1947	annual	index	TR5A_A
<i>Industrial production</i>	1923–1947	annual	in Turkish lira (millions), at current prices	TR5B_A
<i>Labour force</i>	1923–1947	annual	million inhabitants	TR5C_A
<i>School enrolment</i>	1923–1947	annual	million inhabitants	TR5D_A
6. NATIONAL ACCOUNTS AND POPULATION				
<i>GNP, nominal terms</i>	1923–1947	annual	in Turkish lira (thous.), at current prices	TR6A_A
<i>GNP, real terms</i>	1923–1947	annual	in Turkish lira (thous.), at 1948 prices	TR6B_A
<i>Exports</i>	1923–1947	annual	in Turkish lira (thous.)	TR6C_A
	Jan.1924–Dec.1947	monthly	in Turkish lira (thous.)	TR6C_M
<i>Imports</i>	1923–1947	annual	in Turkish lira (thous.)	TR6D_A
	Jan.1924–Dec.1947	monthly	in Turkish lira (thous.)	TR6D_M
<i>Population</i>	1923–1947	annual	mid-year, million inhabitants	TR6E_A

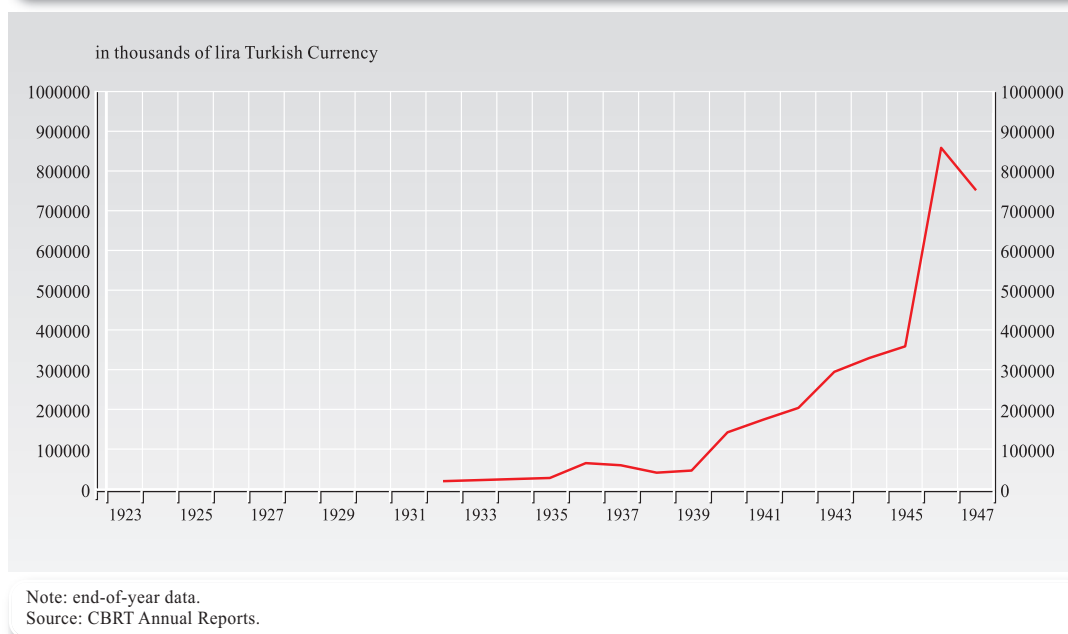
* The code of each variable comprises a country prefix (TR), a number of the variable group (1, 2,...) and a letter identifying the respective time series within the group (A, B, C,...); at the end, A stands for annual and M for monthly time series. Monthly time series are provided in the volume's CD.

2.1 MONETARY VARIABLES

2.1.1 Reserves

Data on total reserves are only available from 1932 onwards. The data reported in Table TR1.1A_A were mainly determined by gold holdings held in cash in domestic accounts and in foreign banks over the first decade of the Republic of Turkey. Even though the share of foreign exchange accounts and clearing accounts in total reserves went up, the average share of gold holdings remained above 70% in the period between 1936 and 1947. As seen in Figure 1, total reserves remained stable throughout the 1930s, increasing thereafter. In 1940 and again in 1946, reserves rose considerably due to an increase in gold holdings both domestically and abroad. An explanation for this upward movement was the devaluation of the lira during that period, which was especially dominant in the case of 1946, as well as the strict capital controls which were put in place to stop outflows. As access to foreign capital markets was limited, the economic policies pursued relied chiefly on domestic capital to finance growth. Incentives to implement open trade policies were quite limited at that period. Therefore, strict capital controls were imposed on money outflows in an attempt to resist the post World War II global financial turmoil.

FIGURE I Monetary Aggregates for Turkey, 1923–1947



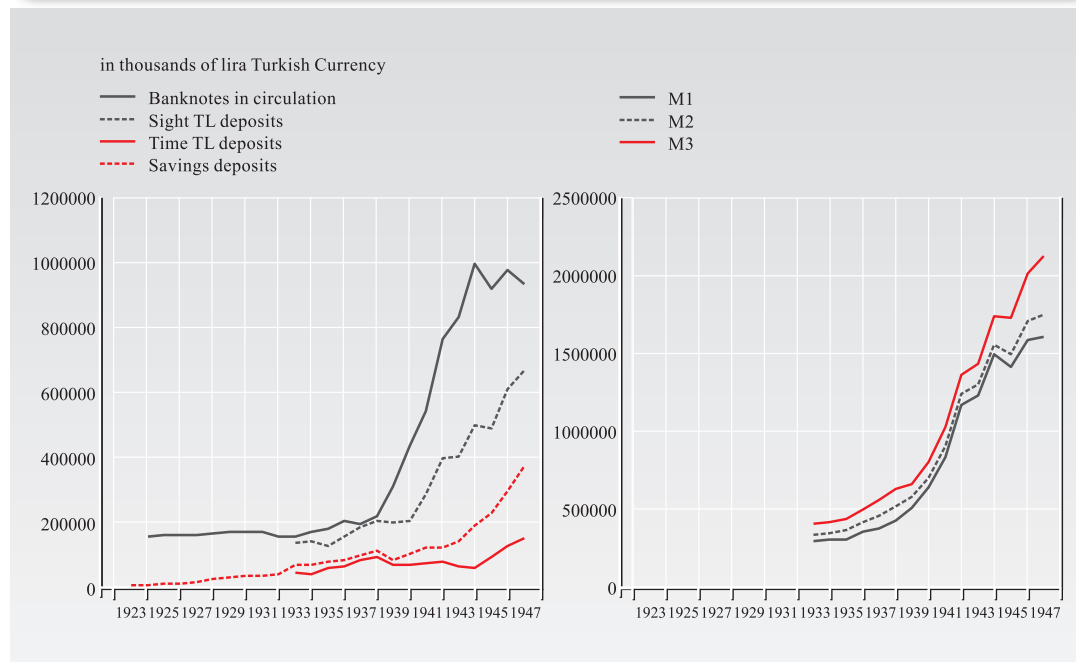
2.1.2 Banknotes in circulation

The 1715 Law on the Central Bank of the Republic of Turkey came in effect in 1930 and the bank was founded in 1931, while operations only began officially on 1 January 1932. A license to issue the national money for a period of 30 years was granted to the new bank. Hence, the data series availability starts in 1933. The series of banknotes in circulation refers to the notes issued by the Ottoman Bank up to 1932 and by the TCMB from 1933 to 1947. Its starting point is 1924 since data are available only for that year onwards. It is shown at annual intervals (end-of-year). 1933 is the starting point for the notes issued by the newly established central bank.

2.1.3 Monetary aggregates: money supply

M1, M2 and M3 definitions of money supply for Turkey have been assessed based on their components of banknote circulation, private sight, time and savings bank deposits in the domestic currency only. Specifically, M1 money supply consists of currency in circulation and sight deposits. M2 includes M1 and time deposits in domestic currency. M3 is defined as M2 plus savings deposits. As seen in Figure 2, the growth of money supply accelerated during World War II. Furthermore, the high levels of banknotes in circulation prevailing in almost every year in our sample as compared to the low levels of deposits signal the weak financial development of the country. After 1943, however, banknote circulation seems to remain stable, whereas money supply continues its increasing time path mainly driven by rising sight and savings deposits.

FIGURE 2 Monetary Aggregates for Turkey, 1923–1947



Note: end-of-year data.

Sources: CBRT Annual Reports and Tezel (1994) for the data on banknotes in circulation before 1933.

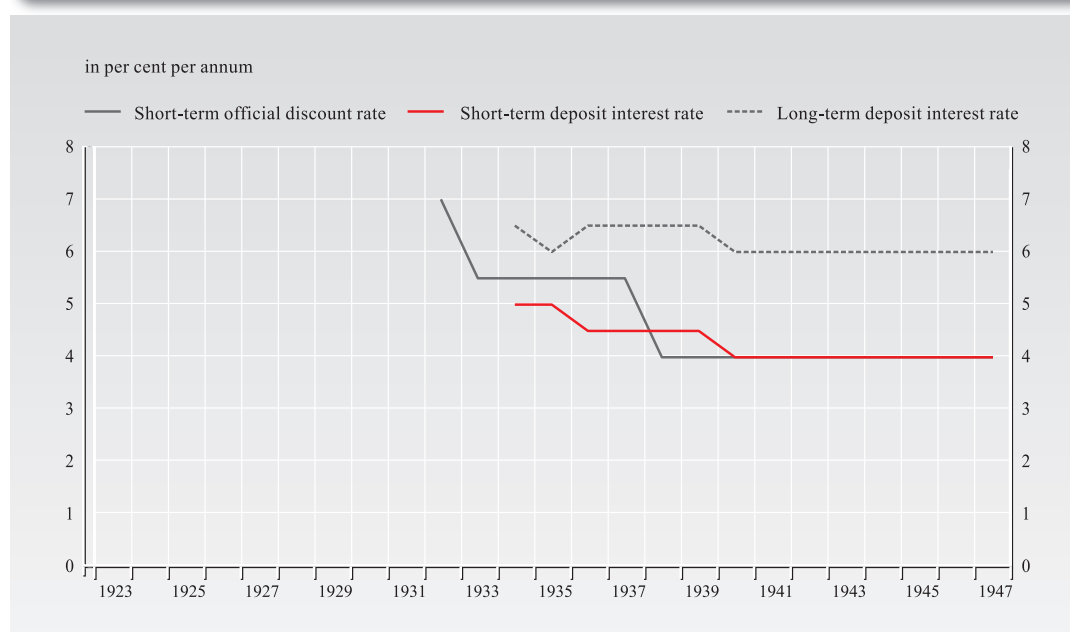
2.2 INTEREST RATES

The interest rates reported in Table TR2_A refer to the central bank's discount rate, the short-term and long-term deposit interest rates. 3-month bank deposit rates are considered as short-term rates, while deposit rates for maturities of over 2-years are considered as long-term interest rates. From 1940 onwards, the short-term official discount rate and the 3-month bank deposit rate were the same, since interest rates were manipulated by governmental authorities (see Figure 3).

The fact that interest rates were kept unchanged for a long time (especially after 1940) is revealing about the monetary policy framework of the time: the central bank did not really consider the interest rate as a monetary policy tool. Instead, credit facilities were the favoured monetary policy instrument during the very early years of the young Republic. Since the government's prior-

ity was the implementation of economic policies for hunger prevention and poverty reduction, the already scarce money sources were to be channelled to those sectors that produced basic consumption goods and services. Moreover, WWII emergencies put a burden on the budget due to increased military spending³ and thus high public spending had to be covered through credit facilities provided by the bank.

FIGURE 3 Interest Rates, 1923–1947



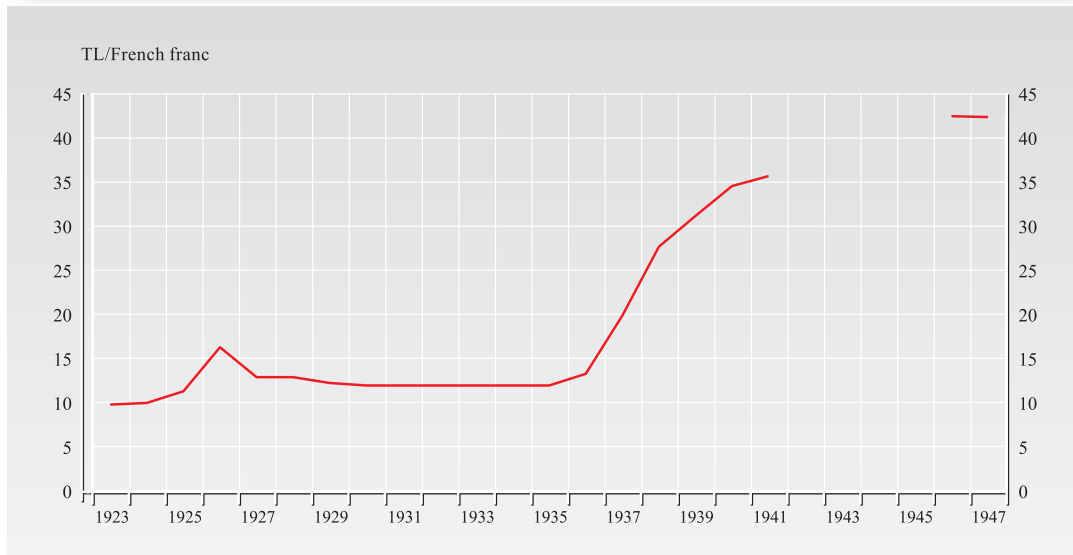
Note: end-of-year data.
Source: CBRT Annual Reports.

2.3 EXCHANGE RATES

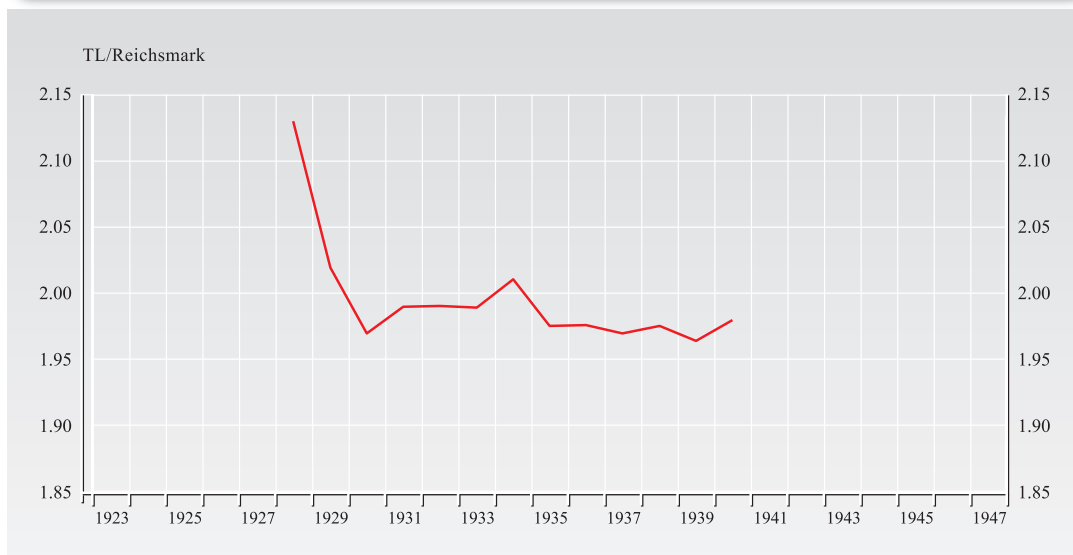
The exchange rate series refers to the nominal exchange rate of the Turkish lira against the pound sterling, the French franc and the US dollar since 1923 and against the Reichsmark since 1928 (Table TR3_A). However, some observations against the French franc and the Reichsmark are missing during and after wartime. The exchange rates are expressed as the price of one unit of the Turkish lira in terms of the foreign currency. Therefore, an increase means appreciation of the domestic currency against foreign currency and *vice versa*. Monthly data are also reported, even though some observations are still missing.

Major foreign exchange movements during that period become also apparent, especially against the US dollar, as seen in Figure 6. Strong appreciation pressures are evident in 1932, which were driven by external developments related to the US recession and its impact on the dollar. In 1946, the government heavily devalued the lira by 54% against the dollar, and afterwards kept it fixed at 2.80 dollars per lira. As mentioned above, this policy action aimed at strengthening the resilience of the Turkish economy to the newly emerging Bretton Woods gold-dollar standard by trying to gain an export competitive advantage before the irrevocable fixing of the conversion rates occurred.

³ Turkey entered the war in 1945.

FIGURE 4 Exchange Rates for Turkey, 1923–1947

Note: Annual averages based on monthly averages.
Source: CBRT Annual Reports.

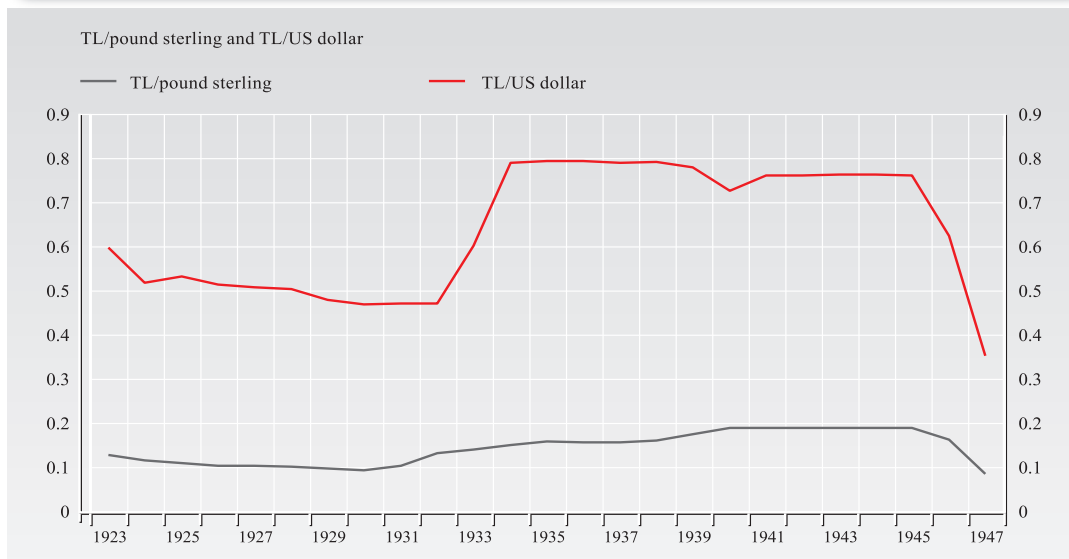
FIGURE 5 Exchange Rates for Turkey, 1923–1947

Note: Annual averages based on monthly averages.
Source: CBRT Annual Reports.

Against all expectations, however, devaluation did not yield the initially forecasted results, i.e. an increase in exports and a decrease in imports. Since domestic production was dependent on imports of raw materials and energy, the high rise in the prices of imported goods was financed first by depletion of the country's foreign exchange reserves and then by foreign aid that the country received until 1953.



FIGURE 6 Exchange Rates for Turkey, 1923–1947



Note: Annual averages based on monthly averages.
Source: CBRT Annual Reports.

2.4 GOVERNMENT FINANCES

The data series on government finances consist of government expenditures, realised tax revenues and public debt, both foreign and domestic. All series are depicted in nominal annual terms. During the early years of the young Republic, governments placed much emphasis on balancing the budget; still, the

FIGURE 7 Government Expenditures and Tax Revenues, 1923–1947



Note: Annual data.
Sources: CBRT Annual Reports, Turkish Finance Ministry and TURKSTAT

tax/GNP ratio was relatively low. The time series on foreign and domestic debt look consistent with the budget deficit series. The co-movement of both variables means that governments used to cover excess spending through debt issue (Figure 7). The steadily increasing size of government spending as revealed by the data figures over those years, can be explained by two factors: first, the continuous rise in military expenditures, which became more intense after 1937, and, second, the urgent need for urbanisation investment and infrastructure spending in order to eliminate the effects of decades of wars and their impact on social services, including water, electricity, schooling and health services provision. Unfortunately, as evident in the figure, tax revenues were not increasing as fast as government expenditures, reflecting a lack of taxable income. Series TR4C_A and TR4D_A report data on public foreign and domestic debt.

2.5 PRICES, PRODUCTION AND LABOUR

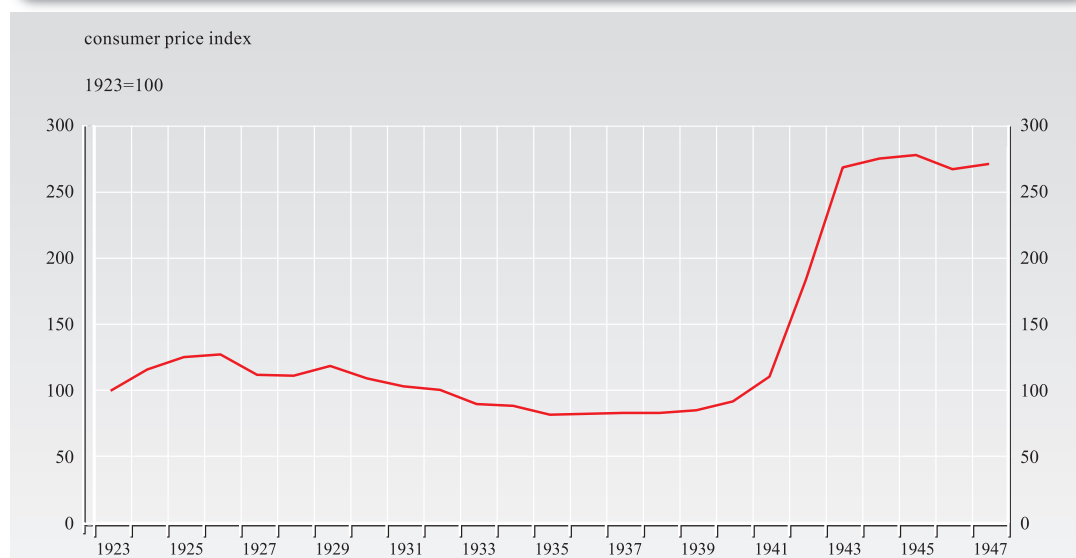
2.5.1 Prices

This group of variables contains data on the consumer price index, industrial production, labour force and school enrolment. Series TR5_A reports the consumer price index (1923=100) at annual frequency, covering the period from 1923 to 1947. The data figures are annual averages. Monthly data do not exist. As seen in Figure 8, inflationary pressures remained relatively moderate until 1929. From then on and until the eve of WWII, moderate deflationary pressures prevailed. However, starting from 1940, inflationary pressures resurfaced; by end-1943, consumer prices almost tripled within a 2-year period. As price controls, which were imposed on large scale during wartime, were partially or totally removed, goods prices started adjusting upwards.

2.5.2 Industrial production

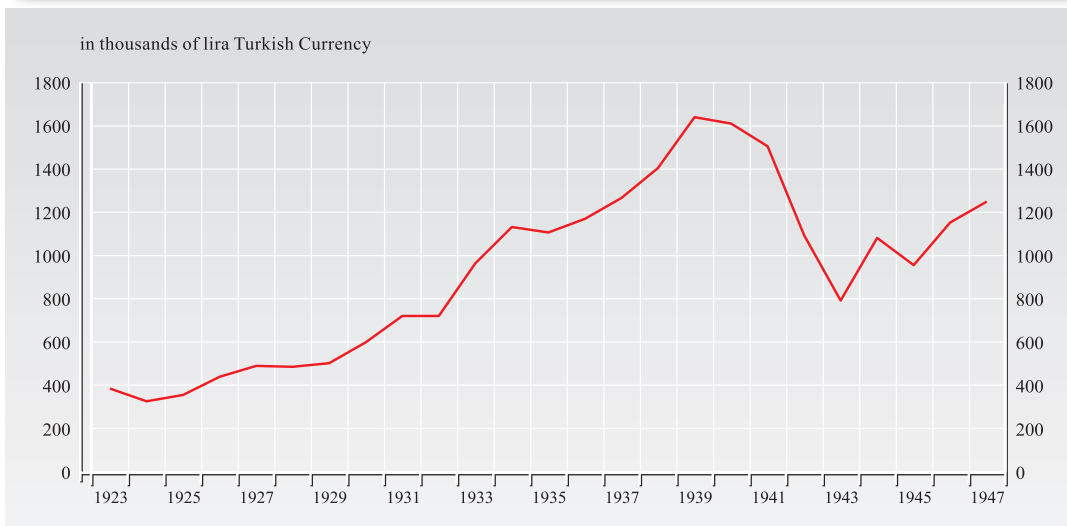
Series TR5_B displays the values of industrial production as a proxy for domestic economic activity. The data series refers to real prices and covers annual intervals from 1926 to 1947. Figure 9

FIGURE 8 Price Developments, 1923–1947



Note: Annual averages.
Source: TURKSTAT.

FIGURE 9 Industrial Production (at constant prices), 1923–1947



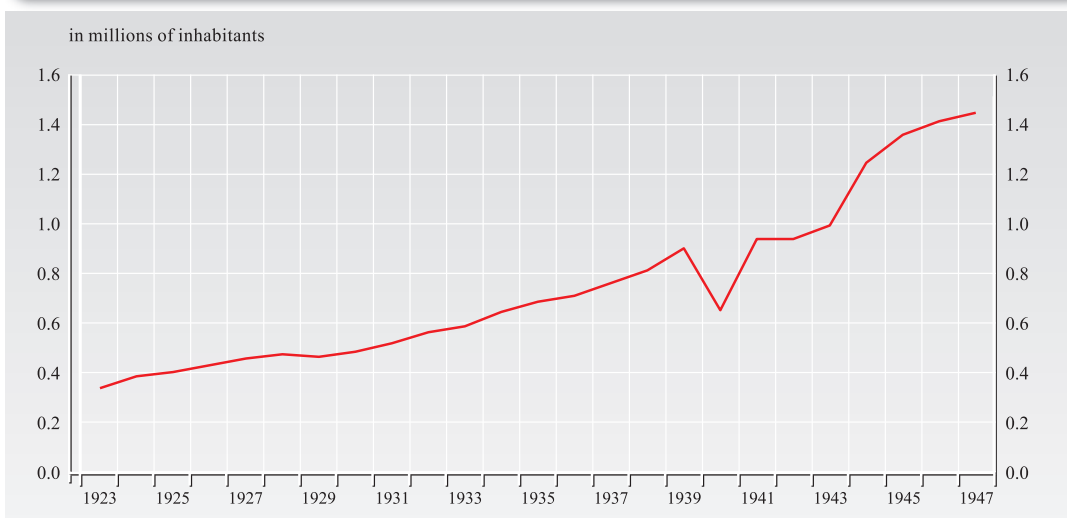
Note: CPI (1923=100) has been used as deflator.
Source: TURKSTAT.

depicts developments over time. As shown, industrial production exhibited a continuous upward trend up to WWII. In its aftermath, a sharp drop occurred, followed by a fast rebound afterwards.

2.5.3 Labour force and school enrolment

Series TR5C_A and TR5D_A depict the labour force and school enrolment data, respectively. Both series cover the period from 1923 to 1947 and are measured in millions of inhabitants. The school enrolment series is depicted in Figure 10. What is interesting to note is that the number of pupils

FIGURE 10 School Enrolment, 1923–1947



Source: TURKSTAT.

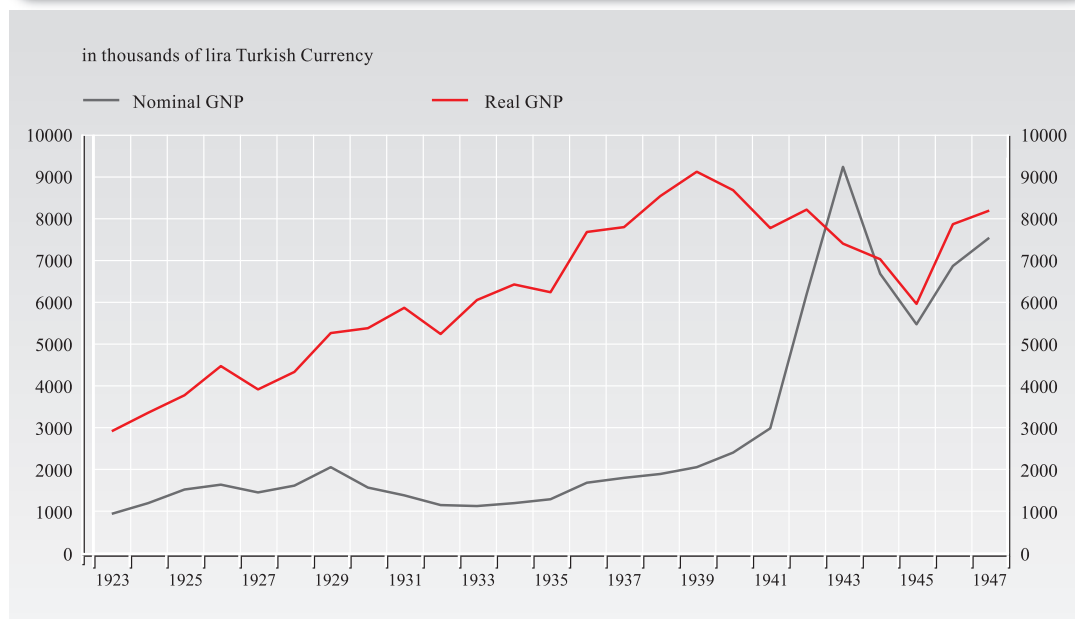
fell sharply in 1939. Hence, the data figures for that year should be used with due caution, although the sharp fall might be explained by the extensive militarisation of the school-aged population pending a possible involvement of Turkey in the war.

2.6 NATIONAL ACCOUNTS AND POPULATION

2.6.1 Gross national product

Due to the structure of the domestic economy that was dominated by agricultural production, GNP which is depicted by series TR6A_A, exhibits high volatility chiefly driven by weather conditions. The data entries are in current prices and cover the whole sample period (1923–1947). The high rate of increase in nominal GNP which was particularly marked over the years 1941–1943 mainly stemmed from price increases. Series TR6B_A displays real GNP data points for the same sample period, at 1948 constant prices. As shown in Figure 11, well until 1939, both real and nominal GNP exhibited an upward trend; afterwards and until 1945 it was continuously falling reflecting the adverse impact of the wartime. Monthly data on nominal and real GNP do not exist. Data on the GNP deflator are not available, either.

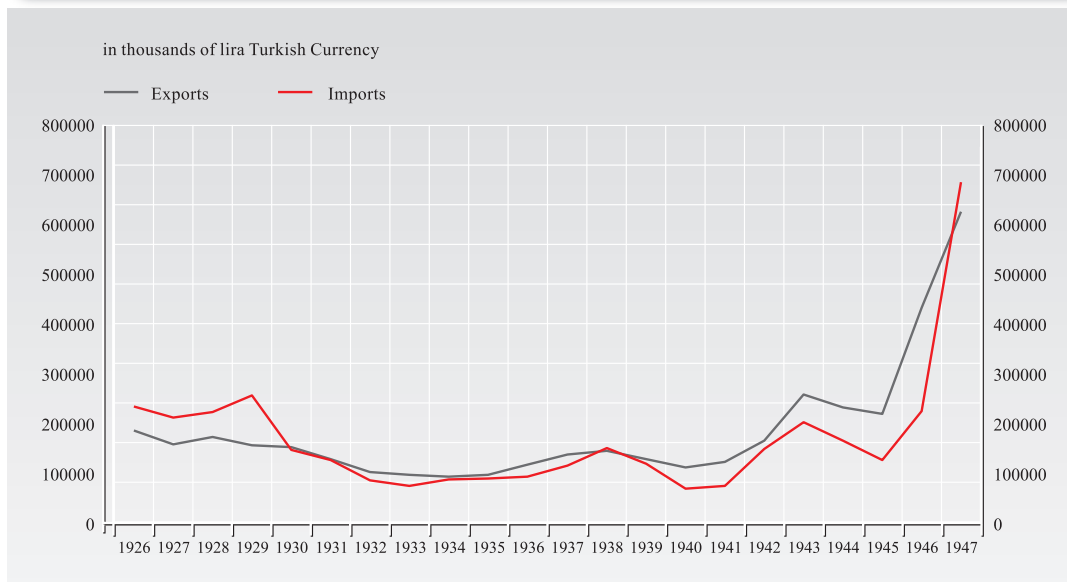
FIGURE II GNP, 1923–1947



Source: TURKSTAT.

2.6.2 Foreign trade

Foreign trade data include exports and imports data on goods and services. Series TR6C_A and Series TR6D_A report annual values for exports and imports, respectively. The data figures are in nominal terms and in domestic currency, and the sample period is from 1923 to 1947 for the annual data and from January 1924 to December 1947 for the monthly data. Both exports and imports increased between 1923 and 1929, chiefly due to the liberal foreign trade policy which was dominant during that period. After the Great Depression, protectionist policies were adopted

FIGURE I2 Exports and Imports, 1923–1947

Source: TURKSTAT.

worldwide, and trade volumes thus decreased. From 1940 onwards, trade values increased sharply again; although largely reflected high inflation rates that prevailed after the war (Figure 12).

2.6.3 Population

Population is shown at annual intervals and is measured in millions of inhabitants (Series TR6E_A). The population time series was estimated by using the formula $P = P_0 e^{r \times n}$ based on the annual rate of increase, where r is the annual rate of increase, n is the number of years and P_0 is the initial value. Over the whole sample period, population grew very fast, from 12.4 to 20.8 million people.

3 DATA SOURCES

The historical data series on total reserves and their main components, the monetary aggregates and the interest rates are collected from the TCMB's *Annual Reports*. The data series on the government finances are also taken from the TCMB's *Annual Reports* and the *Statistical Indicators Volume 1923–2011* of the Turkish Statistical Institute. The data entries on foreign trade are retrieved from the TURKSTAT databases as well. The data on GNP, consumer prices, industrial production, population, labour force and school enrolment are collected from the TURKSTAT's and TCMB's *Annual Reports*. Secondary sources have also been used: Tezel (1994) and Fatma and Suut (2005).

4 REFERENCES

Akgüç, Öztin (1989), *100 Soruda Türkiye'de Bankacılık (100 questions for banking in Turkey)*, Extended Second Edition, Gerçek Yayınevi, İstanbul.

Central Bank of the Republic of Turkey (TCMB), *Annual Reports (1931–1948)*, Historical Archives of the Central Bank of the Republic of Turkey, various issues.

Eroğlu, Nadir (2010), *Atatürk Dönemi Para Politikaları (Monetary policies of the Atatürk's era)*, Marmara Üniversitesi İİBF Dergisi, Cilt XXVIII, Sayı I, 23–26.

Doğruel, Fatma and Doğruel A. Suut (2005), *Türkiye'de Enflasyonun Tarihi (The history of inflation in Turkey)*, Economic and Social History Foundation of Turkey.

Görmez, Yüksel (2006), 'The evolution of central banking in Turkey', in Roumen Avramov and Şevket Pamuk (eds), *Monetary and fiscal policies in SE Europe. Historical and comparative perspective*, 127–140, SEEMHN and BNB, Sofia.

Görmez, Yüksel and Gökhan Yılmaz (2007), 'The evolution of exchange rate regime choices in Turkey', in Peter Mooslechner (ed.), *The experience of the exchange rate regimes in South–Eastern Europe in a historical and comparative perspective*, SEEMHN and OeNB Proceedings of Workshops 13, 127–140, Vienna.

Görmez, Yüksel (2008), 'Banking in Turkey: history and evolution', SEEMHN and Bank of Greece Working Paper Series no 83.

Görmez, Yüksel and Serkan Yiğit (2009), 'The economic and financial stability in Turkey: A historical perspective', in Branko Hinić, Milan Sojic and Ljiljana Durđević (eds), *Economic and financial stability in SE Europe in a historical and comparative perspective*, SEEMHN and NBS, 283–313, Belgrade.

Kazgan, Haydar (1997), *Osmanlı'dan Cumhuriyete Türk Bankacılık Tarihi (Turkish banking history from the Ottoman period to the Republican period)*, The Banks' Association of Turkey, İstanbul.

Parasız, İlker (1998), *Türkiye Ekonomisi, 1923'ten Günümüze İktisat ve İstikrar Politikaları (Turkish economy, economic and stabilisation policies from 1923 to today)*, Ezgi Kitabevi Yayınları, Bursa.

Tezel, Yahya S. (1994), *Cumhuriyet Döneminin İktisat Tarihi, 1923–1950 (Economic history of the Republican era, 1923–1950)*, Tarih Vakfı Yurt Yayınları, İstanbul.

Turkish Statistical Institute (TUIK), *Statistical Indicators 1923–2011*, Publication Number 3890, <http://www.turkstat.gov.tr>.

Tokgöz, Erdinç (1997), *Türkiye'nin İktisadi Gelişme Tarihi 1914–1997 (History of Turkey's economic development, 1914–1997)*, İmaj Yayınları, Ankara.

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

TABLE TR I.1_A Total reserves and monetary base, 1923–1947*(thousands TL, end-of-year balance sheet entries).*

Year	Total reserves	Gold holdings (in metallic)	Gold holdings (in foreign banks)	Gold holdings (in domestic correspondent accounts)	Foreign exchange and clearing accounts balances	Banknotes in circulation
	TR1A_A	TR1B_A	TR1C_A	TR1D_A	TR1E_A	TR1F_A
1923	.	.	.	.	.	.
1924	.	.	.	.	.	156000.0
1925	.	.	.	.	.	159000.0
1926	.	.	.	.	.	159000.0
1927	.	.	.	.	.	159000.0
1928	.	.	.	.	.	165000.0
1929	.	.	.	.	.	168000.0
1930	.	.	.	.	.	169000.0
1931	.	.	.	.	.	170000.0
1932	20580.0	18483.0	0.0	2097.0	0.0	157154.0
1933	25022.0	17237.0	5270.0	2515.0	0.0	155398.0
1934	27458.0	19588.0	5355.0	2515.0	0.0	167436.0
1935	29495.0	23304.0	6191.0	0.0	0.0	178755.0
1936	65692.0	24042.0	8030.0	0.0	33620.0	201840.0
1937	61634.0	27604.0	9119.0	0.0	24911.0	193989.0
1938	42621.0	24136.0	12736.0	0.0	5749.0	219432.0
1939	48199.0	21802.0	14084.0	954.0	11359.0	308050.0
1940	142918.0	101720.0	8423.0	0.0	32775.0	433801.0
1941	176256.0	102125.0	13280.0	0.0	60851.0	543503.0
1942	206004.0	104954.0	38116.0	0.0	62934.0	765545.0
1943	296969.0	109244.0	92454.0	0.0	95271.0	833664.0
1944	331027.0	109240.0	167142.0	0.0	54645.0	994541.0
1945	360132.0	109241.0	191685.0	0.0	59206.0	918567.0
1946	859890.0	220863.0	442414.0	0.0	196613.0	975437.0
1947	752711.0	217794.0	258511.0	0.0	276406.0	932804.0

TABLE TR I.2_A Monetary aggregates, 1923–1947*continue**(thousands TL; end-of-year balance sheet entries)*

Year	Sight deposits (TL)	Time deposits (TL)	Savings deposits	M1	M2	M3
	TR1G_A	TR1H_A	TR1I_A	TR1J_A	TR1K_A	TR1L_A
1923	.	.	3897.7	.	.	.
1924	.	.	5767.7	.	.	.
1925	.	.	7525.5	.	.	.
1926	.	.	10349.8	.	.	.
1927	.	.	16855.1	.	.	.
1928	.	.	22467.7	.	.	.
1929	.	.	27171.1	.	.	.
1930	.	.	32286.9	.	.	.

TABLE TR 1.2_A Monetary aggregates, 1923–1947

(thousands TL; end-of-year balance sheet entries)

Year	Sight deposits (TL)	Time deposits (TL)	Savings deposits	M1	M2	M3
	TR1G_A	TR1H_A	TR1I_A	TR1J_A	TR1K_A	TR1L_A
1931	.	.	35913.4	.	.	.
1932	.	.	39651.5	.	.	.
1933	137213.0	43596.0	69451.1	292611.0	336207.0	405658.1
1934	139873.5	40270.3	68159.2	307309.5	347579.8	415739.0
1935	125307.2	58448.2	75383.1	304062.2	362510.4	437893.6
1936	154326.3	62076.9	84117.0	356166.3	418243.2	502360.2
1937	185238.7	82645.4	96815.9	379227.7	461873.1	558689.1
1938	205045.3	94240.5	112390.1	424477.3	518717.8	631108.0
1939	200778.4	69503.0	83135.0	508828.4	578331.4	661466.4
1940	202116.1	69492.2	99380.6	635917.1	705409.3	804789.8
1941	284856.3	72845.2	123174.4	828359.3	901204.5	1024378.9
1942	398585.9	75868.9	118742.6	1164130.9	1239999.7	1358742.3
1943	400003.6	62608.0	140854.9	1233667.6	1296275.6	1437130.4
1944	499757.7	56006.6	187800.4	1494298.7	1550305.3	1738105.7
1945	489287.0	89643.0	229510.2	1407854.0	1497497.0	1727007.2
1946	610015.0	126302.0	297356.0	1585452.0	1711754.0	2009110.0
1947	668291.2	150807.7	371686.0	1601095.2	1751902.9	2123588.9

TABLE TR 2_A Interest rates, 1932–1947

Year	Short-term official discount rate	Short-term bank deposit interest rate	Long-term bank deposit interest rate
	TR2A_A	TR2B_A	TR2C_A
1932	7.0	.	.
1933	5.5	.	.
1934	5.5	5.0	6.5
1935	5.5	5.0	6.0
1936	5.5	4.5	6.5
1937	5.5	4.5	6.5
1938	4.0	4.5	6.5
1939	4.0	4.5	6.5
1940	4.0	4.0	6.0
1941	4.0	4.0	6.0
1942	4.0	4.0	6.0
1943	4.0	4.0	6.0
1944	4.0	4.0	6.0
1945	4.0	4.0	6.0
1946	4.0	4.0	6.0
1947	4.0	4.0	6.0

TABLE TR 3_A Exchange rates, 1923–1947

Exchange rates against foreign currencies are reported in foreign currencies per one Turkish Lira (TL). Data are based on monthly averages.

Year	TL/ Pound sterling	TL/ French franc	TL/ Reichsmark	TL/ US dollar
	TR3A_A	TR3B_A	TR3C_A	TR3D_A
1923	0.131	9.887	.	0.600
1924	0.119	10.092	.	0.520
1925	0.112	11.414	.	0.534
1926	0.107	16.377	.	0.517
1927	0.105	12.997	.	0.510
1928	0.105	12.959	2.130	0.507
1929	0.099	12.291	2.020	0.482
1930	0.097	12.001	1.970	0.471
1931	0.105	12.047	1.990	0.473
1932	0.135	12.047	1.991	0.474
1933	0.143	12.051	1.989	0.604
1934	0.153	12.055	2.011	0.792
1935	0.162	12.047	1.976	0.795
1936	0.160	13.305	1.976	0.796
1937	0.160	19.925	1.970	0.792
1938	0.162	27.733	1.976	0.794
1939	0.177	31.150	1.964	0.782
1940	0.191	34.538	1.980	0.729
1941	0.191	35.714	.	0.762
1942	0.191	.	.	0.764
1943	0.191	.	.	0.765
1944	0.191	.	.	0.765
1945	0.192	.	.	0.763
1946	0.166	42.463	.	0.626
1947	0.088	42.409	.	0.355

TABLE TR 4_A Government finances, 1923–1947*continue*

(thousands TL)

Year	Total tax revenue	Government expenditure	Foreign public debt	Domestic public debt
	TR4A_A	TR4B_A	TR4C_A	TR4D_A
1923	101150.0	105926.9	.	.
1924	121400.0	131628.0	.	.
1925	145200.0	201449.7	.	.
1926	125600.0	172186.9	.	.
1927	128827.0	198951.2	.	.
1928	138700.0	201133.0	.	.
1929	143681.0	213367.4	.	.
1930	127221.0	210129.7	.	.

TABLE TR 4_A Government finances, 1923–1947

(thousands TL)

Year	Total tax revenue	Government expenditure	Foreign public debt	Domestic public debt
	TR4A_A	TR4B_A	TR4C_A	TR4D_A
1931	106633.0	181861.0	.	.
1932	120374.0	212011.1	.	.
1933	123340.0	173608.8	.	.
1934	142129.0	228858.7	242805.8	214787.7
1935	153065.0	259589.2	238118.7	241576.1
1936	174275.0	252402.0	248079.7	257682.8
1937	197376.0	287183.7	205237.9	303386.0
1938	177515.0	303889.0	187461.0	346152.7
1939	172514.0	387229.4	191766.1	365620.0
1940	197468.0	535863.8	303338.7	484468.5
1941	258582.0	574594.5	325021.4	687617.6
1942	637927.0	885102.3	329571.6	865756.2
1943	578351.0	1019036.9	338679.8	980996.6
1944	583546.0	1077456.3	359277.7	1136063.6
1945	376441.0	600676.0	356695.6	1126639.8
1946	621110.0	1018854.1	707400.2	1216826.5
1947	949976.0	1564240.5	724597.1	1025622.2

TABLE TR 5_A Prices, production and labour, 1923–1947

continue

(TR5B_A in thousands TL; TL5C_A and TR5D_A are in millions of inhabitants)

Year	Consumer price index	Industrial production (value)	Labour force	School enrolment
	TR5A_A	TR5B_A	TR5C_A	TR5D_A
1923	100.0	125.7	5.5	0.3
1924	116.4	118.2	5.6	0.4
1925	125.6	145.2	5.8	0.4
1926	127.7	162.8	5.9	0.4
1927	112.1	186.1	6.1	0.5
1928	111.7	184	6.6	0.5
1929	118.7	199.2	6.8	0.5
1930	109.4	176.1	6.5	0.5
1931	103.4	171.0	6.6	0.5
1932	100.8	161.4	6.7	0.6
1933	90.0	181.5	6.8	0.6
1934	88.6	214.2	7.0	0.6
1935	82.3	232.6	7.2	0.7
1936	82.6	258.5	7.4	0.7
1937	83.8	293.1	7.6	0.8

TABLE TR 5_A Prices, production and labour, 1923–1947*(TR5B_A in thousands TL; TL5C_A and TR5D_A are in millions of inhabitants)*

Year	Consumer price index	Industrial production (value)	Labour force	School enrolment
	TR5A_A	TR5B_A	TR5C_A	TR5D_A
1938	83.5	311.4	7.8	0.8
1939	85.3	370.6	8.0	0.9
1940	92.5	446.1	7.9	0.7
1941	110.6	578.5	7.9	0.9
1942	184.5	824.5	8.0	0.9
1943	268.9	985.6	8.1	1.0
1944	275.6	1026.4	8.3	1.2
1945	278.1	878.2	8.4	1.4
1946	267.5	1006.6	8.6	1.4
1947	271.5	1149.4	8.8	1.4

TABLE TR 6_A National accounts and population, 1923–1947*(TR6A_A, TR6B_A, TR6C_A and TR6D_A are in thousands of TL. TR6E_A are mid-year estimates, in millions of inhabitants)*

Year	Nominal GNP	Real GNP	Exports	Imports	Population
	TR6A_A	TR6B_A	TR6C_A	TR6D_A	TR6E_A
1923	952600.0	2928100.0	84651.0	144789.0	12.43
1924	1203800.0	3363800.0	158868.0	193611.0	12.70
1925	1525600.0	3793300.0	192428.2	241618.7	12.98
1926	1650500.0	4484000.0	186422.8	234699.7	13.26
1927	1471200.0	3909600.0	158421.0	211398.2	13.56
1928	1632500.0	4341300.0	173537.5	223531.8	13.85
1929	2073100.0	5278200.0	155214.1	256296.4	14.15
1930	1580500.0	5393900.0	151454.4	147361.1	14.45
1931	1391600.0	5865700.0	127274.8	126659.6	14.76
1932	1171200.0	5235200.0	101301.4	85983.7	15.07
1933	1141400.0	6063900.0	96161.9	74675.9	15.39
1934	1216100.0	6429600.0	92149.1	86789.9	15.72
1935	1310000.0	6233800.0	95861.1	88823.5	16.05
1936	1695000.0	7679800.0	117733.2	92531.5	16.35
1937	1806500.0	7798200.0	137983.6	114379.0	16.63
1938	1895700.0	8537500.0	144946.5	149836.7	16.92
1939	2063100.0	9117800.0	127389.0	118248.9	17.37
1940	2403400.0	8667900.0	111446.5	68922.7	17.72
1941	2992300.0	7780400.0	123080.9	74814.8	17.95
1942	6195900.0	8217400.0	165034.0	147714.0	18.14
1943	9231700.0	7412900.0	257152.0	203045.0	18.34
1944	6684700.0	7037900.0	232529.0	164947.0	18.53
1945	5469800.0	5960100.0	218929.0	126166.0	18.66
1946	6857600.0	7864000.0	432096.0	223931.0	19.07
1947	7542600.0	8192400.0	625245.0	685003.0	19.49

