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Nenovsky, Nikolay

CRIISEA, University of Picardie Jules Verne, France, RUDN, Russia

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The Soviets monetary experience (1917 – 1924) through the perspective of the discussion on unity and diversity of money

Nikolay Nenovsky¹

CRIISEA, University of Picardie Jules Verne, Amiens

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Abstract:

The paper presents the evolution of monetary regimes and monetary reforms in the Soviet Union during the period following the seizure of power in October 1917 until the currency reforms carried out by the Soviet authorities in mid-1924. The studied period gives possibilities for reflection on the “diversity and complexity of monetary practices”, the currency competition and complementarity, the various ways of connecting the different monetary functions (measure, payment, exchange, store of value etc.). Of special interest are the relations between measure (accounting), and exchange (payments), and between large and small currency denominations.

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Key words: NEP, soviet economy, diversity and unity of money

¹ nenovsky@gmail.com

I Introduction

This paper presents the evolution of monetary regimes and monetary reforms in the Soviet Union during the period following the seizure of power in October 1917 until the currency reforms carried out by the Soviet authorities in mid-1924. We are interested in exploring the period for a number of reasons.

First, the examined period gives possibilities for reading from the viewpoint of “diversity and complexity of monetary practices”, of competition and complementarity of money, of the various ways of connecting the different monetary functions (measure, exchange, payment, store of value etc.). Of special interest are the relations between measure (accounting) and exchange (payment), and between large and small token money.

Second, especially interesting is the experience of parallel circulation of two main media of exchange (from July 1922 to May 1924) where phases of complementarity alternated with phases of competition². The period of War communism and natural economy offers a number of proposals and projects were advanced for exchange in kind and reducing money to a tool of calculation, and later, for eliminating money as measure, unit of account. Over the examined period, there were episodes of mass dissemination of numerous spontaneously emerging forms of currency (often referred to as “money substitutes”).

Third, and more generally, the early Soviet experience provides food for thought about the debates between the two major schools of monetary theory and practice: (i) that of exogenous, or commodity money having a positive intrinsic value and (ii) endogenous money, or fiat money, either fiscal or bank. Of special interest is the interaction between fiscal and bank money.

Fourth, the experience is interesting from the standpoint of the fundamental debate on the existence of a specific tradition, archetype, in the monetary practices and thinking in Russia (and perhaps in Asia) where, unlike the western tradition, money is associated with the centralised power and are ideal by nature. The discussion about the specific Russian order clearly fits into the much larger debate about Russia’s path of civilisation (slavophilism versus prowesternism), etc. Theoretical discussions from the NEP period in many respects repeat theoretical and policy debates during the 1895/1908 monetary reform (brought to completion by Count Sergei Witte)³. One of the leading and most original participants in these discussions, Sergey Sharapov (1856-1911) put forward numerous proposals of a model of “absolute, ideal money”. In his model the medium of exchange and payments function is inferior, secondary and subordinate to measurement, accounting, which in turn is ideal and a function of absolute power and trust of the Russian people with the monarch (see also Pososhkov, 1987 [1724] 375-377).

Hence, fifth, interesting are the theoretical discussions and projects of monetary systems, where we find intermingled not only the interests of different social groups and actors, but also the

² In one of my previous studies, I overestimated the role of competition between the various types of money and underestimated the points of their complementarity (Nenovsky, 2006).

³ See Vlassenko (1949).

various ideas on money and economy in general⁴. In this array of thoughts, the Bolsheviks' monetary stabilisation efforts were the product of a special synthesis of the ideas and projects of post-war monetary stabilisation in the other countries with the specific problems and tasks of the Soviet regime (war, monetary revenue was the only source of financing of the huge budget deficit soaring to 60-90%), as well with some not quite clarified theoretical premises about the place of money in the new communist society.

Finally, sixth, we should not forget that the NEP experience in the monetary area was used in a number of events as an example of monetary stabilisation. These cases included the German stabilisation which followed right after the Soviet one (organised by Schacht in 1923), Greek reform in 1944/1945, and in modern times the stabilisation of the Yugoslavian dinar (initiated by D. Avramovich in 1993/1995). The NEP parallel currencies reform was prized highly by J. M. Keynes (in his *Tract of Monetary Reform*).

At the beginning below, I propose a tentative historical chronology of the evolution of monetary regimes in Soviet Russia from October 1917 until the complete withdrawal of the *sovznaks* (or *sovznaki* – transliterated from Russian plural form of *sovznak*) from circulation in May 1924. Within each period, I have given the basic facts, practical measures, and theoretical discussions in relation to money. Generally, and with some provisos, I have distinguished five periods.

Period I: An attempt to build state capitalism (October 1917 to June/mid 1918) which is actually the period from the October revolution through to War communism.

Period II: War economy (natural, non-monetary subsistence) based on distribution of goods. Issuing economy (*Emissionnoe hoziaistvo*)⁵ (June/mid 1918 to February/March 1920) which is the period of Civil War and War Communism.

Period III: Socialist non-monetary commodity exchange (simple socialist commodity economy) (February/March 1920 to March/August 1921) till the launching the NEP.

Period IV: NEP until the issuance of *chervonetz*. Here we speak of ‘inflationary economy’ (March/August 1921 to November 1922).

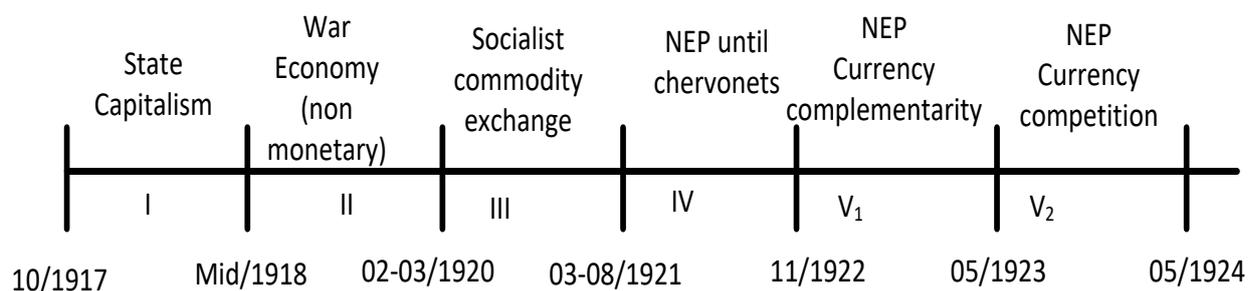
Period V: NEP and dual currency circulation (November 1922 to May 1924), with two phases money complementarity (November 1922 – May 1923) and money competition (May 1923 – May 1924)

This last period covers the time from the effective issuance of the *chervonetz* (gold backed currency) their circulation in parallel with the old *sovznaks* (unbacked paper currency), through to the final point of the currency reform when the entire circulation was unified based on gold. Within this period, two phases can be distinguished. During the first phase, also called “a period of peaceful co-existence”, the spheres of *chervonetz* and *sovznak* were centrally managed, while the second, which started in mid (to be more particular in May) 1923, was characterised by competition and fight between the two types of currency with the *chervonetz* becoming winner. In a whole we obtain a following picture (see Figure 1)

⁴ See the one-of-a-kind in terms of depth and based on reading of the archival materials of that period study by Goland, 2006.

⁵ That mean the principal source of government is money issue, economy based on seigniorage.

Figure 1 Periodisation of Soviet monetary reforms (1917 – 1924)



Let us look into the details of these five periods.

II

Attempt to build state capitalism (first period: October 1917 to June/mid 1918).

This was in effect the period from the October revolution to War communism. Here the main theoretical and guiding sources was Lenin's book "*Left Wing Childishness and the Petty Bourgeois Mentality*" (18 April 1917) where state capitalism is implied, i.e., temporary using the state machine for social production purposes. According to Lenin, "State capitalism would be a step forward as compared with the present state of affairs in our Soviet Republic".

After the revolution, the issues of currency and budget stabilisation, etc., were discussed, as well as the option of suspending money printing done during the war and during Kerensky's provisional government. Nevertheless, the strong depreciation continued (the *rouble* fell down to 32 *kopeks* in 1917) with the deficit reaching colossal proportions (81.7% in 1917 and 66.9% in 1918).

Lenin fought against left-wing ("petty-bourgeois") communists who were in favour of a monetary system based only on centralised social accounting (O. Schmidt and *). Rosentuk proposed "work tickets", "receipts", state shops bonds, etc.). Left-wing economists proposed that the currency should be abolished, whereas Lenin upheld that this should only be done as a coercive measure. In 1918, in Turkestan, an article titled "Down with money! (*Doloi dengi!*)" was published and a project of moving to coupons.

At that point, the decentralisation of monetary practices took place, and there were a great number of monetary experiments and projects. Thus, for instance, cooperatives and private banking consortiums, to name a few, issued currency. For example, Moscow's industrialists union proposed that regional bonds should be issued in circulation along with the state currency (*Narodnoe hozyaistvo* (Народное хозяйство), 1918, 6/7)

Until mid-1918, commodity exchange was a voluntary, albeit oftentimes broken principle. That is, Lenin tried to build a centralised system of commodity exchange at fixed prices (rationed products). The experience proved that the voluntariness of that exchange collapsed and evolved into a commodity-money turnover, into exchange, when fixed prices gradually becoming

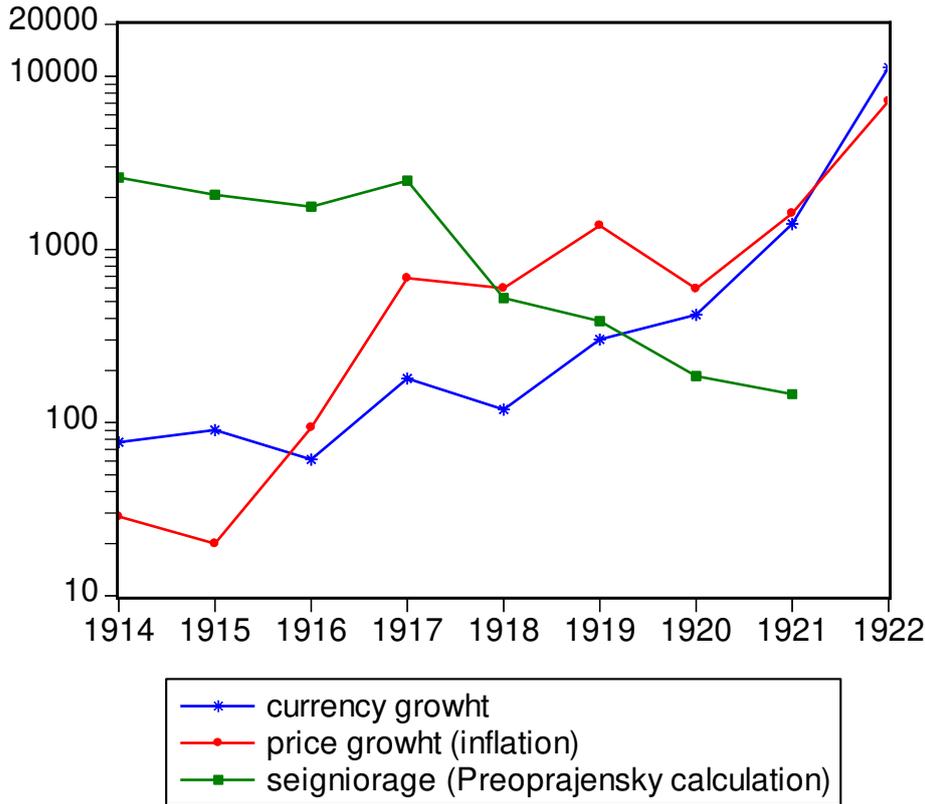
flexible. This happened because a voluntary exchange at fixed prices leads to non-equivalent exchange and shortage of goods.

Things changed as the Civil war broke out with the counter-revolutionary mutiny of Socialist revolutionaries in Yaroslav in June 1918. In fact they took Yaroslav branch of Gosbank under their control and took the banknotes (the cash).

**II
Non-monetary and distribution-based economy (June 1918 to February/March 1920).**

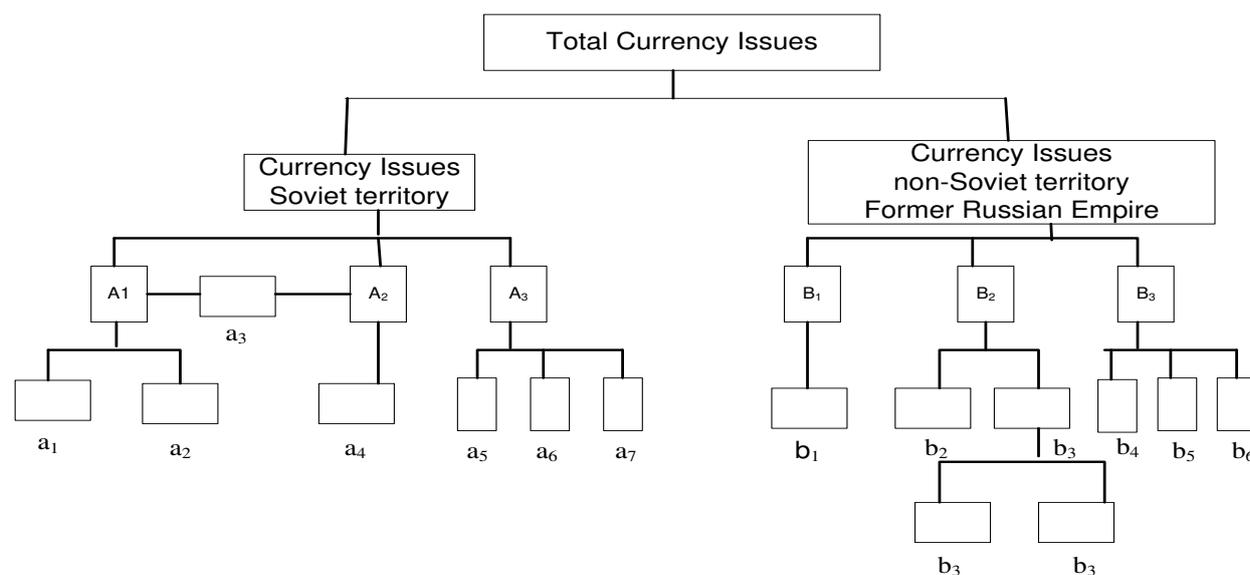
This was the period of War communism, and the so-called “issuing economy (*emissionnoe hoziaistvo*)”. The war led to building a military economy intended to organise the army’s food supplies provision, which was financed by means of taking away resources from the peasants. In late 1918, a state monopoly of trade was introduced and a centralised distribution of products in the public, nationalised, sector, followed by massive inflation. Monetary income, seigniorage (*emmissia*) was the only source of incomes as there were no taxes, no possibility for issuing debt, and no gold reserves (see Figure 2).

Figure 2. Annual growth of the monetary supply, prices and seigniorage (calculated by E. Preobrazhenski), 1914 – 1922, logarithmic scale



At this moment centrifugal forces were unleashed in the former Russian empire as a large number of attempts were made to issue local currency reaching up to 200 according to Atlas (2181 according to Chuchin and 6000 according to), (Atlas/112, Chuchin, 1927, Yurovsky, 2008 [1917-1927], 213)(see Figure 3)⁶. Thus, there were some 60 types issued by local authorities, and also those issued by restaurants and cafes. For example, the circus in Tuais issued its own circulation bonds (called *script*). In some regions in Chechnya (Grozny) religious money were issued, in Turkestan – *turkbonds*, and so one. Currency were also issued in the Far East (printed by private firms or in Japan), also in Ukraine (printed in Germany), and by the various White Guard groups (Denikin, Kolchak, Semenov, Czech Legion), etc.

Figure 3 Typology of Currency issues (extended chart from Atlas,)



A1 - Centralised currency issue of RSFSR

a1 – Former currencies (tsarist and provisional government issues)

a2 – Soviet currency issue 1919, “units of accounts roubles (*razschenie znaki*)”

a3 – Soviet currency issued by local soviet authorities with the sanction of Central Government/ex: Arahangelsk Gosbank issue 1918/25 roubles (*morjovki*).

A2 – Currency issues of others Soviets republics

a4 – Currencies issued by sovereign soviet republics (Kavkaz union/Azaerbadjan, Gergie, Armenie/Buhara

A3 – Others soviet currency issues

a5 – Local soviet issues without sanction

a6 – Issues by cooperatives, others social organizations

a7 – Issued by private entities

B1 – Currency issues of capitalist states, formerly part of Russian Empire

b1 – Official currency issues of Poland, Baltic countries

⁶ Details on different currency issues could be found in Pogrebtsky (1924), Rinkov (2006), Petin (2011), Orlov (2012).

- B2 – Currency issues during Civil War and Allied Intervention
 - b2 – Currency issued by governments of Denikin, Vrangel, Koltchak⁷
 - b3 – Currency Issues by Intervention Allied Powers (foreign currency covered, or local issues non-covered)
- B3 – Currency issued by local authorities, city authorities, cooperatives, private and others
 - b4 – Issues by municipalities, towns etc
 - b5 – Issues by cooperatives, others social organizations...
 - b6 – Issued by private entities
 - b7 – Issued by private army (Czech legion)

Having done an analysis on local currencies in 1919, the Russian Treasury (*Narcomfin*) announced its official position:

“Concerning local currency issuance, the centre is oftentimes in a difficult situation. On the one hand, the principle of nationwide currency system has it that no separatist currency issuing be allowed; and on the other, the centre’s financial problems and its detachment from the outlying districts compels a temporary retreat from this principle. At the first chance, however, to the extent the fiscal and technical aspects would permit, the centre seeks to achieve unification of the monetary system at the national level” (“Our currency circulation”, 1926, 257 and Atlas (1969), 114)

The authorities took actions to centralise and unify the monetary economy. *Turkbonds* for instance were exchanged at the rate of 10 *turkbonds* to 1 rouble. We should note that the Soviet government issued in 1917/1919 mainly currency notes of the old specimens (tsarist and of the Provisional government), in 1918 state credit notes (called “*creditki*”), and in 1919 – currency of the RSFSR. On first of January 1920, *sovznaks* accounted for 56.2% of the total supply and on first of January 1921 the old pre-soviet currency notes were just 8.9%. As a whole, there were several types of currency with fluctuating rates between them (see table 1). Although the media of exchange were diverse, yet all were based on the gold unit of account, the gold pre-war *rouble*.

Table 1. Structure of the money supply on 01/04/1920

<i>Kinds of Currency Notes</i>	<i>Volume</i>	<i>% of money supply</i>
Tsartski	21 796	6.4
Dumski	40 358	11.9
Kerenki	46 768	13.8
Soviet emissions/sovznaks	230 777	67.9
Piatakovski	221 282	
Exchange certificates	9 495	
Total	339 697	100

Source: Apostol (1921), 883

⁷ Anarchical organization of Nestor Mahno for instance issued currency/bon named “liberty” (*Vorosii istorii*, 1966, 9, 49), but this fact is actually challenged (see *Numbon*, 1996, 6 (36): 1-8).

The state of economic thinking of the moment could be illustrated by quote from Trotsky's speech at the Second congress of the Communist International on July the 23rd, 1919 regarding the issuance of paper money after the war:

The issuance of paper money continues to escalate with a growing speed. While in Soviet Russia the growing amount of paper currency and their devaluation together with the development of the public economy, the planed redistribution of products and the growing naturalization of the wages emerges only as a result of the decline of "commodity and money relations" in the capitalist countries the growing amount of paper money is a sign of the deepening economic chaos and inevitable collapse", Trotsky, 2005 [1920], 479.

Soon after the problem of currency hunger emerged as the currency supply depreciated in real terms due to the high inflation. An evidence of the increased money printing was the higher number of workers in the printing works to 13 616 in 1921 (11 260 in 1920, 7 500 in 1917, and 4 500 before the war). Overall, the entire period of War communism was characterised by currency and especially small denominations shortage. Real value declined rapidly (table 2).

Table 2 Real value of currency in circulation
(Based on the all-Union price index)

	1918	1919	1920	1921
In million roubles	1214	348	88	65
In % of 1918	100	28	7	5

Source: Atlas (1969), 130

According to Zahari Atlas:

"The severity and chronic currency hunger and the tremendous efforts to handle it evidence that despite the widespread view, currency, despite their diminished scope of circulation, play an important role even in a situation of military communist economy: the currency problem stood very sharply and both the local and central bodies of the Soviet authority gave it constant attention." (Atlas (1969), 129)

Moreover, while resources were mobilised from the peasantry and from the remaining private sector by issuing currency (*sovznaks*), a process of naturalisation developed in the public and nationalised sectors involving non-monetary (in-kind) distribution. Was introduced a "surplus appropriation system" (food rationing at fixed prices), which was a result of subjective factors and communist ideology ("economy without money"). At the end of April 1920 a work ration in kind and in-kind methods of payment and distribution were introduced (work was classified into four categories). According to Lenin, the system was called by the war situation as a tool for measuring different kinds of work. However internal contradictions quickly appeared. Labour productivity fell sharply.

"Its development pushes money outside the sphere of distribution of commodities while posing the issue of monetary assessment of in-kind bonus payment, i.e. proving that money is indispensable in implementing the socialist principles of division of labour". (Atlas (1969), ***)

In other words, after the Bolsheviks clearly demonstrated that they would do away with money as a medium of exchange, a new problem emerged – the need for money as measure, as a unit of account. That gave rise to various theories and proposals of non-monetary exchange and non-monetary measurement as a response to the question of how measurement should be done within a socialist setting⁸. The policy proposals were numerous and are summarised in Table 3).

Table 3 Competing theories of organising non-monetary socialist economy

A. Weinstein A. Chayanov O. Neurath	M. Smith S. Klepikov	S. Strumilin (subsequently he worked at Gosplan)
Non-value and non-monetary exchange Non-value measurement (No single measure)	Value measurement based on energy (human and machine, heat)	Value measurement based on <i>labour</i> (measurement in units of labour, <i>socially necessary labour costs</i>) Imitation of monetary economy, this is a mathematical problem. Social utility (not individual utility, Jevons).
Efficiency factors Efficiency coefficients (of enterprises and branches...), correlation between efforts and outcomes compared to average ratio ... (similar to modern DEA method) Chayanov (1921) Exchange in kind, subsistence farming. The “saving of force, power (<i>ekonomia sili</i>)” principle (law). Allocating consumption (connected consumption/	Unit of measurement “ <i>Work energy unit</i> ”, “ <i>Ened</i> ” energy unit (<i>energeticheskaya edinitsa</i>) = human energy (live labour) + machine energy (“dead” labour). In other words, taking into account labour costs including their technical capabilities (the debate is about whether to take into account only labour or labour and capital, i.e., whether the interest rate should be included in the prices). The depreciation (amortisation) issue.	It is believed that the “no money” option does not exclude value measurement which is necessary in a planned system (but a “new form of value”) <i>Labour value unit</i> (“ <i>Tred</i> ” = <i>trudovaya edinitsa</i>) = “the value of the product of labour per a normal working day of a first wage category worker at 100% performance of his work norm” (NN: The issue of simple labour!) 1 kilo <i>Tred</i> = 1000 <i>Tred</i> According to Strumilin, a dual system is needed, between different sectors: (i) Inside the public sector measurement in work (“ <i>treds</i> ”, working hours), the medium of exchange are the <i>sovznaks</i> (these after all are not money ...) (ii) Measurement between sectors (public, private and external) is in gold (in gold rouble), while the medium of exchange is money and that is the “work bond (<i>tred</i>)”.

⁸ The idea of a material, in-kind balance sheet and budget, “prices without money” or “money without monetary system”. A *Utilization committee* was set up; in 19/1/1920 the central bank was abolished. All was distributed in tickets and cards, rations, the idea of *in-kind measurement* and establishment: *in-kind, material bank*

Rationing (<i>payek</i>).		The two measurement units (gold and <i>tred</i>) should be linked by fixing an exchange rate. (iii) and later on, in the public sector – a “monetary system with parallel circulation of two currencies: 1) commodity backed (<i>treds</i> and work-roubles) and 2) unbacked (<i>sovznaks</i>).
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Initially (in his letter form 19 of May 1919), Lenin supported the “no money” ideas. Even the word “money” was removed, the notion was termed “units of settlement/unit of account (*razschetnii znak*)”. Thus, from 4 of February 1919 “units of settlement of the RSFSR” were issued (some with inscription in seven languages), see Picture 1 and 2.

Picture 1 Unit of Account of 500 roubles of the FRFSR issued in 1919



Picture 2 Unit of Account of the FRFSR 500 roubles, inscription in different languages



In order to do away with money, the left communists (L. Trotsky, Y. Larin, E. Preobrazhenski) wanted to issue enormous quantity of money. Lenin, too, defended inflation. He believed that paper money served only to “borrow from peasants” (and not to expropriated from them) by the proletariat. It was considered as loan first for waging the war, and second for recovering the economy. Lenin, however, came to the awareness that village and town people should be on better terms and therefore suggested that the surplus appropriation system (food rationing) should shift to “a socialist commodity exchange”. It was supposed to be exchange without money. In Lenin’s own words, this was a needed “retreat”. Thus, a transition was made to the next stage of the evolution of the Bolshevik monetary system.

III

Socialist commodity (non-monetary) exchange (February/March 1920 to March/August 1921)

This was the third period until the beginning of NEP. As already mentioned, due to the inflation and the different purchasing power across the geographic regions, the so-called pack peddlers (*meshochniki*)⁹ came into existence, i.e., traders travelling from place to place and selling goods, etc., speculating from the difference in prices. There were no small denominations while high denominations were already in demand (see Table 4).

Table 4 Value of the highest currency denomination, 1914 – 1921

Value as of 1 January	Currency denomination in rouble (Nominal)	Real value of currency denomination In rouble, calculated via the all-Union price index
1914	500	495.05
1915	500	384.61
1916	500	349.65
1917	500	170.06

⁹ In French *homes à sac*.

1918	1 000	48.17
1919	1 000	6.09
1920	10 000	4.13
1921	10 000	0.59

Media of exchange sprang spontaneously and sporadically into existence, mostly presented by foreign currencies, gold, and some sort of commodity money. Again according to Z. Atlas:

“A study of the market relations in that period indicates that the market, along with abandoning the *sovznaks*, tried to create commodities-money outside the control and regulation of the state” (Atlas (1969), 165).

Interestingly, during the period from the end of the war February/March 1920 until Kronshtadt Naval Rebellion (March 1921), Lenin considered the idea of experimenting through diverse local and regional experiences to select the most appropriate monetary and exchange system. Lenin set tasks in a following (“Hayekian”) way:

“Practice is a criterion for efficient and equitable institution. In a few months we need to have practical results in order to compare and study them” (Atlas/171)

In August/September 1921 occurred a natural spontaneous transition from commodity exchange to normal trade, i.e. buying and selling for money. Demand for money for transaction purposes emerged, especially at the end of the War communism. Mainly it was function of the expansion of commodity exchange, of the re-establishing of trade connections between the village and the town (so called “linkage” (*smichka*)). In August 1921, Lenin observed that money appeared on its own and he made a “new retreat” to monetary economy: According to him:

“It appeared – and now you all know too well from practice, as is also obvious from the media – that commodity exchange has failed, failed in the sense that it turned into buy and sell. And now, we have to realise, if we don’t want to hide head under wing, if we don’t want to pretend we don’t see our defeat, if we don’t want to look in the face of danger.

We need to realise that the retreat proved to be insufficient and so a further retreat is needed, yet another move back whereby from state capitalism we move to building state regulation of buy and sell and of currency circulation. Commodity exchange proved wrong, the private market proved stronger than us and instead of commodity exchange we experienced a simple buy and sell, i.e., trade.” (Lenin speech, VII Moscow Party Conference, Lenin, vol. 44, 207-208)

Precisely because was searched village and town to have better relations (*linkage/smichka*) by developing trade between them. And whilst initially trade and currency circulation were viewed on par with direct commodity exchange, with in-kind payment, i.e., as an auxiliary form, later on they became leading. That exactly was the decision to go for the NEP, the partial restitutions of capitalist and market economy principles. To note also that in this moment appeared one of the analysis concerning the impossibility for calculation without money under socialist economy, developed by Boris Brutzkus (1922), one of the forerunner of “socialist calculation debate” (see Brutzkus, edited by F. Hayek in 1937).

IV

NEP until the monetary stabilisation (*chervonets*), NEP under inflationary economy (March/August 1921 to November 1922)

This is the fourth period covers the time from the start of the NEP until the currency crisis in late 1922. Apart from the political and macroeconomic problems that led to a sharp change of the course in a direction to NEP (that are not object of analysis in this paper), the NEP launching was also for technical monetary reasons. The inflation of the official Soviet currency (*sovznaks*) and the appearance of various monetary substitutes (“local monetary issues”), notably the massive use of gold and foreign currency, had to be addressed urgently by means of monetary reform. The aim was to curb the unplanned monetisation of foreign and gold money, and prevent the seigniorage from being totally lost for the state.

March 1921 put the beginning of the NEP (X Congress) but it was not before August that monetary economy started to be talked about. Restoration occurred in the following order. Money was first restored as measurement, as a unit of account, then as a medium of payment and of exchange, firstly of high value denominations and secondly of small denominations.

In 1920 according to Krestinsky’s calculations the budget deficit was around 98 %, Katzenellenbaum gives similar figures (see Table 5, 6)

Table 5 Krestinsky’s figures

	Revenue (millions roubles)	Expenditure (millions roubles)	Deficit (millions roubles)
1918	1 804	46 726	44 922
1919	48 954	216 697	167 743
1920	150 000	1 150 000	1 000 000

CBRP (1922), 11

Table 6 Katzenellenbaum’s figures

Year	In Millions of Roubles			Deficit % Of Total Expenditure	Currency Issue
	Revenue	Expenditure	Deficit		
1914	2 961	4 859	1 898	39.1	1 283
1915	3 001	11 562	8 561	74.0	2 670
1916	4 345	18 101	13 756	76.0	3 480
1917	5 039	27 607	22 568	81.7	16 403
1918	15 580	46 706	31 126	66.6	33 500
1919	48 959	215 402	166 443	77.3	164 200
1920	159 604	1.215 159	1 055 555	86.9	943 600
1921	4 139 900	26 076 816	21 936 916	84.1	16 375 300

Katzenellennbaum, 1924, 69

In July 1921, the Politburo set the task of “deficit-free industry management”. Budget had to be balanced and reduced (XI Congress, December 1921). Austerity measures were taken, end of 1921, 60% of the state employees were made redundant, and further 25% were planned for 1922 (CRBRP, 1922, 33). Was taken radical shift form food rationing to reintroducing

agriculture taxes first in kind and later in cash¹⁰. Seigniorage as main source of revenues was abandoned. According to Lenin “Our tactical objective is to stop issuing money”, it is “opium for the people” etc. Following Volin’s analyses, seigniorage is paid up by no other but the state enterprises, i.e., it distributes income inside the public sector (“from one pocket to the other”) and does not generate new resources. There were intense debates how to begin reforms, from budget stabilisation to monetary stabilisation or vice versa.

At that period started interesting academic debates about the efficiency of issuing money and seigniorage calculations, with participants L. Yurovsky, E. Preobrazhenskii, S. Strumilin, and L. Krestinsky, to name a few. All analyses and figures showed the insignificance of monetary revenue in real terms (gold roubles). (See Tables 7, 8, 9, and 10).

Table 7 Krestinsky’s figures

	Issues in nominal terms (paper roubles)	Issue in real term (gold roubles)
1919	168 milliards	300 millions
1920	955 milliards	200 millions
1921	10 000 milliards	200 millions

CRBRP (1922, 12)

Table 8 Preobrazhenskii’s calculations

Year	Issue in real term
1914	1 397
1915 (second half year)	2 068
1916	1 768
1917 (approximation)	2 500
1918	525
1919	386
1920	186
1921	145.8

Pravda, 1922

Table 9 Yurovsky’s figures

Year	Value of the monetary issue in million of roubles/ Index of labor statistics
1914 (second half year)	873.8
1915	2 019.5
1916	1 718.1
1917	2 561.2
1918	536.2
1919	224.6
1920	122.0

¹⁰ It is worth noting that the surplus appropriation system (food rationing) led to a 6-fold lower income from taxes compared to the pre-war period (CRBRP, 1922, 10).

1921	149.0
1922	296.5
1923	327.8
1924 (January and February)	33.9
Total	8 863.6

Yurovsky, 2008 (1927), 339

Table 10 Yurovsky's figures by periods

Periods	Number of Months	Value of total issue in gold roubles	Average per month
War and till to February 1917 Revolution	32	4 862.5	151.9
Provisional Government	8	1 735.6	216.9
War Communism	44	1 492.0	33.9
NEP	32	773.5	24.2
Total		8 863.6	-

The independent Gosbank was re-established in October/November 1921 although it continued to be under *Narcomfin*'s control and initially lent in *sovznaks*. One year later, Central Bank was granted the right to issue banknotes not to cover the deficit (only via short-term commodity loans). From that moment started the existence of two separated monetary circuits (soft fiscal and hard banking). The general purposes were to repair the budget, reduce lending through Gosbank (in particular in 1922), and improve the trade balance. In Lenin's view, there were two tasks, first building Gosbank (in charge of commodity circulation, short-term loans etc.) and second, strengthening the budget by *Narcomfin* (reducing deficit, and introducing money taxes).

The unit of account ("measure of value" in Marxist terms) was once again under debate. Budget had to be presented in "ideal" pre-war gold roubles (i.e., gold became a unit of account). The principal political text here was Lenin's "*On the significance of gold at the present stage and after the complete victory of socialism*" (November 1921). Was introduced the gold measurement in pre-war gold roubles plus indexation to commodity rouble coefficient to count the change of price level during the wars years (Council of People's Commissars, 5/11/1921)¹¹, see (1).

$$(1) P = P_0 \times \kappa$$

where

P_0 – Price level in 1897 pre-war rouble

κ - Coefficient, set by *Narcomfin*, based on foodstuff basket

Thus, two types of prices existed, gold and paper linked through a floating rate. At this point a debate was started which price, gold level (P_0) should be taken as reference. Three options were discussed: (i) historically, price level from Tsarist Russia, 1898/1913, (ii) externally, current

¹¹ According to many authors was provisional because this coefficient is determined by changes in the prices of a particular basic foodstuff basket.

level from the capitalist countries through the exchange rate, or (iii) price level of a particular commodity basket, commodity collateral (E. Preobrazhenskii's "inflation targeting" proposal). Prices gradually shifted from fixed into controlled, and subsequently to free-floating (here the main intellectual source came from Lenin's letter to Tsyurupa, 18/2/1922)

As a whole, we could summarise. Unit of account ("measure of value") was gold rouble and gold. Medium of exchange and means of payment in the nationalised sector were *sovznaks*, which were paper fiat money. And as medium of exchange and means of payment in the private sector and among sectors were used gold and foreign currency. The means of saving was gold.

A flight from *sovznaks* started, as it was pushed away by gold (the reason behind this was that the exchange rate between them was floating, and not fixed)¹². The crisis in late 1922 was currency hunger. A new wave of local money and media of exchange appeared in great numbers (bonds, stamps, labels bearing the *Narcomfin* stamp). In 1922/1923, permission was issued for these to be used in local budgets (Pogrebetsky, 1924, Chuchin, 1927). At this moment new official media of payments and media of exchange came into being, - bonds issued in relation to the grain loan (reimbursement were made either in cash or in grain). Two grain loans and one sugar loan were floated. In 1922, the first Soviet rouble was issued and the term "unit of settlement rouble" ceased to be used. The new currency appeared named "Rouble monetary unit" began to be used instead (1 *rouble* 1922 = 10 000 paper *sovznaks* (after the denomination).

The 1922/1923 budget was covered by a 26.6 % issue (whereas during the years 1918-1920 – from 66% to 85 %.). In that period, international monetary conferences were held, and of particular importance was this in Genoa (1922) where Russian delegation tried to negotiate new debts. Western creditors were reluctant because of Bolshevik's refusal to recognise the Tsar's debts. The NEP project and the idea of issuing parallel currencies, was supported by Keynes (in his *Tract of Monetary Reform*). But, according to a majority of economist from that period, Ozerov for instance, maintained that no stabilisation on Soviet ground was possible (The Economist and Report of Russian Banks' Representatives in Paris, CRBRP, 1922)¹³.

At that point started one of the most interesting and theoretically deep discussion of how to stabilise the Russian currency. Although projects were advanced before that, in June/July 1922 a number of academic and policy sessions were held in an extremely free and constructive tone (Goland, 2006, CRBRP, 1922, Strumilin, ***, Dobrohodov, 2008). Once again, these projects reproduce astonishingly the monetary reforms of Witte's 1895/1897 (on Witte's reforms see Kaufman, , Sharapov, 1895, Guriev, 1903, Vlassenko, 1949, Van Laue, 1969).

¹² Had it been fixed, Graham's law would have been observed leading to exactly the opposite – pushing gold away.

¹³ See also Spring Rice (1919), Arena (1923), Lyon (1927), Eiacheff (1931), Ciocca (1933), Griziotti Kretschmann (1924, 1928), Kokovtzeff (1931), Nolde (1928), Temkin (1965).

Table 11 Currency reform projects, for introduce a second medium of exchange

Proposals from abroad	Proposal form Russian scholars (Witte reformers)	Central Bank (Gosbank) proposal	Treasury (Narcomfin) proposal	Planning Committee (Gosplan) proposal
<p>A. Putilov (Large industrialist and banker, Russian-Asian Bank)</p> <p>Foreign bank plus Soviet participation in its capital. Bank was to issue banknotes in Russia fixed to the French gold franc. Credibility comes from abroad and would lead to foreign loans.</p> <p>Supported by the Bolshevik L. Krasin (Foreign trade commissioner)</p> <p>Project of Information/Temps (Paris)/1922</p> <p>Issuing Bank for Russia with branches in Russia issuing banknotes convertible to foreign currency at a fixed exchange rate. Banknotes</p>	<p>V. Tarnovskii Powerful foreign financial group to set up a bank and issue a loan, of much higher capital than Putilov's.</p> <p>Issue a parallel competitive medium of exchange (banknote). The banknote to replace the <i>sovznak</i> completely.</p> <p>N. Kutler (involved in Witte's reform of 1897/1898, met with Keynes)</p> <p>Not as a competitive currency (as these could be contaminated) but as complementary, and by gradually withdrawing the Soviet currency issue from circulation.</p>	<p>A. Scheimann Gosbank should issue banknotes based on short-term obligations (of up to 2 years) and backed by and convertible into gold coin.</p> <p>In a debate with Sokolnikov (Narcomfin) insisted that Gosbank should issue small denominations of gold backed banknotes.</p> <p>However, the Narcomfin was reluctant as it feared it might lose the seigniorage</p>	<p>G. Sokolnikov Bank bills (banknotes), backed by gold but nonconvertible, called <i>hrivna</i> (1 <i>hrivna</i> = 2 gold roubles).</p> <p>According to L. Yurovskii 1 <i>hrivna</i> = 10 gold roubles</p> <p>Politburo (29 June 1922), with the purpose to prevent competition and so avoid a zero seigniorage. "Peaceful co-existence" was promoted (complementarity).</p> <p>The issue of small value denominations, and increase the value of the smallest denominations of <i>hrivna</i> (5, 10, 25, 50, and 100). Banknotes to become means of saving.</p> <p>Politburo (20 July 1922) and Decree of 25 July 1922 to be issued by the name of <i>chervonets</i></p>	<p>S. Strumilin Levied critique against gold stabilisation (1/6/1922, in <i>Pravda</i> and <i>Ekonomicheskaya Zhizn</i>).</p> <p>He critiqued Sokolnikov and proposed stabilisation based on the <i>commodity rouble</i>, and not gold backed. Model inspired by I. Fischer's (compensated dollar).</p> <p>He met with Keynes.</p>

<p>guaranteed by the European powers.</p> <p>The banknotes were issued against (i) advance payment by the Soviet Union which were to be controlled by the foreigners and (ii) against export guarantees. The banknotes were to gradually replace the Soviet roubles (<i>sovznaks</i>).</p> <p>Project of the Russian banks in Paris (prepared for the conference in Genoa 1922)</p> <p>Issuing shareholding bank with foreign participation in the capital, but with Russian majority. Gold backed, but not convertible into gold banknotes (inspired by Austro-Hungarian Bank).</p>	<p>The new currency should be gold-backed, and silver coins should be issued as well.</p>	<p>because of the continuing deficit.</p>	<p><i>1 chervonets = 10 gold roubles</i></p> <p>Denominations (high value) banknotes 10, 25, 50, 100.</p> <p>Convertibility is to be postponed, promised, for 2 years.</p> <p>Gosbank may extend loans in the new banknotes 50% backed by foreign currency reserves; taxes are also payable in banknotes.</p> <p>The <i>chervonets</i> is backed 25% by precious and durable metals and gold foreign currencies and 75% by easy to place promissory notes (bills of exchange) and short-term obligations</p> <p>Thus, there were 3 operations against which <i>chervontsi</i> could be issued (Forex reserves, 6-month loans, and bills of exchange).</p>	
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V

NEP and dual currency circulation (November 1922 to May 1924)

Thus, as already mentioned, in late November 1922, Gosbank started issuing *chervonets*, 25% backed by precious metals and stable foreign currency (backed by gold) and 75% payable bills of exchange, short-term commodity loans. An Issue Department was set within the bank's structure to monitor the coverage. There was also a free issue balance, a surplus reserve above the issued amount of *chervonets* (see balance sheet on table 12)

Table 12 Balance sheet of Issue Department within the Gosbank structure (NN example)

Asset	Liability
Cover funds 500	<i>Chervonets</i> banknotes 200
	Free balance from the right to issue notes 300

Picture 3 One gold *chervonetz*



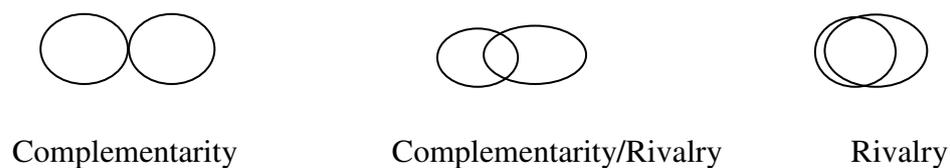
In fact, there was no convertibility and its beginning was not clear (2 years later), it was just promised to start in a later date. In other words, stabilisation was not based on convertibility, but on quantitative limitation of the issue and the active intervention of the state on the foreign exchange market. The purpose was for the *chervonets* to push gold and foreign currency, i.e., to keep the seigniorage from flying abroad.

A note should be made that the *chervonets* were not received well by the population (Yurovsky, 2008 [1917 - 1927], 311-314). The authorities had to introduce them by force, similar to the reluctant attitude to gold roubles in Witte's reform. This exactly was one of the arguments which was why a number of Russian economists asserted that the Russian people preferred ideal and power-bestowing money rather than tangible money in precious metals (Pososhkov, 1724; Sharapov, 1895, Nechvolodov, 2015 [1906]). Mainly the argumentation was based on philosophical and cultural grounds (so called Slavophil tradition), but also on

the long periods of Russian monetary history based on paper and unbacked currency (roughly from 1768 to 1897)

The period was characterised by a number of interesting developments where the spheres of the two media of exchange (*sovznak* and *chervonets*) either shrank or expanded alone or together, initially in a complementary relation and finally becoming rivals, competitive currencies. The interaction between complementarity and rivalry, albeit purposefully managed, were largely conditional on spontaneous market developments. The figure 4 presents a dynamic of the dual circulation, from complementarity to competition.

Figure 4 Dual currency circulation (*sovznak* and *chervonetz*), from complementarity to competition



V1 Phase of complementarity or “peaceful co-existence and mutual help” (November 1922 to May 1923)

The *chervontsi* were a high value currency, denominations of 10 rouble (wages were in the order of 1 rouble). They were money of the town. The *sovznaks* were small value money. They were money of the village, of the peasants. The exchange rate between the two was not fixed, but floating and announced daily. This way, the state tried to manage the two spheres and urge them to support each other, and not to compete. The two media of exchange did not fight – they were in a “peaceful co-existence”, or at least that was the Soviet authorities’ aim (confirmed at the XII Congress in March 1923). By means of exchange rate interventions, they tried to stabilise at one moment the *sovznak*, at another the *chervonets*.

After Yurii Goland:

“Sokolnikov declares that if the spheres of activities of the *chervonets* and the *sovznak* are properly distributed, it is possible that the two co-exist peacefully. He also recognizes that if no such division exists, the *sovznak* would fail. “If the banknote enters the retail turnover, if it goes beyond lending to industry and becomes a medium of exchange in the retail turnover area, it would kill the *sovznak* and would itself become a *sovznak*, i.e., a medium of issue of the treasury”. These words explain why Narcomfin was against introducing the *chervonets*.” (Goland, 2006, 459)

According to L. Yurovskii, the aim was:

“To use the *sovznak* as the basis on which to breed and grow the *chervonets*, and keep the *sovznak* until it’s needed depending on the condition of the state budget, and as far as it could exist more or less, so that the whole monetary system could be reformed” (Yurovskii, 319)

As far as lending was concerned, the idea was Gosbank would lend short-term loans in *chervontsi* to the light industry, and loans in *sovznaks* to the heavy industry.

The Soviet literature referred to the *chervonets* as “a stable currency” and to the *sovznak* as “a declining currency (*padaiuchaia valuta*)”, that is, there were two media of exchange and payment. However, there was a growing demand for the *chervonets* and an *agio* occurred, a departure from the officially announced exchange rate.

In 1923, the *chervonets* became *unit of account* (replaced the gold pre-revolutionary rouble). The *chervonets* quickly asserted itself as the medium of saving and hoarding. It was now in demand on international exchange markets and even a song appeared (see Nenovsky, 2006):

“The Brit, the Frenchman, the Pole, the Japanese
“Are completely stunned,
“That a *chervonets* of the proletarian country became already firm
“Foreign bankers began even to assure that they have to recognize
“A Pure Golden Russia” Gleiser (1993, [1978])¹⁴



The *chervonets* was increasingly in demand because the private craftsmen (shopkeepers, farmers). **The so-called *nepmen* profited from it by using it to pay the state enterprises and for paying their loan debts in *chervonets*.** On the other hand, the endeavour to strengthen the budget and reduce the budget deficit limited the *sovznak* issue which led to increasing their demand. The demand for *chervontsi* was higher than the demand for *sovznaks*. There were some speculative attacks, attempts against the *chervonets*, such as the one organised by W. Churchill through the banks in Berlin (to cite...).

¹⁴ In Russian this symbolic rhyme sound:
„Britt, frantsuz, poliak, iaponetz,
Ochelomlenii vpolne,
Chto okrep uje chervonez
V proletarskoi storone.
Zagranichnie bankirii
Uje stali uveriat'
Chto Chervonnoi im Rossii
Nevozmojno ne priznat'”, Gleiser (1993, [1978]).

In order to prevent the seigniorage from being lost completely and the *sovznaks* from disappearing, G. Sokolnikov (*Narcomfin* head) decided to issue a *new medium of exchange*, which comprised 3-month 6% lottery bonds redeemable in gold roubles. They were in denominations of 500, 1000, and 5000 roubles. Sokolnikov's aim was two types of currency – bank and fiscal having different logic of coverage and issue (table 13).

Table 13 Balance sheet of the issuing institutions according to Sokolnikov (NN interpretation)

Bank currency

Asset	Liability
Gold coverage (gold and foreign currency covered by gold)	Bank money (high value money)
Commercial loan	
Government bonds	

Fiscal currency

Asset	Liability
Taxes (in anticipation)	Fiscal money (small value money, small change)

Narcomfin waged institutional fight with Gosbank and refused to agree to an issue of small denomination *chervonets* banknotes ($1/2$ *chervonets*) for fear of losing the seigniorage. On 7 July 1923, VTsIK (All-Russian Central Executive Committee) took a decision to limit the issue of *sovznaks* in real terms (in gold roubles) and reduce the state expenses (so to preserve the *sovznak*). Although the *sovznak* depreciated quickly and it became clear that it could not be saved, Sokolnikov made a new and last proposal for a new, fourth type of medium of exchange to be issued – called “fiscal guaranteed rouble” (July 1923).

This time the *price scissors* issue aggravated (elaborated in details by L. Trotsky) which was reflected in higher industrial prices and falling agrarian prices (in a ratio 3:1) (see chart 4). The village more and more boycotting supplies from the town.

Picture 4 The Price scissors

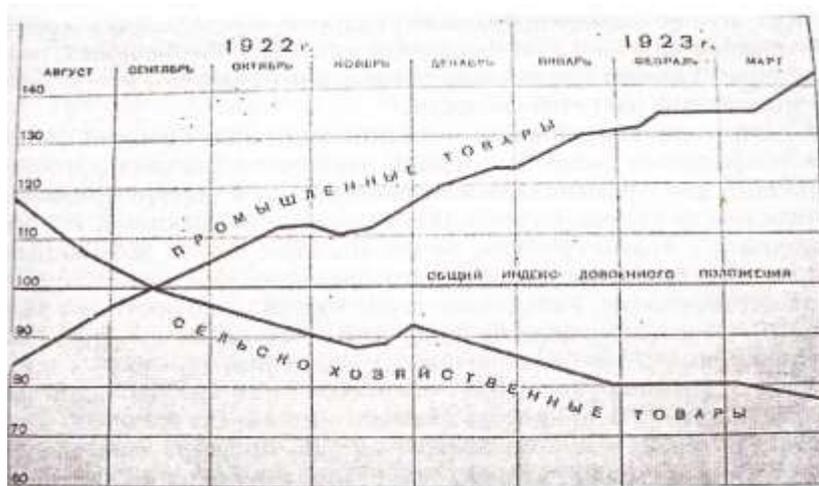


Рис. 1. Диаграмма динамики цен

Further opening of the price scissors was observed because industrial deals were made in the *chervonets*, while the village – in the falling *sovznak*. This led to even higher transfer of resources from the village to the town. In fact, along with taxes, the scissors were the key tool of draining resources from the village (this was theoretically elaborated as “Primitive accumulation of socialism” in *Initial Accumulation of Socialism* by E. Preobrajenski, Y. Larin, etc.) (Preobrajensky, 1970 [1922], 1966 [1926], day, 1975). The depreciating currency brought a loss to workers as well since their pays were in *sovznaks*.

The summer of 1923 saw different new types of exchange bonds. For instance the pharmacy “K. Marx” in Kiev issued bonds (1, 3, 5, and 10 roubles), similar bonds were issued by a canteen in Tula. Transport certificates were issued as well (of 1, 3, 5, 10 k, 20 k, 50 k), 1 *chervonets* being equal to 2 transport certificates. At a whole in this period (late 1923), unit of account was *chervonets* (defined in gold roubles), medium of exchange and payment were *chervonets* (banknote), lottery bonds (fiscal money), *sovznak* (fiscal money), and transport certificates (fiscal money). The medium of saving were performed by *chervonets*, foreign currency and gold.

Towards the end of the period, a transition was made to a competition phase. The scope of *sovznak* was reduced, while that of *chervonets* increased. The velocity of *chervonets* was similar to that of the pre-war gold rouble, while that of the *sovznak* increased 4-fold in 4 months. In August 1923, it became absolutely clear that the *sovznak* would collapse.

V 2 Competition phase, “the *sovznak* agony”, (May 1923 – May 1924)

The Soviet authorities took a course of complete elimination of the *sovznak* and a currency reform. This was conceded by intended higher issue of *sovznaks*. The aim was also to introduce the *chervonets* in the village although Sokolnikov proposed once again a new type of fiscal money, similar to transport certificates, and fixed to the *chervonets*. As usual, Sokolnikov strived to keep the issue from being taken completely by Gosbank and resisted the small *chervonets* denomination proposed by the governor A. Scheimann.

During October 1923 saw the *sovznak* increase by 4.4% daily or 131.7% in total. That was actually inflation and opened the price scissors even further. Part of the private sector liked the currency failing as this also depreciated their debts (this was sustained by the “left opposition”, Trotsky for instance). At that time, the budget sphere was stabilised. In 1922/1923, the losses incurred by state enterprises fell and for the first time some profit was registered. The government sector improved its efficiency. The *chervonets* gained reputation and became obligatory in contracts. The current account became positive (monopoly of foreign trade was kept), and a silver coin was issued.

Table 14 Dynamics of the monetary supply January 1923 – October 1924

		Amount of <i>Chervontsi</i> transferred to the bank by the bank Issue Department (in thousands)	Precious metals and stable foreign currency covering the issue of <i>chervontsi</i> . Percent	Amount of treasury issues in circulation "Sovsnaks" in mlns of Rubles	Percentage of <i>chetvontsi</i> in circulation to the total amount	Bank's possession of gold and foreign currency in Russia and abroad (in thousands of <i>chervontsi</i>)
1	1923	1,118	97,7	1,994	3	3,148
2		1,93	78,9	2,629	6,3	4,193
3		3	66,2	3,236	10,6	5,132
4		4,5	61,9	4,482	14,8	6,486
5		6	63,8	6,076	22	7,384
6		8	53,6	7,051	27,7	7,558
7		9,6	55,3	9,032	37	9,154
8		13,5	50,1	12,4	50	11,573
9		18,4	51,4	15,136	66,5	13,664
10		23,5	50,9	22,702	79	15,853
11		25,45	50,2	53,593	74,4	16,569
12		26,766	50,4	98,839	75,4	18,556
1	1924	28	51,2	178,51	78,3	21,353
2		30,3	50,7	333,018	83,7	24,655
3		32,8	51	866,504	82,2	27,128
4		33,8	51,3	768,101	75,1	30,113
5		35,2	53,4	740,236	67,6	31,086
6		36,7	53,3	-	60,5	31,869
7		38,75	51,9	-	60,9	30,346
8		41,75	50,1	-	57,6	31,355
9		46,156	46,8	-	56,9	31,314
10		51,887	44	-	55,7	30,498
11		-	-	-	-	32,649

Source: Katzenellenbaum (1925), p. 104, p. 176.

Table 15 The exchange rate of the *chervonets* at the Moscow Exchange at the beginning of every month and Purchasing Power of the *Chervonets*

		Exchange rate in Soviet (1923 issue) roubles	Exchange rate in UK Pounds (parity - 1.057)	Exchange rate in US Dollars (parity - 5.14)	Purchasing Power of the <i>Chervonets</i> in revised wholesale index prices of the Gosplan	Purchasing Power of the <i>Chervonets</i> in detail prices index of the Inst. Of "Econ. Conjunction"
12	1922	117	1,17	5,087	-	-
1	1923	175	1,219	5,426	10,4	6,99
2		209	1,259	5,186	9,62	6,8
3		239,5	1,128	5,206	8,63	6,29
4		302	1,168	5,206	8,7	6,45
5		457	1,033	4,408	9,18	6,71
6		570	0,856	3,851	7,92	5,59
7		760	1,02	4,662	6,88	4,87
8		1120	1,037	4,765	6,32	4,41
9		2000	1,047	4,591	6,36	4,79
10		4000	1,066	4,878	6,39	5,24
11		7000	1,093	4,827	6,7	4,48
12		13700	1,055	4,594	6,36	4,81
1	1924	30000	1,064	4,545	5,92	4,18
2		82000	1,085	4,608	5,36	3,89
3		300000	1,103	4,739	5,18	3,88
4		500000	1,196	5,141	5,53	3,97
5		-	1,174	5,141	5,71	4,39
6		-	1,193	5,145	6,03	4,46
7		-	1,189	5,141	5,91	4,52
8		-	1,169	5,141	5,7	4,26
9		-	1,145	5,141	5,8	4,24
10		-	1,152	5,141	6,09	4,55

Source: Katzenellenbaum (1925), p. 108, p. 111

The reform was finally completed on 5 of February 1924. Narcomfin took a decision to issue treasury notes (fiscal paper money) of denominations 1, 3, and 5 gold roubles. They were not directly linked to either the *chervonets* or the *sovznak*, and their volume was fixed at maximum at 50% of the *chervontsi* volume. The purpose behind the new fiscal money was to replace the depreciating *sovznak*.

On 14 of February 1924, the issue of *sovznak* was stopped and from 7/03/1924 to 10/05/1924 *sovznaks* were bought outright at the exchange rate of 1 gold rouble = 50 000 *sovznak* of 1923 = 50 billion *sovznak* rouble of 1922. In total depreciation of the paper rouble until the reform was 50 000 000 000. Silver coins were issued in circulation, also by Narcomfin.

The reform was completed, currency circulation was reduced and based on gold. Or, in the words of Soviet experts the result was "a system of paper currency circulation with gold parity" (*sistema bumajno-denejnogo obrachenia s zolotim paritetom*). At the end of the reforms, after the reform 1924, the unit of account was *chervonets* (defined in gold roubles), the medium of exchange and payment were also *chervonets* (gold backed banknotes), state

paper currency (fiscal currency backed by gold), silver coins (full-bodied money issued by the Treasury). The medium of hoarding, saving were *chervonets*, foreign currencies and gold.

VI

Post-NEP and general reflexions on the early soviet monetary experiences

After Lenin's death, the attacks against the NEP became stronger and the problems in the economy aggravated. The chervonets coverage began melting and on 9 July 1926 their export was banned. In 1927, the disproportions intensified and that is believed to be the NEP's last year of existence. G. Sokolnikov was against mixing a long- and a short-term loan when issuing *chervontsi* into circulation. That was also the position of the other prominent specialist L. Yurovskii (the debate was with Gosplan in the face of S. Strumilin). The choice however had already been made - Stalin took the path of five-year plans and collectivisation. For example, table 15 shows that already in 1926-1927 the part of private and cooperative sectors in the gross industrial output declined.

Table 15

Gross Industrial Output According to the Type of Ownership
(in %, at Pre-war Prices)

Period	State	Cooperative	Private and Concessionary
1923-24	70.3	5	24.7
1924-25	72.2	9.1	18.7
1925-26	74.7	9.0	16.3
1926-27	77.1	8.8	14.1

Source: Bandera (1963), 268 (data are from: Segal, L., B. Tal (1929), Economic policy of soviets' government, Moscow and Leningrad, 165)

As a whole, the currency stabilisation was a success even for the fact that gold reserves were scarce, merely 8.7% of the gold reserves until the war and 13% of the gold reserves during Witte's stabilisation of 1895/1898. No external loan was taken and the international relations were hostile to the Bolsheviks. These are for example the main point of success stressed by the witness and distinguished monetary specialist of this period Z. Atlas (1969). Yurii Goland, probably the most informed and original modern scholar on NEP, highly prized the NEP economic model and particularly the monetary part of the reform (). According to him, this was unique missed possibility to develop a different from of socialism economy ().

- To develop theoretical interpretations of this experience
- Articulation of different functions, mainly accounting and exchange, payments, also big and small denominations
- How this articulation was theoretically and practically challenged by different projects (abolishing monetary accounting, monetary accounting without mean of exchange and payment, later monetary regime with two complementary and later

competitive means of exchange and payments, finally stabilisation on monetary unity of functions (based on gold))

- What are the tracks for explaining this evolution of monetary projects and policies (conventional monetary approach (currency substitution, seigniorage maximization via two currencies); Political Economy/International Political Economy approach (Monetary regimes changes as expression of group interest/creditors and debtors/external and internal/monetary and political/power order...); Institutional, sociological, anthropological approach (Institutional complementarity and Institutional competition/Pereira and Théret approach to monetary duality/Cuba). Role of Interests and Ideas)/ Blanc, Desmedt, Baubeau from the seminar etc

Annexes

Table 16 Work unattendance rate in 1920 for the railway industry

1920	% of absentees from work for various reasons (total)	% of absentees from work for unknown or unacceptable reasons (<i>progul</i>)
January	29.8	6.3
February	29.8	5.1
March	28.2	5.3
April	28.8	5.2
May	26.5	4.4
June	23.8	4.3
July	24.8	4.5
August	25.8	5.3
September	25.7	4.6
October	25.3	4.8

Source: Russian Economist (1921), p. 766

Table 17 Work desertion and unattendance in Ukraine for the first half of 1921

Factories	Number of workers beginning of July	% of absentees from work		
		February	March	April
Petrovski	547	17	17	20
Yuzovski	357	30	-	-
Makeevski	4 462	24	32	33
Don-Yurevski	1 921	21	34	31
Luganski	3 565	28	43	43
Harkovski	4 596	31	25	32
Kramatorski	2 028	29	30	31
Druvkovski	1 545	28	33	31
Taganrogski	4 675	23	21	31

Debalcevski	721	38	45	43
Ekaterinoslavski A	7 284	45	52	53
B	1 364	21	24	24
Mariupolski	2 466	40	45	54
Konstantinovski	217	20	19	-
Kerchenski	464	-	-	-
Suvinski	1 891	-	-	-
Nikolaevski	3 218	-	-	-

Source: Russian Economist (1921), p. 1427

Table 18 Overtime working hours in Moscow 1919 – 1920

	% overtime work	Overtime working hours, realized by a worker in a month	Daily overtime working hours
October 1919	15.8	62.8	2.9
November 1919	18.3	62.2	3.9
December 1919	12.7	53.9	2.5
January 1920	25	67.3	3.7
February 1920	14.2	37.8	2
March 1920	17.9	46.8	2.3
April 1920	14.4	37.9	2
May 1920	15.3	68.8	3.4
June 1920	17.9	33.2	1.5

Source: Russian Economist (1921), p. 752

Table 11

Increase of the *sovznaks* money supply and of prices in *sovznaks* (Based on the preceding month ...)

Месяц	1921		1922		1923		1924	
	Δm	Δp						
January	11.1	28	69.8	89	31.8	30	98.6	199
February	14.6	27	63.0	112	23.1	12	80.6	280
March	13.3	29	67.3	119	38.5	26		
April	13.7	20	59.5	65	35.6	39		
May	10.7	45	65.0	22	16.0	22		
June	10.6	30	49.7	14	28.1	52		
July	19.6	-2	48.4	-4	37.9	66		
August	22.0	-5	46.6	7	35.3	75		
September	29.0	7	22.3	23	76.5	97		
October	43.1	16	28.7	58	131.7	67		

November	51.9	44	35.0	42	67.8	110		
December	78.1	108	34.8	29	95.1	136		

Annex Tabl1 9

Dynamics of the main variables in Russia during the crises, observed in the period 1905 – 1997

In %, % change minimum (% change maximum)

	National product	Agrarian Economy			Industry		Transport		Investment in fixed capital
		total	Plant-growing	Farming	Total	Consumption goods	Cargo-carrying	Passengers'	
1905-1906	-10 (-15)	-15 (-20)	-20 (-25)	-5 (-10)	-5 (-10)	-	-5 (-10)	0 (-5)	-20 (-30)
1916-1917	-20 (-25)	-10 (-15)	-20 (-25)	0 (-5)	-25 (-30)	-30 (-35)	-20 (-25)	-10 (-15)	-
1918-1921	-45 (-50)	-30 (-35)	-35 (-40)	-25 (-30)	-70 (-75)	-50 (-55)	-75 (-80)	-50 (-55)	-75 (-85)
1932-1933	-5 (-10)	-30 (-35)	-20 (-25)	-50 (-55)	+10 (+5)	-5 (-10)	0 (-5)	-10 (-15)	-10 (-20)
1940-1946	-30 (-35)	-50 (-55)	-55 (-60)	-45 (-50)	-30 (-35)	-45 (-50)	-35 (-40)	-45 (-50)	-40 (-50)
1990-1991	-10 (-15)	-5 (-10)	-5 (-10)	-5 (-10)	-5 (-10)	-5 (-10)	-10 (-15)	-10 (-15)	-10 (-20)
1992-1997	-40 (-45)	-30 (-35)	-20 (-25)	-40 (-45)	-50 (-55)	-55 (-60)	-45 (-50)	-35 (-40)	-65 (-75)

Source: Poletaev (2001), p. 222

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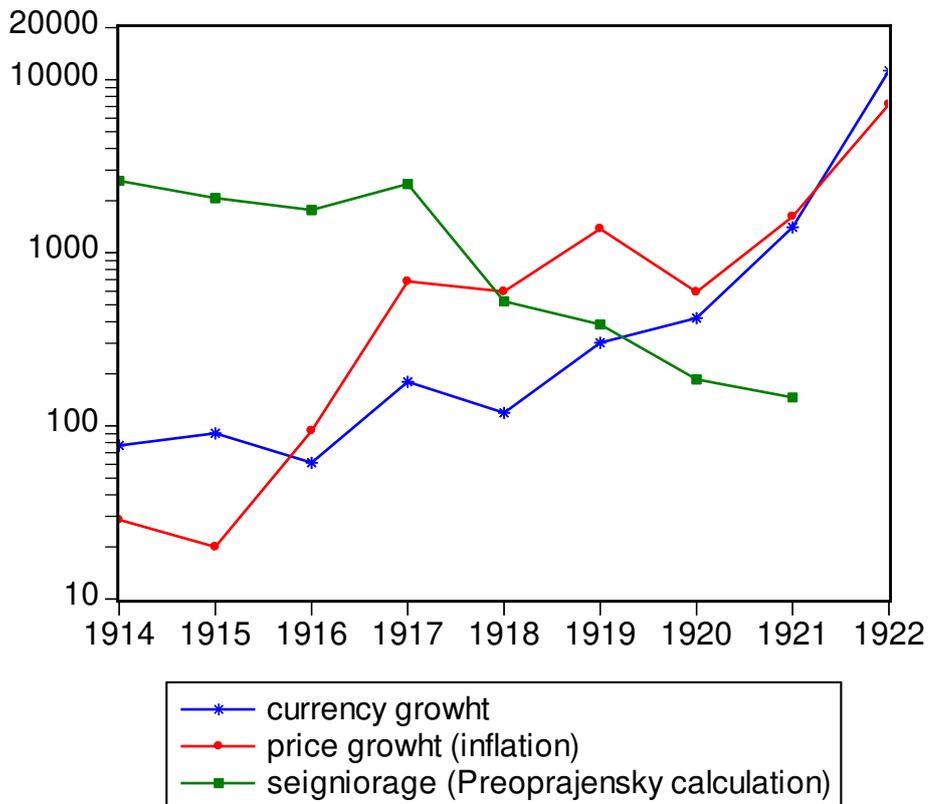
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Graph 3. Annual growth of the monetary supply, prices and seigniorage (calculated by Preobrazhensky), 1914 – 1922, logarithmic scale



Graph 2. Currency and price growth (1914 – 1924 г.) – normalized scale

