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Bolshevik roots of "Modern Monetary Theory"

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"Religion is opium for the people."
К. Marx/V. Lenin
"Emission is opium for the national economy",
P. Bark/G. *Sokolnikov*

Introduction. *MMT* one hundred years earlier

When I came across *Randall Wray's* book '*Understanding Modern Money*' in 1998, it seemed strange compared to what Bulgaria had experienced a year earlier a deep financial crisis, hyperinflation and the establishment of a Currency Board (*Hanke*, 2012). The new restrictive monetary regime was introduced after a large-scale monetisation of the public debt accumulated as a result of transferring the losses of privatised enterprises to the state. The government's deposits were left on the balance sheet of the Currency Board and thus fiscal policy influenced the monetary base. We viewed this as detrimental to the functioning of the automatic monetary equilibrium (*Nenovsky and Hristov*, 2002). In this setting, most of the ideas in Wray's book were a misunderstanding to us. At this time Wray's ideas took me back to a bygone period, that of the socialist monetary system, and later brought me back to monetary theory and history from the early years of Bolshevik rule. Particularly popular then was a monetary theory called the "Theory of Emission Economy (TEE/*Теория эмиссионного хозяйства*)," most fully formulated by *Semyon Falkner* (1890-1938).

Later, after 2008, the main ideas and proposals put forward by *Wray* became popular and became the so-called "Modern Monetary Theory, MMT" (*Wray*, 2015; *Mitchell and al.*, 2019). The pandemic crisis of 2020 confirmed changes in the pattern of monetary policy, with central banks injecting vast amounts of liquidity, monetizing government and large private debts virtually without limit (*Congdon*, 2020). Today MMT is gaining momentum and becoming the "new normal monetary theory."

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In this line of thought, it is interesting to make a comparison with the Bolshevik theory, formulated exactly a century ago, which is strikingly reminiscent of MMT (it is interesting that *Falkner* himself also calls his theory "modern"). Like MMT, TEE has had both supporters and critics. More importantly, during a certain period of time (1918-1920), the TEE was put into practice, and the "consolidation hypothesis" of MMT, that of the unification of the central bank with the treasury, became a reality (January 1920). The Bolsheviks' brief experience with MMT ended disastrously. Lenin himself, who at the beginning shared its basic ideas, was forced to undertake monetary stabilization based on the parallel introduction of gold money, the *tchervonetz* (*Goland*, 2006).

The task of this paper is to present the theoretical discussions surrounding the TEE as well as the monetary policies of Bolshevik Russia in order to derive some useful patterns for today. It is often argued that there is insufficient empirical evidence on the functioning of *MMT* (see the Latin America article by *S. Edwards*, 2019). In my view, Bolshevik Russia can be seen as a specific historical example of the application of MMT.

The text is organized as follows. First, we lay out the theoretical elements of the TEE, most clearly articulated in *S. Falkner* and partially in the mathematical model of *O. Schmidt*. We also present the criticisms of this theory made both by adherents of the Austrian school (e.g., *V. Novozhilov*) and by a number of Marxists (e.g., *B. Livshits*). In the second part, I present the practice of the Bolshevik "Emission economy" and its results. These led to the need for reforms to stabilize the ruble, undertaken by the Bolsheviks in order to preserve power.

I. The theory of the emission economy

The TEE was born as part of a theoretical debate among Russian economists that gained momentum in the years of the First World War and was related to the clarification of the nature of paper money. Paper money is known to dominate Russian history in one form or another (in practice paper money dominated the period 1769-1897). However, for most Russian economists, the brief period of the gold standard (1897-1914) was extremely successful. After the war, they did not question its restoration (*Lomeyer*, ed., 1918). Only a few "pre-revolutionary" economists saw a new stage in the development of money and believed that an era of "managed paper currency" detached from its metallic content was coming. Among them were *M. Tugan-Baranovsky* and *M. Bernatsky* (*Nenovsky*, 2020).

The Bolsheviks' rise to power radically changed the attitude towards money. Added to the turmoil in the monetary system, a result of the war, was the Marxist ideology that money had no place in the new communist society (*Yurovsky*, 2008 [1928/1924]). According to the leading understandings of the time, during the transition period money would be used as an instrument to destroy the capitalists and capitalist relations. Very quickly, however, they would die out and there would be a shift towards moneyless exchange, i.e., to labour or in-kind accountability. There are similar understandings of the place of the state as an organisation, which at first will also exist only as an instrument for subjugating the capitalist class and eliminating the class enemy (this is why the Bolsheviks do everything they can to distinguish themselves from the anarchists, Preobrazhensky, 1920). The main elements of the transitional

period, including the policy towards money, are presented in *N. Bukharin* and *E. Preobrazhensky's* The ABC of Communism (2008 [1918]).

In the early years of the Bolshevik regime, monetary income (seignoriage) became practically the only way to finance state expenditures (see Table 1). The fiscal base was destroyed by the war and the subsequent Bolshevik nationalisation of the main industrial enterprises. The economy was closed and there were no customs revenues. The issuance of interest-bearing debt securities was unrealistic (in fact, the emission of paper money can be seen as interest-free debt of the government). It was in this period that the emergence of "an emission economy" began to be discussed (*Hensel*, 1935).

Table 1**. Dynamics of the budget and financing through money emission** (Million roubles)

	Revenue	Expenditures	Deficit	Deficit as % of expenditure	Currency Emission	Proportion of deficit financed by currency emission, %
1914	2 961	4 859	1 898	39.1	1 283	68
1915	3 001	11 562	8 561	74.0	2 670	31
1916	4 345	18 101	13 756	76.0	3 480	25
1917	5 039	27 607	22 568	81.7	16 403	72
1918	15 580	46 706	31 126	66.6	33 500	100.1
1919	48 959	215 402	166 443	77.3	164 200	98
1920	159 604	1 215 159	1 055 555	86.9	943 600	89
1921	4 139 900	26 076 816	21 936 916	84.1	16 375 300	75

Sources: *Katzenelenbaum* (1924), p. 66; *Yurovsky* (ed.), (1926), pp. 15; *Shmelev* (1931), p. 126, and my calculations.

At this point various projects emerged to limit the role of money not only as a medium of exchange and means of payment, but also as a unit of measurement (unit of account) (*Bogomazov*, 1974, *Boettke*, 1999 [1990], *Nenovsky*, 2020)[1] . Within the framework of the destruction of money as a medium of exchange and means of payment, two theoretical approaches stand out. The first can be called the "currency nullification approach". The main proponent of this approach is *E. Preobrazhensky*, ("Paper Currency in the Epoch of Proletarian Dictatorship", 1920). This approach is first of all ideologically justified - money is the main instrument for destroying capitalist elements, and inflation is a lever for achieving this goal. Preobrazhensky himself is eloquent enough in the dedication to his book:

[1] The discussion on the cashless economy is extremely rich and interesting, I note here only some of its main points. For theoretical conceptions that propose the destruction of money as a means of measurement and calculation, and their critique, see *Lavoie* (2015[1985]), *De Soto* (2010 [2001/1992]), and *Magnin and Nenovsky* (2020). For a comprehensive review, see *Pasvolsky* (1921), *Manevich* (1986); *Shukhov* (1991); *Goland* (2006); *Arnold* (1937); *Malle* (1985), *Nenovsky* (2009, pp. 154-183). P. Boettke is the most complete and interesting study of this period from the positions of the Austrian school (*Boettke*, 1999 [1990]).

> "I would like to dedicate this imperfect work to the one who gave occasion to write these pages, the printing press of the People's Commissariat of Finance. [...] In the archives of the great proletarian revolution, alongside the guns, rifles and machine guns of our epoch that struck down the enemies of the proletariat, the printing 'machine gun' of the Narkomfin, which shelled the monetary system of the bourgeois system in the rear, turning the monetary circulation of the bourgeois regime into a means of destroying that regime and into a source of financing the revolution, will stand in a place of honour." (*Preobrazhensky*, 1920, p. 4.)

The second theoretical approach to the function of money as a medium of exchange and means of payment can be called the "monetarist approach". It puts the managed and controlled "depreciation of money" at its centre. This was what TEE is - the theory of the economy of emission. It finds its fullest development in the writings of Falkner (1918, 1918/1919, 1919, 1919a, 1919b, 1919c, 1920, 1920a, 1920b, 1921, 1922, 1924a), later summarized in his book *Problems and Practise of the Emission Economy* (*Falkner*, 1924). A mathematical attempt to verify the TEE was made by *O. Schmidt* in "*Mathematical Laws of Monetary Emission*" (1923)[2] . Before stating the basics of this theory, I will note that Falkner began working on the subject of paper money as early as 1914 and 1917 and conducted an extensive historical study of the French Revolution's laws of paper currency issue in connection with the so-called assignats[3] (1789-1797). Subsequently, he was an active participant in the creation of the Supreme Board of the National Economy (*Высший совет народного хозяйства* (ВСНХ)/VSNKh), and the subject of paper money was designated as the leading research topic of the new institution (NKh, 1918, p. 45).

The main propositions of TEE can be reduced to the following.

First, there are four ideal types of economy through which the state is financed - (a) a natural tax economy, (b) a natural production economy, (c) a monetary tax economy, and (d) an emission economy (see Table 2). Among these four types, the last, the issue economy, stands out, in which the state itself produces new currency (rather than seizing through taxes the currency already circulating). According to Falkner, although common in history, the emission economy model has rarely been analysed.

The emission economy gives the state unlimited possibilities to finance its spending. Falkner's analytical formulations are the result of observations he had on paper currency during the war years, when convertibility into precious metal (mainly gold) was interrupted. According to Falkner, non-convertible paper money underlies a specific regime that is not a deviation from the norm, but rather an independent, stable (albeit transitory) system. This regime is an unique economic category and has its own

[2] In his analysis of the monetary reform of the Hungarian Revolution, *E. Varga* speaks of three monetary strategies - 1) cancellation of money, 2) devaluation of money, and 3) withering away of money (*Varga* (1922 [1921]).

[3] *Assignats* - paper currency put into circulation in France during the Revolution of 1879 and in Tsarist Russia from 1789 to 1843. See the history of French assignats and the economic processes associated with them presented in *Aftalion* (2007).

mathematical laws (*Falkner*, 1920). According to the author, the emission economy is the opposite of the tax economy[4] .

> "Emission economy, paper currency [...] has the features of a completely peculiar and internally closed financial system that can and should be opposed to other systems. [...] The idea is to oppose the tax system as its antithesis. The state can obtain the funds it needs either by the forced withdrawal from circulation of the currency already circulating (a tax system) or by the forced introduction of new, arbitrarily created currency (an emission system). In the first case, the purchasing power of each monetary unit remains stable, constant. Only the quantity of privately held currency is reduced; in the second case, the quantity of privately held currency is not changed, but its purchasing power is artificially reduced at the expense of the newly created purchasing power, that of the new currency. [...] The emission of paper currency appears to be the strongest and most effective state-financial method of the decentralized commodity-exchange economy" (*Falkner*, 1919, p. XIII, pp. 267-268).

Table 2. **Types of economy and government financing systems**

Funding principles Form of financing	Seizure from the private sector (Tax economy)	Self-production (Production economy)
Natural form (Subsistence, natural economy)	Seizure in kind (Natural tax economy) (1)	Production of products (Subsistence, natural, economy) (3)
Monetary form (Monetary economy)	Seizure in currency, money (Monetary tax economy) (2)	Production of currency, money (Emission economy) (4)

Source: author's adaptation from *Falkner* (1924, pp. 35-36).

Second, the emission economy is a stationary state of a transient and disorganized economy caused by wars, social revolutions and other social upheavals[5]. According to Falkner, post-war Europe "will for a long time be in the state of the EU" and so until "the financial situation of Europe is radically changed" (*Falkner*, 1920, p. 24). The emission economy has its own laws of development. According to the author:

> "The possibility of an arbitrarily continuous development of the economic system of emission is conditioned by two factors: first, by the absolutely exceptional and incomparable importance of currency circulation (in all its distorted forms) for the exchange economy as a whole; and, secondly, by the adaptability of the exchange economy to every external influence, owing to the mobility of the elements and units of which it is composed" (*Falkner*, 1924 [1920], p. 25).

[4] According to Faulkner, the emission system can be approached in three ways: a) as a method of financing, b) as a monetary phenomenon and c) as an organisational form.

[5] According to the author's calculations, "in 1919, in continental Europe (adding Russia), out of a population of 462 million, 340 million were living under conditions of intensive EU development, and only 122 million, i.e. about 27%, under conditions of a barely stable monetary circulation" (*Falkner*, 1920, p. 24).

> "It may be argued that just as the criterion of a sound monetary economy is the sustainable value of the monetary unit, so likewise such a criterion of a normal emission economy is the sustainable rate of its depreciation. [...] What is the significance of the commodity depreciation of our currency as a whole? The depreciation of issued money is primarily a form of economic compensation for the emission itself. [...] This reaction (depreciation) is not only inevitable but necessary, because it constitutes a way of maintaining the normal operation of the national economic mechanism" (*Falkner*, 1924 [1919], pp. 45-46.)

According to Falkner, the sustainable state of the emission economy is determined by the fact that Soviet power is fully sovereign, the leading industrial sectors are nationalised and domestic savings are negligible. That is, the basis for taxes and for mobilizing interest-bearing debt is weak[6] . Also, it is only the peasants who have savings and can pay taxes, but doing so is extremely difficult. *E. Varga*, a well-known Soviet economist and formerly a financial commissar in the Hungarian Bolshevik Republic (1919), notes:

> "In the beginning the proletarian state economy inevitably runs a large deficit, just as the capitalist economy did after the war. Capitalist states can cover part of their deficit by contracting new loans. The proletarian state cancels old state debts. It understands that it cannot contract new ones, to create new sources of non-labour income. Thus, to cover the deficit, no mean remains other than the issue of new paper money. [...] The function of money as a medium of exchange is preserved. This makes it possible to cover the deficit of the state economy by means of new issues of paper money" (*Varga*, 2019 [1920], pp. 121, 123).

Third, Falkner presents an analysis of the limits of the emission economy, the limits of the production of currency (type 4 in the table 2).

> "The distrust of the possibility of the continued self-preservation of paper-money finance is the unconscious reason why all theorists of economics and finance have regarded it as an accidental anomaly in the general course of financial development, and have predicted its speedy and inevitable collapse" (*Falkner*, 1919, pp. XIV-XV.).

Based on his historical analyses (of the French Revolution's paper money), and because of the existence of Soviet Russia's sovereignty, Falkner believes that the emission economy's collapse can only occur in three ways, viz:

> "First, in the event of the abandonment of any circulation of which the given currency serves as an instrument; secondly, in the event of a change from a monetary to a natural circulation; and, thirdly, in the event of the exchange of the given currency for some other circulating medium, i.e., in the event of the economic displacement of the given monetary system by another which has legally or illegally assumed the performance of circulatory functions. [...] Only the third case is real - the case of a complete depreciation of the paper money mass by virtue of the population's turning to other circulatory means, competing with the paper ones and victoriously pushing them out of circulation. But outside of a diversion to better circulatory means that can be used to mediate commodity circulation,

[6] In reality, paper money is a kind of interest-free government debt.

> no "complete collapse" of the paper money system is possible today. This would mean that the population would voluntarily give up all exchange, or go over to natural exchange" (*Falkner*, 1919, pp. XIV-XV.).

Completely in the spirit of his theory, three years later, in 1922 (in the discussions surrounding the NEP[7]), Falkner opposed the introduction of new "hard" bank currency alongside the devalued Soviet paper currency, the paper rouble (the *sovznak*). At a meeting of specialists on 26 January 1922, Falkner and *L. Yurovsky* voted against the legalization of transactions in gold and silver, as well as those in a foreign currency (*Falkner*, 1922, pp. 67, 76-78, 87, 88-89).

Fourth, active management and control of the EU requires that the devaluation of money be studied scientifically. This means calculating the optimal rate of emission by discovering the laws of money issuance. In his article "*The Economic Functions of the Depreciation of Money*" (1919), Falkner wrote:

> "The question of the speed, consistency and pace of the decline in the value of the currency is brought to the fore by the overall logic of the emission and serves as crucial material for predicting the future fate of the issued currency. Just as a sudden change and acceleration of depreciation is a signal of distress and an indicator of the emergence of certain new factors making the situation of paper currency dangerous, so the persistence of the rate of depreciation (manifested in a certain numerical coefficient) is an indicator of the credibility of the general emission economy situation. [...] Currency depreciation is a method of counteracting the excessive increase in the purchasing power of certain population groups. By counteracting the overaccumulation of currency, the decrease in the economic importance of the currency becomes a tool for the forced restoration of the country's exchange of goods. Conversely, where the real depreciation of the currency is halted by the slower upward movement of commodity prices due to their settling at the same level for too long, a blockage of commodity circulation immediately occurs. [...] Prices must be periodically revised in accordance with the rate of use of the monetary system for the purpose of financing the state apparatus" (*Falkner*, 1924 [1919], pp. 45-47.)

A number of mathematical modelling attempts have been made to predict the emission. Among the authors are *V. Bazarov*, *E. Preobrazhensky*, *S. Strumilin*, *E. Slutsky* et al. One of the most interesting models is that of mathematician and geophysicist *O. Schmidt* (1891-1956), who held important economic posts in the early years of Soviet power. *Schmidt* introduces his model in italicize the title of his paper Mathematical Laws of Monetary Emission (1923[1922]), in a paper presented to the Socialist Academy on 23 November 1922:

> "The laws of monetary issuance are poorly understood. The economic science of the past has been limited to describing the harm resulting from the issue and to mild advice on how to restore a 'normal' monetary system after the emission has ceased.

[7] New Economic Policy (*Novaya ekonomicheskaya politika, NEP*) - economic policy introduced in 1921 in Bolshevik Russia that to some extent liberalized the post-revolution economy and returned its dynamism.

These studies viewed the emission as a transient and severe disease of the national economy, but were not interested in the pathology of this phenomenon.

At the same time, large countries have repeatedly had to live under the conditions of an issue. [...] No doubt, during the period of the emission and until the ruble is restored, we should not stop theoretical work. The period of the issue will last a long time, during which time significant reforms will take place and colossal changes will take place in the national economy. We must not shirk the task of studying the laws of emission, both for the best orientation today and for the fuller justification of measures to stabilize the currency" (*Schmidt*, 1923 [1922], pp. 3-4.)[8]

In his paper, *Schmidt* proposes and empirically verifies a mathematical model of the quantity theory of money that practically overlaps with that of Phillip Cagan in 1956 (*Cagan*, 1956). According to *Schmidt,* "the size of the issue depends on time" in a geometric progression, or:

"The issue reflects the transition from one economic form to another, so that three periods can be clearly distinguished: 1) the transitional period (1918-March 1919), 2) the period of "war communism" (April 1919-June 1921), and 3) the NEP (from July 1921). Within each period - a striking fact! - the issue proceeded as if all other factors had no discernible significance. Emission grows only in relation to time. [...] The magnitude *n* (the rate of emission – note N.N.) for each of the three periods can be easily calculated. Taking one year as the unit of time, *n is* approximately equal to 0.81, 1.55 and 5.31 respectively" (*Schmidt*, 1923[1922], pp. 5, 16.).

So:

"We may consider that the state appropriates by the issue per unit of time always the same definite part of the aggregate of commodities found in the market" (*Schmidt*, 1923 [1922], p. 6.)

According to *Schmidt,* in the NEP period things become more complex because there is also a withdrawal of currency through revenues and taxes. Then the dynamics of the formula change and a factor is introduced at which the issue stops[9].

II. The Critics of the Theory of the Emission Economy

The basic propositions of the TEE are immediately criticized by many. I will limit myself to two of them, *V. Novozhilov* and *B. Livshits*. My choice is motivated, first, by the fact that they are among the few authors who devote special in-depth attention to this theory, and they are proponents of different theoretical schools of money. One is a proponent

[8] Similar ideas and patterns are presented in *Preobrazhensky*'s book (1920), which draws on early research by *Schmidt*.

[9] In his book, *A Tract on Monetary Reform*, published in 1923 (Keynes, 2000 [1923]) Keynes paid special attention to the dynamics of money supply, inflation, and real money demand, as well as the monetary income (seigniorage) that could be derived from the currency emission. Many of his analyses are similar to those of Russian economists during the debate on the issuing economy. Keynes illustrates much of his theoretical hypothesis with the behaviour of variables in Russia during inflation and monetary stabilization. For me personally, there is no doubt, adding his interest in Russia, that Keynes was influenced by a number of ideas and observations he received during his communication with Russian delegates at the Genoa conference in April / May 1922.

of the Austrian school (*V. Novozhilov*) and the other shares the ideas of Marxism (*B. Livshits*). B. Novozhilov in the 1920s was a young economist, but later became one of the most famous Soviet economists - the founder of the mathematical branch of Soviet economic theory. In fact, *Novozhilov* was known more as a mathematician economist, but in his early years he can be seen as a strong supporter of the Austrian school[10] (*Kovalev*, 2014). *B. Livshits*, on the other hand, was a strong supporter of the Marxist theory of money; he was very active in methodological debates about the nature of money in the new communist society. He sought to adapt Marx's positions on money to the new Soviet society, affirming Marx's position that money is always based on a particular metal, in this case gold[11] .

The criticism of *Novozhilov* (1892-1970) resembles in many ways today's critics of *MMT*. Of particular interest is the article "Limits of Inflation" (1924, written in 1923)[12] . *Novozhilov* analyses the two cases of inflation - fiscal and banking, i.e., an increase in the volumes of paper currency and bank credit, respectively[13] . I will confine myself to the analysis of fiscal inflation. Commenting on Falkner's TEE (*Novozhilov* considers the TES more dangerous than the money-zeroing approach because it claims that money printing has no limit), he notes the following main problems.

First, the emission economy cannot be limitless. Inflation has very clear and "natural" internal limits. These limits are linked to the fact that the emission economy deforms and destroys the structure of the economy. The end result is a curtailment of the "productive forces of the country" (*Novozhilov*, 1924, p. 97). In the author's words:

> "Inflation has "natural limits". The collapse does not come in the form of currency turning into simple paper, but otherwise. The national economy as a whole puts an end to inflation. [...] For fiscal inflation there are no limits within the currency circulation. It is not the decomposition of the monetary system, but the decomposition of the national economy, of society and of the state apparatus, that sets limits to the issue. The history of money is the history of inflation, but it knows of no case of a long existence of a pure emission economy. And this is not an accident, but a natural law of economics: "an issue economy as a stand-alone financial system is impossible. "

[10] *Novozhilov was influenced by* the ideas of Mises. He entered an economic essay contest in the United States (*Novozhilov*, 1927) and his ideas from this essay were noted by Hayek (*Hayek*, 2012 [1929], pp. 145-146, 153). In my opinion, *Novozhilov* was influenced by all three studies of *B. Brutskus*, published in 1922 (and later in an English version, in 1935, and edited by F. Hayek).

[11] The controversy over Marx's positions on the question of money continues to this day (for more on this debate, see *Nenovsky*, 2019, 2019a).

[12] *Novozhilov* has another famous article related to the subject, namely "The Scarcity of Goods" (1926). In it, the author develops similar themes by linking the scarcity of goods to the scarcity of currency. For example, "It seems to us that it is enough to extend credit to make all the adversities of the crisis pass away, so that the growth of production may continue at the same rate. However, this appearance is false. The scarcity of money capital is itself a symptom of a serious disorder in the whole system of capitalist industry. Inflation can only increase this disorder, can only intensify the main evil of the crisis, make it more difficult to overcome" (*Novozhilov*, 1926).

[13] Inflation is defined as: 'an excess of money - excess compared to the state of commodity circulation. An external manifestation of inflation is the increase in commodity prices" (*Novozhilov*, 1924, p. 83.)

> Unlimited fiscal emission may repeat itself in history, but it cannot continue uninterrupted. For to become again a profitable instrument of the treasury, the national economy must be restored. This is impossible without limiting or temporarily abandoning all fiscal emission. [...] Fiscal inflation causes wasteful consumption and ends in a crisis of overproduction" (*Novozhilov*, 1924, pp. 85, 98, 120.)

According to *Novozhilov,* the emission economy is undermining the country's productive forces by changing the structural proportions in the economy. The emission economy distorts relative prices, which act as signals (they are a "language") for economic agents (entrepreneurs and consumers).

> "Economy is impossible without proper accounting of costs and revenues, means and ends. Any error in calculation is inevitably punished; inflation redefines all the basic data for calculation in a monetary economy: prices and incomes. The movement of prices and incomes performs an economic function of great importance in the exchange economy. What to produce, how much to produce - all this is dictated by the language of prices. [...] Inflation redefines all price ratios, it redefines the only criterion of the correctness of the organisation of the economy. With inflation, language begins to lie" (*Novozhilov*, 1924, pp. 88-89.)

Further:

> "Fiscal inflation creates a false appearance of abundant resources available to the state. [...]. The emission economy can be seen as a single tax: a tax on money taken per unit time of holding it. [...] The impracticability of a uniform unequal tax is an elementary truth of financial science. It is therefore all the more surprising that the idea of the possibility of a single tax was resurrected a few years ago in the emission economy." (*Novozhilov*, 1924, p. 98.)

Novozhilov criticises the EU not only for being an aggregate model, i.e., not taking into account structural effects: he also highlights problems of the emission economy (today's *MMT*) as (a) ignoring inflation expectations, (b) failing to take into account the "real" demand for money, real incomes, real seigniorage, and in general the real dimensions of variables, and (c) thinking in a closed economy (where there is a political monopoly).

Fairness demands that we note that the criticized Falkner was aware of the structural and redistributive effects of his model, but either overlooks them or thinks they can be overcome technically. Technical in the sense that it can be done through planned centralised change, i.e., relative price management. It is no coincidence that Falkner wrote a number of papers on fixed price issues and that the Committee on Prices at the Supreme Council of National Economy dealt with fixed prices.

And while *Novozhilov*'s criticism may seem natural for an adherent of the Austrian school, the assessment of another Russian economist of those years is telling. We are talking about *B. Livshits*, who attacked the EU from the positions of Marxist methodology in his article "Towards a Statement of the Monetary Problem from the Point of View of the Law of Equilibrium" (1924). In practice, *Livshits* makes the same accusations against the EU model. This article is part of the fundamental debate among Marxists about the nature, value and purchasing power of paper currency (and especially about the theory of R. Hilferding on the independent value of paper money, a value independent of gold). In a part of his article called "*Prof. S. Falkner's 'Theory of the 'emission economy'*", *Livshits*

denies the independent existence of the EU and analyses its harmful character. According to the author, the emission economy leads to "economic disorganization" (*Livshits*, 1924, p. 239). He states:

> "The common way of calculating the value of money by means of an index is theoretically incorrect [...] because the general level of prices is the result of a whole series of complex interrelations of forces acting in the economic organism. [...] The change in the general level of prices cannot serve more or less as an accurate indicator of the qualitative and quantitative changes that have taken place in the social economy. Apart from anything else, this general level does not reflect the relative weights of individual commodities on the market. [...] The same rate of depreciation of paper money in relation to the general level of commodity prices may not at all correspond to the same qualitative and quantitative change in the distribution of productive forces" (*Livshits*, 1924, pp. 235, 238.)

Emission economy borders cannot be controlled and managed (as Falkner and *Schmidt* suggest[14]). They occur spontaneously and people abandon paper currency. *Livshits* notes:

> We believe that this moment [the limits of for the emission economy - N.N.] can come also purely spontaneously. It is when the reduction in the purchasing power of paper money is subjected to too sharp a deviation from the rate of the preceding depreciation compared to an objective measure of value. And the rate of depreciation is not proportional to the issue. It is then that there is a spontaneous refusal to accept a currency and the introduction into circulation of a stable foreign currency or of other securities which have not been circulating up to that time" (*Livshitz*, 1924, pp. 235, 238.)

Like *Novozhilov*, for *Livshits* the EU model is built on the assumption of a closed economy and does not take into account the monetary circulation between countries (exchange rates ("inter-currency rates") and balance of payments dynamics). Like *Novozhilov, Livshits* thinks that it is necessary to think in real rather than nominal terms and analyses the "real" money income generated by the emission[15] .

In the first years of Soviet power, economic events developed extremely dynamically. Despite the theoretical efforts of Falkner, *Schmidt* and others, and the practical actions of the Bolshevik businessmen, the possibilities of the EU were exhausted very quickly. Inflation was out of control (see Table 1). In this critical situation, *Lenin* was the first Bolshevik politician to see the limits of the EU, and the need to move towards a partial restoration of the private sector and the market. This was done by stabilizing currency and restoring taxes (the "tax economy" according to Falkner's model).

[14] *Livshits* also criticizes various approaches to measuring the optimal rate of emission and its "efficiency," including those of *Yurovsky*, *Schmidt*, and *Bazarov* (*Livshits*, 1924, p. 239).

[15] In reality, the "nominal-real" dichotomy is debatable. We are not discussing it here.

III. *Lenin* against *MMT*: Monetary Stabilization (1921-1924)

After four years of civil war and military communism, the economic and financial condition of Bolshevik Russia was catastrophic. In mid-1921 there was a real threat that the Bolsheviks would lose political power. The EU provided almost 100% of the budget revenue. For example, at the beginning of 1922, 98% of revenues came from the issue. At the same time, the issue brought in less and less real income, i.e., its marginal yield starts to tend towards zero. The issue of unsecured paper money from the Treasury (representing interest-free debt) yielded practically nothing (Tables 3 and 4).

Table 3. Dynamics of currency emission and its revenues

Year	Currency emission (nominal), in paper roubles	Currency emission (real), in gold rubles (data of *N. Krestinsky*)	Currency emission (real), in gold rubles (data of *E. Preobrazhensky*)	Currency emission (real) deflated by the labour index (data by *L. Yurovsky*)
1919	168 billion.	300 million.	386 million.	224.6 million.
1920	955 billion.	200 million.	186 million.	122 million.
1921	10,000 billion.	200 million.	145.8 million.	149 million.

Sources. 12; *Preobrazhensky (*1922), p. 255; *Yurovsky* (2008 [1927]), p. 339. There are small discrepancies in the calculations, but overall, the dynamics of real revenues from the currency emission are similar.

Table 4. Money circulation in the period 1918-1921.

(RUB in million, all data are as of the first day of the respective quarter)

Year, quarter (Q)	Currency in circulation	Emission during the quarter as a share of total currency in circulation, in %	Real value of circulation, in gold rubles	Real value of the new emission, book ruble index	Price index (1913=1)
	(1)	(2)	(3) = (1)/(5)	(4)	(5)
1918 Q1	27 650	22.9	1 317	62	21
Q2	33 975	28.7	790		43
Q3	43 711	17.9	491	21	89
Q4	51 525	19.0	548		94
1919 Q1	61 326	22.6	374	19	164
Q2	75 185	34.4	224		336
Q3	101 030	46.7	154	18	656
Q4	148 201	51.8	161		923
1920 Q1	225 015	51.4	93	10	2 420
Q2	340 662	50.2	71		4770
Q3	511 816	45.6	63	10	8 140

Q4	745 158	56.8	77		9 620
1921 Q1	1 168 597	44.3	70	6	16 800
Q2	1 686 684	39.2	47		35 700
Q3	2 347 164	-	29	-	80 700

Source: *Davies* (1958), p. 31; the author makes a careful synthesis of data from various sources. In my observation the table is correctly constructed.

Under the NEP that was launched, the first step towards legalising private business was taken and taxes payable in kind began to be introduced. Due to inflation and differences in geographic purchasing power, speculators emerged, the so-called "*meshotschiki*" (bag people), i.e., traders who carried goods from one place to another and speculated on the price difference[16]. There was an acute (small) currency famine. Means of exchange begin to appear spontaneously, and these are primarily foreign currencies, the gold Tsarist rubles and various types of commodity currency. According to *Zachary Atlas:*

> "The study of market relations of this period shows that the market, together with the abandonment of sovznaks (Soviet currency – N.N.), sought to create commodity-money that was beyond state control and regulation" (*Atlas*, 1969, p. 165).

Lenin continued to insist on experimenting with models of moneyless exchange, suggesting that the known local experiments of exchange should be studied, and then a general choice made (Lenin was not yet talking about a "monetary system").

> "Lenin: In a few months we should have practical results to compare and study" (*Atlas*, 1969, p. 171.)

But only a month later, in August 1921, Lenin saw that currency was becoming more and more spontaneously imposed and abruptly changed his position - a new retreat in the direction of a "money economy" was needed. In a report to the Seventh Moscow Party Conference Lenin said:

> "It has turned out - now you all know this perfectly well from practice, but it is also evident from all our press - that the exchange of goods has failed: it has failed in the sense that it has become a sale and purchase. And now we are obliged to realise this if we do not want to bury our heads in the sand, if we are not afraid to look danger in the face. We have to realise that the retreat has not been enough, that a further retreat is needed, another step backwards, as we move from state capitalism to the creation of state regulation of purchases and sales and of the circulation of money. Nothing happened with commodity exchange; the private market proved stronger than we were, and instead of commodity exchange we got mere buying and selling, trade" (*Lenin*, T. 44, pp. 207-208.)

The decision to reintroduce a currency was taken. It was a question of how to control this process and which monetary system to choose. It is clear that economic reform could not be expected to succeed without stabilising the currency and restoring the

[16] After the collapse of Tsarist Russia and during the first two years of Bolshevik rule, between 3,000 and 6,000 types of currency circulated, issued by a variety of institutions, and this is a particularly interesting period (see *Pogrebetsky*, 1924, *Chuchin*, 1927, *Nenovsky*, 2010, *Khodiakov,* 2018, for details).

central bank. These become conditions for stabilising the budget and for introducing taxes payable in money.

Lenin's early hesitations about the place of money in communist society are well known (see *Bogomazov*, 1974, pp. 37-42). By the end of 1921, however, he strongly supported proposals for monetary stabilization, and on the basis of his own repudiation of the gold standard. Proceeding from the types of financial holdings (presented in Table 2), it can be argued that *Lenin* was aware not only of the inevitability of the transition from an issue (Form 4) to a subsistence economy (Form 1), but also of the subsequent transition to a monetary tax economy (Form 2). Most economists supported the idea of ending the experiment with the emission economy. Without going into details, we note the following points.

In the development of monetary reform, the best Russian economists were involved, some of whom had worked in bourgeois Russia and participated in the reform of *S. Ю. Witte* (for example, *N. Kutler*). The mobilization of the country's economic elite resulted in one of the most interesting theoretical and applied debates on the paths of monetary reform[17]. The discussions are presented in detail in the seminal (unfortunately untranslated) book by *Yuri Goland* "Discussions on Economic Policy in the Years of Monetary Reform 1921-1924" (2006)[18]. Generally speaking, the main controversial topics boil down to where to start stabilization - from the budget to the currency or vice versa, from the currency to the budget, as well as whether to stabilize the circulating government paper currency (called "falling currency/*падающая валута*") or to introduce new, stable bank money ("new hard currency") in parallel.

Following the failure of the Genoa Conference in April/May 1922 (relying on a large external loan to stabilize public finances) it was decided to start with money stabilisation, i.e., from money to the budget, and to do this by issuing new gold-fixed banknotes (called *tchervonetz*). The tchervonetz were issued by the restored central bank, while the paper money (sovznaks) continued to be issued by the Treasury. Initially, the two types of money circulated in parallel, and their turnovers were deliberately separated. Paper money served the nationalised sector, while 'hard' notes served the new private sector. In this first phase, one can speak of "monetary complementarity" (*Nenovsky*, 2010, see Kuzovkov's fundamental book on the subject, 1925).

Very quickly, however, there comes a moment when we move to a phase of monetary competition and after a short battle the "hard" money defeats the "falling currency" (sovznaks, the Treasury's paper currency). The "agony of the sovznaks" rapidly came to an end. In March-April 1924 several decrees put an end to the "double standard". Sovznaks and all other monetary substitutes were withdrawn from circulation. The rouble was anchored on a red-note basis, inflation was overcome, and the exchange rate

[17] I consider this to be one of the most remarkable theoretical monetary debates in Europe in the twentieth century for its depth, diversity and, paradoxically, for its ideological liberation (see also *Trifonov* and *Shirokorad*, eds. (1983) and *Nenovsky*, 2010).

[18] Of course, the exclusive source are the following books: the participant in these debates *L. Yurovsky* (2008, edited by *Y. Goland*); that of *Arnold* (1937); and the recently published works of *M. Nikolaev* (2018) and *M. Khodiakov* (2018); see also *Jaconis* (2017).

against the dollar and the pound was stabilized. The Bolsheviks' monetary reform was welcomed by a number of Western economists, including J.-M. Keynes, who wrote a special essay on Russia, and in several newspaper articles.

> « At about that date I had the opportunity of discussion at Genoa with some of the Soviet financiers. They have always been more self-conscious and deliberate than others in their monetary policy. They maintained at that time that, with the help of legal compulsion to employ paper roubles for certain types of transaction, these roubles could always be maintained in circulation up to a certain minimum real value, however certain the public might be as to their ultimate worthlessness. According to this calculation, it would always be possible to raise (say) £3,000,000 to £4,000,000 per annum by this method, even though the paper rouble regularly fell in value at the rate of a tenfold or a hundredfold a year (one or more noughts being struck off the monetary unit annually for convenience of calculation). [...] At the same time, in order to furnish a reliable store of value and a basis for foreign trade, the Soviet Government introduced in December 1922 a new currency unit (the tchervonetz, or gold ducat), freely convertible on sterling-exchange standard principles, alongside the paper rouble, which was still indispensable as an instrument of taxation. So far, this new bank note has kept respectable. [...] Russia provides an instructive example (at least for the moment) of a sound money for substantial transactions alongside small change for daily life, the progressive depreciation on which merely represents a quite supportable rate of turn-over tax. (Keynes, 2000 [1923], 56-58.

At the same time, the Bolshevik government issued domestic interest-bearing loans, and the payment of taxes in money (especially agrarian taxes) was restored, (*Arnold*, 1937, p. 242). The failed emission economy was replaced by a normal tax economy.

It is interesting to note that in the parallel launch of the new "hard" money, the emission economy's main "ideologue", Falkner, actively repeats his theoretical arguments (set out in the previous paragraphs). According to him, the emergence of alternatives to paper "hard money" will become the sole cause of its failure, similar to the experience of the past (the example of the French assignees). During the discussions on the issue of money, Falkner was supported by a number of famous economists, including *Leonid Yurovsky*.

IV. TEE and MMT – comparison and its limits

Recently, Sebastian Edwards presented a comparative analysis of Latin American populism and the main elements of MMT in order to show that this theory is not new. It has been applied and with disastrous consequences in Latin America (*Edwards*, 2019). I will do something similar here by comparing the Bolshevik TES with the American MMT.

In short, to me MMT is nothing but a complex and generally disguised form of TEE. TEE is MMT in its most primal and pure form. TEE (and the monetary model of socialism familiar to us from that era) is the archetype of MMT. Why do I think so? Let's look at the basic tenets of MMT in turn and see how well they match the tenets of the Bolshevik TEE.

First moment. The basic tenet at the core of MMT can be stated as follows: there are no constraints for a sovereign state to finance its expenditures to achieve full employment because it can always finance them indirectly or directly through the issuance of money (*Tymoigne and Wray*, 2013, pp. 2, 40)[19]. This can be done (a) indirectly, when the government's debt is bought by the central bank in exchange for money (it is only domestic debt!), or (b) directly, when the government receives the money directly from the central bank. "Deficit" and "debt" constraints do not exist for a country when it can sovereignly print "its own money". Or:

> "The most important conclusion reached by MMT *is that* the issuer of the money faces no financial constraints. Simply put, a country that issues its own money can never run out of money and can never become insolvent in its own currency. It can make all payments as they become due" (*Mitchell et al*., 2019, p. 13.)
>
> "In countries with their own money, the government does not face tight budget constraints; the government can always print extra money to pay for higher spending" (*Edwards*, 2019, p. 530.)

As *Abba P. Lerner*, who is considered one of the "fathers" of MMT, says, it is a process "similar to moving money from one pocket to another." TEE and Falkner argue the same thing - the state can always finance itself by issuing money, and that is what an issue economy is. There is indeed no domestic debt within the TEE, but that is irrelevant - monetizing debt is just one additional, roundabout cycle in money issuance. And as we know, money is interest-free and highly liquid debt.

Hence the **second point.** MMT adopts the so-called 'consolidation postulate', where the central bank and the treasury (government) are analytically viewed as one (*Tymoigne and Wray*, 2013, p. 2). This unrealistic MMT hypothesis has been criticized even by its post-Keynesian sympathizers such as Marc *Lavoie* (2013). In the TEE, consolidation is not a postulate but reality itself. At that time in Russia, the central bank and the treasury (the Ministry of Finance) were unified, and paper currency was issued entirely by the government and served directly to finance spending. In the theoretical corpus of MMT, monetary and fiscal policy reverse roles - currency is used to manage employment, and fiscal policy is used to control inflation through tax policy (when taxes are increased, the money supply shrinks), i.e., in practice they are merged. It is the same with the TES - here money issuance serves to mobilise natural and financial resources. In both theories, money has a distinct fiscal origin and a fiscal and state-public nature. In both models there is no place for bank and private money.

Third point. MMT implies a sovereign, virtually closed state with control over capital movements and active exchange rate regulation. A fixed exchange rate (to some anchor - gold, foreign money or similar assets), and convertibility of national money are seen as dangerous. The TEE starts from the same principles. So, what is more sovereign than the USSR[20] in those years, where there was a complete detachment of Russian from

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[19] In pedagogical form, the main points of MMT are set out in the macroeconomics textbook published in 2019: Mitchell, W., L. R. Wray, M. Watts, *Macroeconomics*, London, Red Globe Press.

[20] Union of Soviet Socialist Republics (USSR, Soviet Union) - the official name of Russia in the period 1922-1991.

foreign money and total isolation of the Russian economy! MMT is against liberalization and globalization, which is considered natural in TEE as well. When one speaks of monetization of debt, one speaks only of foreign debt. According to the "father" of MMT and of "functional finance" *Abba P. Lerner*, "only foreign debt, like individual debt, can lead to the impoverishment of the nation" (*Lerner*, 1947 [1943], p. 305.)

Fourth point. Like the TEE, the MMT in veiled and softer forms proposes price and wage controls and generally centralized intervention in market mechanisms, the implementation of macroeconomic planning, etc. The goal is full employment and resource utilization. The TEE does not hide these goals, and the processes mentioned were part of the economic landscape of Russia in those years. There was then a Committee on Prices, a State Planning Committee (Gosplan), and scientific institutes engaged in developing planning methodology and theory.

Fifth point. The criticisms levelled at both theories are also similar. Only the participants in the debate change. In the almost century-long interval between the Bolshevik TEE and modern MMT, MMT's postulates have been active in both the Western economic literature (e.g., *Lerner*) and the political economy of socialism; they are its foundation (*Seurot*, 1983; *Kotsev*, 1989).

The criticisms of TEE made by *Novozhilov* (Austrian school), by Livshits (Marxist), and by *Kutler* (a "bourgeois" monetarist) essentially overlap with the contemporary criticisms of MMT made by W. Coats and S. Edwards (*Coats* (2019) and *Edwards* (2019), if we restrict ourselves to them both. TEE and MMT are accused of destroying the economic structure (productive forces), that the end of experimentation comes before people start running out of money, and limits are set by the overall disorder of the economy. The main common flaw is the total neglect of the structural effects of money issuance and financing. It is the structural imbalances and the disruption they cause that stop the development of MMT. Added to this is another important problem - both theories deal with the nominal expression of the concepts used (monetary illusion, lack of inflationary expectations, etc.). They do not take into account the dynamics of the demand for money in real terms (a similar shortcoming has been noted by the representative of the modern mainstream, Greg Mankiw (*Mankiw*, 2020).

In MMT, inflation control has not been worked out in detail, as if it were assumed that it would not occur. Inflation is generally thought to be controlled through fiscal policy, the money supply is shrunk by raising taxes (conceptually, money in MMT is a function of taxes). Specifically, MMT suggests two phases: phase 1 - money is injected to finance spending and lead to full employment; and phase 2 - money is withdrawn to control inflation. However, Bolshevik practice in the 1920-1922 period shows that phase 2 is unrealistic and if it occurs, it is after inflation, hyperinflation and complete economic disaster. Then new stable money is needed to allow a transition to phase 2, i.e., the possibility of monetary taxes and the emergence of a tax economy. In the case of Bolshevik Russia, as we have seen, this was done by the introduction of the tchervonetz, i.e. after a period of devaluation of fiscal paper currency (sovznaks).

It should be made clear that both theories (MMT and TEE) assume state-centralised and, to varying degrees, planned management of economic processes[21]. In TEE this is explicitly stated, while in the MMT corpus the tendencies mentioned are not explicitly stated. It is clear, however, that the issue of money and artificial full employment inevitably lead to some form of administrative and planned economy. Indeed, the whole practice of socialist countries has shown this. In fact, in Russia from the collapse of the NEP (in 1927) until 1991, as in the other countries of the Soviet Union[22], the "model of suppressed inflation" was applied in conditions of an almost completely stateless economy. This brings us to the topic of the relevance of the TEE for the socialist monetary system and the possibilities of mobilizing some theoretical concepts from the socialist era in order to analyse the dynamics of today's monetary processes.

V. TEE, the socialist monetary system and its projections today

The NEP halted the development of the TEE, but this was only temporary. Lenin died in 1924 and very soon, towards the end of 1927, the new leadership of the USSR, led by Stalin, set out to change the economic course. The principles of the gold and gold exchange backed tchervonetz were broken, and the rate of monetary emission accelerated. The TEE quickly returned and became the basis of the Soviet Union's socialist monetary system. After World War II, the TEE also formed the basis of the monetary systems of the new socialist countries (which copied the USSR). The clarity and explicitness with which the TES was originally set out by *S. Falkner,* would not be repeated (partly because of the pragmatism of the Soviet authorities), the TEE remained the main element of the political economy of socialism. Later, in the 1970s-1980s, a debate began in the Western literature on the "theory of suppressed inflation" under planned economies. This theory is in fact nothing but another name for TEE, rediscovered and launched under another name.

In fact, after the publications of *S. Falkner,* two Soviet authors contributed to the theoretical development of TEE. In 1926, starting from quantitative theory (it is considered Marxist because Marx was a continuator of Ricardo's work), *S. Strumilin* put forward the hypothesis that under a regime of controlled prices and an over-emission of uncovered paper money, equilibration within the quantitative equation takes place not through an increase in the price level but through a reduction in the velocity of money. It was through the rate of decline in the velocity of money that one can judge the "potential" inflation in the system. In turn, V. Novozhilov (whom we have already mentioned) in the same years (1924 and 1926) theoretically deduced the scarcity of goods as a function of the excess of money. These two theoretical dependencies were "rediscovered" in the 1970s-80s by some Polish and Hungarian economists. In their most developed form, they were formulated by János Kornai in his "shortage theory"

[21] Similar is another unrealistic assumption: that of an almost completely closed economy, etc.

[22] Council for Mutual Economic Assistance (CMEA, known in Western countries as COMECON or Council for Mutual Economic Assistance, CMEA) - an economic union of former socialist countries that existed between 1949 and 1991.

and on "suppressed inflation" within his "Disequilibrium Model of Planned Economy" (*Kornai*, 1980)[23] .

Joseph Stalin adopted a number of Strumilin's ideas and from the outset made them the basis of his new economic course. It began with the financial and monetary reform of 1930-1931, which moved to the monobank model. All enterprises, organizations and institutions opened accounts with Gosbank (the Monobank). Payments between enterprises were cashless, in the form of clearing, and within the credit and money plan. This is the first, cashless money (round)circulation.

The second, money turnover, or sector, is that of cash. Available money serves households and the consumer sector. In terms of volumes, this sector was considerably smaller than the first sector, that of enterprises and establishments. The consumer sector kept market relations ('commodity-money relations') within certain limits. In addition to the population, cooperatives and other individual economic entities participated in it. Households had access to certain consumer goods and services (most notably car and housing purchases), which were paid for in cash, in which the population received its wages within the first plan segment. The 'balance of income and expenditure of the population' was formed, which was controlled by the Monobank. Prices in the consumer market are controlled and generally depressed because stable and low prices are the conquest of real socialism. Financial markets and assets do not exist, they are capitalist phenomena.

The link between the two money turnovers (flows), the two sectors, is actively planned, especially the outflows from the non-cash to the cash sector in the form of wages, and the reverse flow, from the cash to the non-cash sector in the form of payment of taxes and fees. Cash is also controlled by the monobank through the 'cash plan', which formulates the issue of cash. It is the net result (balance)[24] of the implementation of the plan for the "money income and expenditure of the population" and of the available transactions under the cooperative sector and payments with foreign countries. [25]

Due to the internal limits of planning ("soft budget constraints"), and as a consequence of Lenin's famous "law of the anticipatory development of the production of means of production over the production of objects of consumption", the available money supply inevitably grows faster than the volumes of the consumer market. This comes by way of wages outstripping labour productivity, and the emergence of budget deficits. The outflow of purchasing power from the non-cash sector (enterprises and state departments) to the cash sector has been called by Kornai the "*siphoning effect*". There

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[23] Some of Kornai's publications have been translated into Bulgarian (Kornai (1996) and (1998, which is a collection of articles). See *Seurot* (1983). In fact, Kornai's non-equilibrium analysis of the planned economy (where 'excess demand' dominates the goods market) is an application of non-equilibrium Keynesian approaches in Western economic thought (e.g., *E. Malinvaud*), where 'excess supply' dominates. Interestingly, this possibility of linking *MMT* to non-equilibrium models is noted by Mankiw (2020).

[24] When receipts are more than payments under the cash plan, the issuance result indicates a withdrawal of money from circulation; conversely, when receipts are less than payments under the cash plan, the net result is a release of additional cash (*Kotsev* (1989), pp. 45-46).

[25] These are familiar principles from textbooks on money and finance under socialism, see *Kotsev* (1989), *Kotsev and Nikolova* (1983) and *Kotsev, Nikolova and Radkov* (1975). A clear exposition of the principles of money flows under socialism is given in the remarkable book by *Garvy* (1977). For a summary of Kornai's ideas, see *Lindbeck* (2007).

have been repeated attempts in the literature to empirically measure this phenomenon (*Kim*, 2002).

The end result of all the dynamics of "overhang money supply" and "suppressed inflation" is the emergence of a structural deficit in the consumer market. The concrete manifestations of this phenomenon are queues, the poor quality of goods, the substitution of good with bad goods, the forced co-sale of desirable and undesirable goods[26] , privilege (specialty shops) and the black market, pointless investment projects, artificial employment, masked unemployment, and above all the considerable forced savings of the population. The latter are primarily in the form of deposits in the savings bank (sometimes cash was hoarded). These savings are the result of there being nothing to buy, i.e. of there being solvent demand without a corresponding supply. Savings were a kind of form of monetary sterilisation.

The velocity of available money was slowing, and this trend was clearly reflected by the statistics of socialist countries (see tables in *Nuti*, 1986, 56), and by empirical evidence (*Birman*, 1980, 1980a)[27]. Moreover, this system leads to the favouritism of communist elites. According to D. M. Nuti:

> "The persistence of excessive demand, indeed the elevation of scarcity to a systemic characteristic, leads to the suspicion that it is maintained mainly because it hides the privileges of the elite through privileged access to luxury goods and possessions at unusually low prices. In fact, equilibrium market prices would reveal and quantify this privilege, since its maintenance would require dramatically more unequal income and wealth" (*Nuti*, 1986, p. 76).

In order to maintain the equilibrium of the system and to avoid social tensions (due to deficits) or outright inflation, apart from several attempts at structural reforms (aimed at self-sufficiency of enterprises and greater productivity), mostly monetary measures were used. These consisted of one-off periods of price increases, a reduction in the money supply (deflation) or monetary reform (exchange the old currency with the new one). Through currency exchange (currency reform), the accumulated sums of money were devalued (e.g. the Soviet reform of 1947, the Bulgarian reforms of 1947, 1952 and 1962, etc.)[28]). All these palliative measures ended in 1989, when the planned system exhausted its partial counterbalancing possibilities and potential hidden inflation became apparent. This was the apogee of the TES.

More than thirty years later, now within the European Union and the eurozone (if we restrict ourselves to them, although what I am about to point out can be applied to other developed countries), we can find some of the elements of the above dynamics of "suppressed inflation", as well as apply similar analytical tools. With all the limitations and with all the complexity of the modern European economy, it can be assumed within the framework of a working hypothesis that signs of depressed inflation and deficit can

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[26] A common practice in the years of shortages in the USSR was to sell highly sought-after goods in a set with obsolete ones (with a load/"*с нагрузкой*"). For example, a bottle of vodka was sold together with shoes (regardless of whether it had the dimensions needed by the buyer).

[27] See *Willes* (1962), *Seurot* (1983), *Nuti* (1986), *Dembinski* (1988), and *Kim* (2002) for more information.

[28] See, for example, *Chudnov* (2018), *Velyov* (1952), and *Tsarevsky (*1975, pp. 45-46).

be found in the financial and especially in the debt market[29]. This process started after the 2008 crisis, but has significantly intensified since 2014. Especially today, during a pandemic, the pattern of suppressed inflation has even greater analytical potential. The European Central Bank (ECB), within the framework of its programmes, purchases, together with the national banks of the eurozone countries, huge volumes of debt securities. It has thus become a lender of first resort for banks and governments[30] (see *Panchev*'s analysis, 2020). The ECB introduced systemic "soft monetary constraints" (to draw a parallel with Kornai's "soft constraint", which he considered a manifestation of a socialist planned economy).

The logic of the analysis may be as follows. Structural imbalances in the public sectors of the eurozone economies and structural imbalances between countries, as well as the desire to preserve consumer market equilibrium (in order to avoid social shocks and the loss of voters), are absorbed by the monetary and financial sectors and transferred to financial intermediaries. Within the analytical parallel with the socialist planned economy, the ECB can be seen as a kind of planning authority (monobank) that creates deficits and suppresses inflation in the debt market. The position and behaviour of banks and investment intermediaries in the financial market is similar to the position and behaviour of households and the population under socialism[31] . In recent years, the ECB has seized the functions of the interbank market. Commercial banks do not communicate with each other, but only with the ECB. Interest rates are artificially and administratively fixed and controlled (they are zero and negative) and this "repression" is transmitted to yield curves[32]. Government bond prices become artificially inflated. In this configuration, interest rates and bond prices do not reflect the actual risk level of their issuers. Financial assets where there is a mismatch between yield and risk can be seen as "sub-quality", as "uncertain assets". There is a shortage of quality and safe assets (*safety assets*) in which banks and institutional investors (e.g., pension funds) can invest. In this sense, similarly to Keynes's "liquidity trap", Ricardo Caballero and Emmanuel Farhi talk about the existence of a so-called "*safety trap*" and of *safe asset shortages,* presenting their model (*Caballero and Farhi*, 2017).

In sum, while there were no quality goods under socialism, there are no quality debt assets today. The lack of safe and profitable assets also puts most central banks, and above all those of peripheral or semi-peripheral countries, to the test. They are finding it difficult to invest the foreign exchange reserves they maintain to support their exchange rate and service their external liabilities. Currently, most central banks are loss-making, i.e., their monetary income (seigniorage) is negative.

The parallels with forms of deficit and suppressed inflation under socialism can be extended. For example, we can also find the "phenomenon of forced substitution" in the case of swapping good for bad debt assets (Greek, Italian and Spanish paper replacing German paper on the ECB's balance sheet), the bundling of bad and good assets within structured assets (a kind of "bust"), etc. The attempts to launch joint Eurobonds, the

[29] I have presented some of my initial thoughts in *Nenovsky* (2020a).

[30] For details see *Panchev* (2021).

[31] It should be recalled that under socialism there were no money and financial markets, including the debt market. There was only a consumer market and monetary disequilibria were concentrated on it.

[32] In research on Latin America, this phenomenon is referred to as "financial repression" (*Fry*, 1995([1988]).

European Commission's May 2018 initiative to launch sovereign *bond-backed securities (SBBS*)[33] and various *Europe safe assets* projects are proof of the joint selling of good and bad assets. Of course, the European Commission motivates these ideas through the diversification of portfolios, reduction of the overall level of risk, integration of European financial markets, etc.[34] .

The huge liquidity overhang (similar to that under socialism) is also manifesting itself today in the form of "forced savings", only by the banks. This is evident in the huge overdraft reserves they maintain at the ECB, even though this is losing them money. Banks also store large volumes of cash (banknotes), which requires storage costs. In addition, the balance scissors in the TARGET2 payment system are dissolving (*Sinn*, 2020), etc. All phenomena are forms of overhang liquidity (coming from monetization of public debts) that is artificially and temporarily sterilized, i.e., parked, in the central bank. The precautionary behaviour of banks in the face of systemic uncertainty is also demonstrated by the fact that 95% of banks in the European Union do not intend to use capital buffers.

To the forced savings of banks and financial intermediaries we can today add the forced savings of households - the result of the pandemic and the pause in consumption. For example, in 2020 alone, as a result of the pandemic, households in France have accumulated an unprecedented EUR 130 billion in savings, which are expected to reach EUR 200 billion by the end of the year. According to *Patrick Artus*, for example, the strong precautionary saving is evidenced by the fact that while France's GDP declined by around 10% in 2020, the real income of the population remained at the same level (*Artus*, 2020).

The precautionary savings of households can be added to the precautionary savings of enterprises, more precisely the phenomenon of "precautionary loans". For example, in most countries of the European Union, enterprises resort to bank loans, which are not subsequently used for real investments, but kept in liquid form. It can be assumed that part of these loans will be used to pay taxes and other financial obligations deferred by the state.

The velocity of money, like that under socialism, has been declining for years. Today, unlike under socialism, this can be seen in the decline of the money multiplier. A number of other current developments, such as the debates surrounding central banks' digital money, the proliferation of convertible bonds (the right to convert into shares), the development of the real estate market, the price of gold, etc., can also be interpreted within the framework of the "theory of suppressed inflation".

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[33] "*SBBS* are a diversified pool of euro area sovereign bonds, which include sovereign bonds from all euro area member states according to their economic weight. When buying *SBBS* backed by this pool, investors can choose to buy securities with higher or lower risk depending on their risk appetite. The securities with the highest risk would be the first to bear any losses from the underlying pool, should they occur, but in return investors would pay a higher return. As a result, the '*senior*' securities, which would only suffer losses once the riskiest securities were completely wiped out, would be low risk. (https://ec.europa.eu/commission/presscorner/detail/en/IP_18_3725.) See the discussion in *De Grauwe and Ji* (2018).

[34] Here we have looked only at the ECB. If we turn to the US and Japan, examples of this type of hybrid assets also abound.

Basically, just as households lost out under socialism in the consumer market, today banks and investment firms are losing out in the financial market (and of course these losses are ultimately borne again by consumers).

My aim in this paragraph was not to develop a comprehensive theory, but rather to put the issue up for discussion and show that TEE is making its way into our present-day economy in various forms. This leads me to think that there are common economic patterns, independent of ideological and political principles, which can be found in seemingly different socio-economic systems, in different countries and during different historical periods.

Concluding remarks

We have seen in this article that *MMT* is not new, the basic tenets of this theory have always existed, at least since the early years of the Bolshevik revolution. The TEE presented above is perhaps one of the first fully constructed theories of controlled monetary issuance, through which government spending is financed without limit. But that is not all. The TEE, *MMT* and their principles were also the basis of the political economy of socialism and of monetary practice in the former Soviet bloc. They were repeatedly studied by Western economists in their models of the shortage and suppressed inflation under planned economies. As we know, socialist economies collapsed because of their low efficiency and structural imbalances. This was not without the influence of monetary imbalances and disequilibria, which were both the result and the cause of the system's deep structural defects.

The advent of *MMT* (*Lerner*'s pioneering article appeared in 1943) did not go unnoticed. *Novozhilov*, who as a young scientist made one of the most articulate, and in an «Austrian» spirit, critiques of the TEE (Novozhilov, 1924), - may not have known that his "teacher" Mises, seeing the danger, reacted as follows:

> "They just want to reduce the purchasing power of the currency at an accelerated pace. Such a policy of radical inflationism is, of course, extremely popular. But its popularity is largely due to a misunderstanding of its effects. [...] To the naïve brain there is something miraculous about issuing fiat money. A magic word uttered by the government creates out of nothing something that can be exchanged for any commodity one would like to obtain. How pales the art of magicians, witches, and conjurers before that of the Treasury! The professors tell us that the government "can raise all the money it needs by printing it" (note by H. Nenovsky: see Lerner, A. P. The Economics of Control, New York, 1944, 307-308). "The income tax, declared the President of the Federal Reserve Bank of New York, is obsolete." How wonderful! And how malicious and man-hating are those stubborn supporters of outmoded economic orthodoxy who demand that the government balance their budgets by covering all expenditures through tax revenues! [...] If there are unemployed, says the progressive doctrine, the government should increase the amount of money in circulation until full employment is achieved. They say it is a grave mistake to call inflation an increase in the amount of money in circulation made under these conditions. It is simply "a policy of full employment." (Mises, 1980 [1952/53], pp. 457, 458, 465.)

Although unstated, the basic principles of *MMT* have been behind central banks' monetary policy for the past ten years. The central banks of not only the leading countries, but also of almost all emerging market countries have been conducting large-scale operations to monetize public and private debts, to colossally increase the money supply, to have negative interest rates, etc. (see *Panchev*, 2020). The financial crisis of 2008 and the pandemic of 2020 fit into the general upward trajectory of debt accumulation and money issuance (*Congdon*, 2020). This has led to a deepening of the structural problems of modern economies.

A considerable part of the analytical apparatus accumulated in the analysis of the planned and administrative socialist economy would help us to build a conceptual framework and, consequently, to have a better view of what is going on in contemporary monetary theory and monetary policy.

BIBLIOGRAPHY

Bibliography in Cyrillic (original titles)

Атлас, З. (1969) *Социалистическая денежная система*, Изд. „Финансы“, Москва.

Базаров, В. (1925) О „восстановительных процессах“ вообще и об „эмиссионных возможностях“ в частности, В: Базаров, В., *Избранные произведения*, Том 1, с. 356–383, Издательский дом „Дело“, Москва.

Боголепов, М. (1922) *Бумажные деньги*, Изд. „Кооперативное товарищество“, Москва.

Богомазов, Г. (1974). *Марксизм – ленинизм и проблемы товарно-денежных отношений в период строительства социализма в СССР (историко-теоретический очерк)*, изд. Ленинградского университета, Ленинград.

Бруцкус, Б. (1922) Проблемы народного хозяйства при социалистическом строе, Изд. „Экономист“, 1 (I–IV), 2 (V–VI), 3 (VII–X).

Бухарин, Н., Е. Преображенский (2018 [1919]) *Азбука коммунизма*, Изд. „Алгоритм“, Москва.

Варга, Е. (1922 [1921]) *Проблемы экономической политики при пролетарской диктатуре*, Государственное издательство, Москва

Вельов, М. (1952) *Функции и роля на парите у нас*, Изд. на БКП, София.

Голанд, Ю. *Дискусии об экономической политике в годы денежной реформы 1921–1924*, Изд. „Экономика“, Москва.

Катцеленбаум, З. (1924) *Денежное обращение России, 1914–1924*, Изд. „Экономическая жизнь“, Москва – Ленинград.

Ковалев, А. (2014) Идеи австрийской школы в советской экономической литературе 1920-х годов, В: Капитализм и свобода, СПб, с. 88–105.

Корнай, Я. (1996 [1992]) *Социалистическата система. Политическа икономия на комунизма*, изд. „Проф. Марин Дринов“, София.

Корнай, Я. (1998) *Трансформация след социализма. Опитът на Унгария*, Изд. Агенция за икономическо програмиране и развитие, София.

Коцев, Ц. (1989) Организация и планиране на паричния оборот и паричното обръщение при социализма, и Система и организация на безналичните плащания, в: *Финанси и кредит при социализма*, Изд. „Г. Бакалов“, Варна, гл. 2 и гл. 3, с. 26–73.

Коцев, Ц., Г. Николова (1983). Организация и планиране на паричното обра-щение при социализма, и Система и организация на безналичните плащания, гл. 10 и гл. 11, в: Ц. Коцев и Г. Петров, под. ред. *Финанси и кредит на социализма*, Изд. „Наука и изкуство“, София, с. 254–305.

Коцев, Ц., Г. Николова, Р. Радков (1975) Организация и планиране на паричното обращение при социализма; Същност и организация на безналичните плащания, гл. 10 и гл. 11, Русенов, в: М., под. ред., *Финанси и кредит на социалистическата държава*, Изд. „Г. Бакалов“, Варна, с. 239–270.

Кузовков, Д. (1925). *Основные моменты распада и восстановления денежной системы*, Коммунистическая Академия, секция Экономика, Москва

Кутлер, Н. (1922) О денежной реформе. Доклад Н. Н. Кутлера, с.112–120 (Российский государственный архив экономики, ф. 2324, оп. 26, д. 103, л. 46–48 гр.), в: Денежная реформа 1921–1924 гг.: Создание твердой валюты. Документы и материалы (2008), РОССПЭН, Москва.

Кутлер, Н. (1923) К вопросу о росте товарных цен, Экономическая жизнь, 29 августа, с. 2, в: Николаев, М. Г. (2018) *Николай Кутлер. Жизнь в двух эпохах. Страницы биографии одного из руководителей Госбанка периода НЭПа*, Изд. Банка России, Москва, с. 349–353.

Ларин, Ю. (1918) У колыбели, *НХ*(4): с. 16–28.

Ленин, В. (1967 [1921]). VII Московская Губпартконференция, В: В. И. Ленин (1967), Полное собрание сочинений, Т. 44, с. 207–208 (http://leninvi.com/).

Лившиц, Б. (1924) К постановке денежной проблемы с точки зрения закона равновесия*, Под знаменем марксизма*, (8–9): с. 224–245.

Ломейер, А. Э., под ред. (1918) *Вопросы денежного обращения*, Изд. „Центральный народно-промышленный комитет“, Петроград.

Маневич, В. (1986) *Развитие теории денежного обращения в советской экономической литературе*, Изд. „Наука“, Москва.

Народное хозяйство (1918) Отдел экономических исследований, № 10.

Неновски, Н. (2020) Рассчитываться без денег: натуральные модели социального бухучета по О. Нейрату и А. Чаянову, в: Автономова, В. С., А. Я. Рубинштейн, под. ред., *Экономическая наука: забытые и отвергнутые теории*, Изд. „Институт экономики РАН и ГУ ВШЭ“, Москва, с. 234–250.

Неновски, Н. (2020а) Паричен национализъм, потисната и открита инфлация, *в-к „Банкеръ“*, 14 август 2020, с. 6–7.

Неновски, Н. (2007). *Паричният ред. Критика на теорията на парите*, изд. Сиела, София.

Николаев, М. Г. (2018) *Николай Кутлер. Жизнь в двух эпохах. Страницы биографии одного из руководителей Госбанка периода НЭПа*, Изд. Банка России, Москва.

Новожилов, В. (1924) Пределы инфляции, В: Штейн, В., под ред.*, Финансы и денежное обращение в современной России*, с. 83–121, Изд. „Петгоргград“, Ленинград – Москва.

Новожилов, В. (1926) Недостаток товаров, *Вестник Финансов*, (2): с. 71–86.

Панчев, С. (2021) Банките сигурно са полудели, в: *2020: Отвътре и отвъд*, Изд. Konrad Adenauer Stiftung, София.

Погребецкий, А. (1924) *Денежное обращение и денежные знаки Дальнего Вос-тока за период войны и революции (1914–1924),* Общество изучения Маньчжурского края, Харбин.

Преображенский, Е. (1922) Русский рубль за время войны и революции, *Красная новь*, (2): с. 242—257

Преображенский, Е. (1920) *Бумажные деньги в эпоху пролетарской диктатуры*, Государственное издательство, Москва.

Сокольников, Г. (2006 [1918]) Основные положения финансовой политики, В: Сокольников, Г. (2006) *Финансовая политика революции*, Изд. „Общест-во купцов и промышленников“, Москва, 19–45.

Сокольников, Г. (1922) Письмо Г. Я. Сокольникова В. И. Ленину, 28 января 1922 г., с. 93 (Российский государственный архив социально-политической истории, ф. 5, оп. 1, д. 1372, л. 1–1 гр.), в: Денежная реформа 1921–1924 гг., Создание твердой валюты. Документы и материалы (2008), Изд. РОССПЭН, Москва.

Шарапов (Талицкий), С. (1895) *Бумажный рубль (его теория и практика)*, типо-графия „Общественная польза“, С. Петербург.

Шухов, Н. (1991) *Политическая экономия социализма в 20-е годы*, Изд. „Наука“, Москва.

Струмилин, С. (1925) *Проблемы экономики труда*, „Вопросы труда“, Москва.

Трахтенберг, И. А. (1922) *Бумажные деньги*, Кооперативное издательство „Московский рабочий“, Москва.

Трифонов, Д., Л. Широкорад, под. ред. (1983) *История политической экономии социализма*, Изд. Ленинградского Университета, Ленинград.

Шмидт, О. (1923) *Математические законы денежной эмиссии*, Государственное издательство, Москва, Петгроград.

Фалькнер, С. Я. (1918) Проблема нормирования цен в системе эмиссионного хозяства, В: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 69–78.

Фалькнер, С. Я. (1918/1919) Будущее нашей валюты, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 27–34.

Фалькнер, С. Я. (1919) *Бумажные деньги французской революции (1789–1797),* Изд. Высший Совет народного хозяйства, Москва.

Фалькнер, С. Я. (1919а) Экономические функции обесценения денег, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 44–47.

Фалькнер, С. Я. (1919б) Эмиссия как финансовая система, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 35–43.

Фалькнер, С. Я. (1919в) Принципы построения системы твердых цен, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 98–109.

Фалькнер, С Я. (1920) Эмисионное хозяйство как экономическая категория, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 13–26.

Фалькнер, С. Я. (1920а) Методы определения ценности бумажных денег, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 123–128.

Фалькнер, С. Я. (1920б) Напряжённость эмиссии и темп обесценения в 1914–1918 гг., в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 129–141.

Фалькнер, С. Я. (1920в) Прошлое и будущее русской эмиссионной системы, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 176–201.

Фалькнер, С. Я. (1921) Цели и средства денежной реформы, в: Фалькнер, С. Я. (1924) Проблема теории и практики эмиссионного хозяйства. Изд. „Экономическая жизнь“, Москва, с. 60–66.

Фалькнер, С. Я. (1922) Изказване В: Журнал совещания по вопросам денежного обращения, происходивщего в Наркомфине 26 января 1922 г., с. 67, 76–78, 87 (Шмелев), 88–89 (Российский государственный архив экономики, ф. 7733, оп. 1, д. 6898, л. 146–188), в: Денежная реформа 1921–1924 гг.: Создание твердой валюты. Документы и материалы (2008). Изд. РОССПЭН, Москва.

Фалькнер, С. Я. (1924) *Проблема теории и практики эмиссионного хозяйства*, Изд. „Экономическая жизнь“, Москва.

Фалькнер, С. Я. (1924а) Изказвания В: Работы Института экономики I Московского Государственного Университета, Факультета общественных наук, СХ (1): с. 416–417, 421; СХ (2): с. 377–378.

Хензел, П. (1935) *Финансово и данъчно устройство на Съюза на съветските социалистически републики*, кооперативна печатница „Напред“, София.

Ходяков, М. (2018) *Деньги революции и гражданской войны*, Изд. Санкт-петер-бургского Государственного Университета, Санкт-Петербург.

Царевски, Н. (1975) *Валутни и кредитни отношения на НР България*, Изд. „Наука и изкуство“, София.

Чуднов, И. (2018) *Денежная реформа 1947 года*, Изд. РОССПЭН, Москва.

Чучин, Ф. (1927) *Каталог бон и дензнаков России, РСФСР, СССР, окраин и образований (1769–1927)*, Издание Советской филателистической ассоциации при комиссии Всероссийского центрального исполнительного комитета фонда имени В. И. Ленина помощи беспризорным детям, Москва.

Юровский, Л. (под ред.), (1926*) Наше денежное обращение. Сборник материалов по истории денежного обращения в 1914–1925 гг.*, Финансовое издательство Народного комиссариата финансов СССР, Москва.

Юровский, Л. (2008) *Денежная политика Советской власти (1917–1927). Избранные статьи*, под. ред. Ю. Голанда, Изд. „Экономика“, Москва.

Bibliography In Cyrillic translated into English (the same order as above)

Atlas, Z. (1969) *The Socialist Monetary System*, ed. "Finance", Moscow. (In Russian)

Bazarov, V. (1925) On "recovery processes" in general and on "emission possibilities" in particular, In: Bazarov, V., *Selected Works*, Vol. 1, pp. 356-383, Publishing House "Delo", Moscow. (In Russian)

Bogolepov, M. (1922) *Paper Currency*, Ed. "Cooperative Society", Moscow. (In Russian)

Bogomazov, G. (1974). *Marxism - Leninism and the Problems of Commodity-Money Relations during the Construction of Socialism in the USSR (Historical-Theoretical Essay)*, ed. Leningrad University, Leningrad. (In Russian)

Brutskus, B. (1922) Problems of the National Economy under the Socialist System, *Ekonomist*, 1 (I-IV), 2 (V-VI), 3 (VII-X). (In Russian)

Bukharin, N., E. Preobrazhensky (2018 [1919]) *The ABC of Communism*, ed. "Algorithm", Moscow. (In Russian)

Varga, E. (1922 [1921]) *Problems of Economic Policy under the Proletarian Dictatorship*, State Publishing House, Moscow (In Russian)

Velyov, M. (1952) *Functions and role of money in our country*, Bulgarian Communist Party Publishing House, Sofia. (In Bulgarian)

Goland, Y. (2006). *Discussions on Economic Policy in the Years of Monetary Reform 1921-1924*, Ed. "Ekonomika", Moscow. (In Russian)

Katzenbaum, Z. (1924) *Monetary Circulation of Russia, 1914-1924*, Ed. "Ekonomicheskaya zhizn", Moscow - Leningrad. (In Russian)

Kovalev, A. (2014) Ideas of the Austrian School in Soviet Economic Literature of the 1920s, In: Capitalism and Freedom, Sant Petersburg, pp. 88-105. (In Russian)

Kornai, J. (1996 [1992]) *The Socialist System. A political economy of communism*, ed. "Prof. Marin Drinov", Sofia.

Kornai, J. (1998) *Transformation after Socialism. The Hungarian Experience*, Ed. Economic Programming and Development Agency, Sofia. (In Bulgarian)

Kotsev, T. (1989) Organization and Planning of Money Turnover and Monetary Circulation *under* Socialism, and System and Organization of Cashless Payments, in: T. Kotsev and G. Petrov, eds. Finance and Credit under Socialism, ed. "Science and Art, Sofia, chap. 3, c. 26-73. (In Bulgarian)

Kotsev, T., G. Nikolova (1983). Organization and Planning of Money Circulation under Socialism, and System and Organization of Cashless Payments, chap. 10 and chap. 11, in: T. Kotsev and G. Petrov, eds. *Finance and Credit under Socialism*, ed. "Science and Art, Sofia, pp. 254-305. (In Bulgarian)

Kotsev, T., G. Nikolova, R. Radkov (1975) Organization and Planning of Monetary Circulation under Socialism; Nature and Organization of Cashless Payments, chap. 10 and chap. 11, Rusenov, V., M., ed. *Finance and Credit of the Socialist State*, in: T. Kotsev and G. Petrov, eds. *Finance and Credit under Socialism*, ed. "Science and Art, Sofia, pp. 239-270. (In Bulgarian)

Kuzovkov, D. (1925*). Highlights of the collapse and restoration of the monetary system*, Communist Academy, Economics section, Moscow (In Russian)

Kutler, N. (1922) On Monetary Reform. Report of N. H. Kutler, pp. 112-120 (Russian State Archive of Economics, f. 2324, op. 26, d. 103, pp. 46-48), In: Monetary Reform 1921-1924: Creation of a Hard Currency. Documents and Materials (2008), ROSSPEN, Moscow. (In Russian)

Kutler, N. (1923) On the growth of commodity prices, *Economic Life*, August 29, p. 2, In: Nikolaev, M. Г. (2018) *Nikolai Kutler. Life in two epochs. Pages of the biography of one of the heads of the State Bank of the NEP period*, Ed. Bank of Russia, Moscow, pp. 349-353.

Larin, Y. (1918) At the Cradle, *Narodnoe hozyastvo* (4): pp. 16-28. (In Russian)

Lenin, V. (1967 [1921]). VII Moscow Gubpartkonferentsiya, In. V. Lenin (1967), Complete Works, Vol. 44, pp. 207-208 (http://leninvi.com/). (In Russian)

Livshits, B. (1924) Towards a statement of the monetary problem from the point of view of the law of equilibrium*, Under the Banner of Marxism*, (8-9): pp. 224-245. (In Russian)

Lomeyer, A., ed. (1918) *Questions of Currency Circulation*, ed. "Central People's Industrial Committee", Petrograd. (In Russian)

Manevich, V. (1986) *The Development of the Theory of Money Circulation in Soviet Economic Literature*, Ed. "Nauka, Moscow. (In Russian)

NKh/*National Economy* (1918) Economic Research Division, No. 10, Supreme Board of the National Economy (in Russian)

Nenovsky, N. (2020) Counting without money: natural models of social accounting in O. Neurath and A. Chayanov, In: Autonomov, V., A. Rubinstein, eds., *Economic Science: Forgotten and Rejected Theories*, ed. Institute of Economics RAS and SU HSE, Moscow, pp. 234-250. (In Russian)

Nenovsky, N. (2020a) Monetary nationalism, suppressed and open inflation, *Banker's Weekly*, 14 August 2020, pp. 6-7. (In Bulgarian)

Nenovsky, N. (2007). *Money Order. Critique of the theory of money*, ed. "Siela", Sofia. (In Bulgarian)

Nikolaev, M. (2018) *Nikolai Kutler. Life in two epochs. Pages of the biography of one of the heads of the State Bank of the NEP period*, Ed. Bank of Russia, Moscow. (In Russian)

Novozhilov, V. (1924) The Limits of Inflation, In: Stein, V., ed., *Finance and Monetary Circulation in Modern Russia*, pp. 83-121, Ed. "Petgorgrad", Leningrad - Moscow. (In Russian)

Novozhilov, V. (1926) Shortage of goods, *Vestnik Finansov*, (2): pp. 71-86. (In Russian)

Panchev, S. (2021) Banks must be crazy, In. 2020 and beyond, Konrad Adenauer Stiftung, Sofia. (In Bulgarian)

Pogrebetsky, A. (1924) *Monetary circulation and currency of the Far East during the war and revolution (1914-1924),* Society for the Study of the Manchurian Region, Harbin. (In Russian)

Preobrazhensky, E. (1922) The Russian ruble during the war and the revolution, *Krasnaya Nov*, (2): pp. 242-257(In Russian)

Preobrazhensky, E. (1920) *Paper Money in the Era of Proletarian Dictatorship*, State Publishing House, Moscow. (In Russian)

Sokolnikov, G. (2006 [1918]) Basic Principles of Financial Policy, In: Sokolnikov, G. (2006) *Financial Policy of the Revolution*, ed. "Society of Merchants and Industrialists", Moscow, 19-45. (In Russian)

Sokolnikov, G. (1922) Letter of G. Sokolnikov to V. Lenin, January 28, 1922, p. 93 (Russian State Archive of Social and Political History, f. 5, op. 1, d. 1372, л. 1-1), In: Monetary Reform 1921-1924, Creation of a Hard Currency. Documents and Materials (2008), Ed. ROSSPEN, Moscow. (In Russian)

Sharapov (Talitsky), S. (1895) *The paper ruble (its theory and practice)*, printing house "Public utility", S. Petersburg. (In Russian)

Shukhov, N. (1991) *The Political Economy of Socialism in the 1920s*, ed. "Nauka", Moscow. (In Russian)

Strumilin, S. (1925) *Problems of Labour Economics*, Questions of Labour, Moscow. (In Russian)

Trachtenberg, I. (1922) *Paper Currency*, Cooperative Publishing House "Moskovskii Rabochiy", Moscow. (In Russian)

Trifonov, D., L. Shirokorad, eds. (1983) *History of Political Economy of Socialism*, ed. Leningrad University, Leningrad. (In Russian)

Schmidt, O. (1923) *Mathematical laws of monetary emission*, State Publishing House, Moscow, Petrograd. (In Russian)

Falkner, S. (1918) The problem of price rationing in the system of the emission economy, In S. Falkner (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn, Moscow, pp. 69-78. (In Russian)

Falkner, S. (1918/1919) The future of our currency, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn, Moscow, pp. 27-34. (In Russian)

Falkner, S. (1919) *Paper Currency of the French Revolution (1789-1797),* Ed. Supreme Council of National Economy, Moscow. (In Russian)

Falkner, S. (1919a) Economic functions of money depreciation, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn, Moscow, pp. 44-47. (In Russian)

Falkner, S. (1919b) Emission as a Financial System, In: Faulkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn, Moscow, pp. 35-43. (In Russian)

Falkner, S. (1919c) Principles of the construction of a system of firm prices, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn", Moscow, pp. 98-109. (In Russian)

Falkner, S. (1920) Emission economy as an economic category, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn, Moscow, pp. 13-26. (In Russian)

Falkner, S. (1920a) Methods of determining the value of paper currency, In: Falkner, S. (1924) The Problem of the Theory and Practice of Emission Economy. Ed. "Ekonomicheskaya zhizn", Moscow, pp. 123-128. (In Russian)

Falkner, S. (1920b) Emission tensions and the rate of depreciation in 1914-1918, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn", Moscow, pp. 129-141. (In Russian)

Falkner, S. (1920c) The past and future of the Russian emission system, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Emission Economy. Ed. "Ekonomicheskaya zhizn", Moscow, pp. 176-201. (In Russian)

Falkner, S. (1921) The ends and means of monetary reform, In: Falkner, S. (1924) The Problem of the Theory and Practice of the Issue Economy. Ed. "Ekonomicheskaya zhizn", Moscow, pp. 60-66. (In Russian)

Falkner, S. (1922) Speech in: Notes of the meeting on monetary circulation, held in the Narcomfin on 26 January 1922, pp. 67, 76-78, 87 (Shmelev), 88-89 (Russian State Archive of Economics, ff. 7733, op. 1, d. 6898, l. 146-188), In: Monetary Reform 1921-1924: Creation of a Hard Currency. Documents and Materials (2008). Ed. ROSSPEN, Moscow. (In Russian)

Falkner, S. (1924) *The Problem of the Theory and Practice of the Issue Economy*, ed. "Ekonomicheskaya zhizn", Moscow. (In Russian)

Falkner, S. (1924a) Speeches In: Works of the Institute of Economics I of Moscow State University, Faculty of Social Sciences, *Narodnoe Hozyaistvo* (1): pp. 416-417, 421; SX (2): pp. 377-378. (In Russian)

Hensel, P. (1935) *Financial and Tax Structure of the Union of Soviet Socialist Republics*, Cooperative Printing House "Napredak", Sofia. (In Bulgarian)

Khodiakov, M. (2018) *The Money of Revolution and Civil War*, Ed. St. Petersburg State University, St. Petersburg. (In Russian)

Tsarevsky, N. (1975) *Currency and Credit Relations of the People's Republic of Bulgaria*, Ed. "Hauka I Izkustvo", Sofia. (In Bulgarian)

Chudnov, I. (2018) *Monetary Reform of 1947*, Ed. ROSSPEN, Moscow. (In Russian)

Chuchin, F. (1927) *Catalogue of Bonds and Denominations of Russia, RSFSR, USSR, Suburbs and Entities (1769-1927)*, Edition of the Soviet Philatelic Association under the Commission of the All-Russian Central Executive Committee of the V. Chuchin Foundation. И. Lenin's aid to street children, Moscow. (In Russian)

Yurovsky, L. (ed.), (1926*) Our Monetary Circulation. Collection of materials on the history of money circulation in 1914-1925*, Financial Publishing House of the People's Commissariat of Finance of the USSR, Moscow. (In Russian)

Yurovsky, L. (2008) *Monetary Policy of the Soviet Power (1917-1927). Selected Articles*, ed. Y. Goland, ed. "Ekonomika, Moscow. (In Russian)

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Bibliography in Latin

Allisson, F. (2015) *Value and Prices in Russian Economic Thought. A Journey inside the Russian Synthesis, 1890-1920*, Routledge, London.

Aftalion, F. (2007) *L'économie de la Révolution française*, Les Belles Lettres, Paris.

Arnold, A. (1937) *Banks, Credit and Money in Soviet Russia*, Cambridge University Press, New York.

Artus, P. (2020) La création monétaire n'annulera pas les effets de la crise, *Les Echos*, 14 décembre 2020.

Birman, I. (1980) The Financial Crisis in the USSR, *Soviet Studies*, 32(1): pp. 84-105.

Birman, I. (1980) A Reply to Professor Pickersgill, *Soviet Studies*, 32(1): pp. 586-591.

Boettke, P. J. (1999 [1990]) The Political Economy of Soviet Socialism. The Formative Years, 1918-1928, Kluwer Academic Publishers, Boston, Dordrecht, London.

Caballero, R., E. Farhi (2017). The Safety Trap, *Review of Economic Studies*, 85 (1): pp. 223-274.

Cagan, Ph. (1956) The Monetary Dynamics of Hyperinflation, in: Friedman, M., (ed.), (1956), *Studies in the Quantity Theory of Money*, pp. 25-117, The University of Chicago Press, Chicago and London.

CRBRP (Comité des Représentants des Banques Russes à Paris) (1922) *Mémoires élaborées à l'occasion de la Conférence de Gênes*, Imprimerie I. Rirachovsky, Paris.

Coats, W. (2019) Modern Monetary Theory: A Critique, Cato *Journal*, 39(3): pp. 563-576.

Congdon, T. (2020) Will the Current Money Growth Acceleration Increase Inflation? *Wolrd Economics*, 21(2): pp. 1-24.

Davies, R. (1958) *The Development of the Soviet Budgetary System*, Cambridge University Press, Cambridge.

De Grauwe, P., Y. Ji (2018) Financial engineering will not stabilise an unstable euro area, *VoxEU CEPR*, 19 March 2018.

Dembinski, P. (1988) *Les économies planifiées. La logique du système*, Editions du Seuil, Paris.

De Soto, J-H. (2010 [2001/1992]) *Socialism, Economic Calculation and Entrepreneurship*, Edward Elgar, Cheltenham.

Edwards, S. (2019) Modern Monetary Theory: Cautionary Tales from Latin America, *Cato Journal*, 39(3): pp. 529-561.

Fry, M. (1995[1988]) *Money, Interest, and Banking in Economic Development*, The Johns Hopkins University Press, Baltimore and London.

Garvy, G. (1977) Money, Financial Flows, and Credit in the Soviet Union, NBER, Ballanger Publishing Company, Cambridge.

Hanke, S. (2012) Bulgaria: Fifteen Years Later. Currency Board, *Studies in Applied Economics* No. 2.

Hayek, F. (2015 [1937]) *Collectivist Economic Planning*, edited with an Introduction and Collected Essays by F. A. Hayek, L. v. Mises Institute.

Hayek, F. (2012 [1929]) Monetary theory and the trade cycle, in. A. Hayek, *Business cycles*, part I, Routledge, Abingdon, New York.

Jaconis, S. (2017) Currency substitution and instability in the economy: the soviet experiment of the 'chervonets' in the twenties, *Rivista di Storia Economica*, 33(1): pp. 89-112.

Keynes, J. M. (2000 [1923]) *A Tract on Monetary Reform*, Prometheus Books, New York

Kim, B. (2002) Causes of repressed inflation in the consumer goods market, 1965-1989: retails price subsidies, the siphoning effect, and the budget deficit, *Economic History Review*, 55(1): pp. 105-127.

Kornai, J. (1980) *Economics of Shortage* (vols. A and B), North-Holland Pub. Co, Amsterdam, New York.

Kremer, G., A. Bouhaili (1992) Modèles monétaires de l'hyperinflation, *Revue Tiers Monde*, 33 (129): pp. 113-136.

Lavoie, D. (2015 [1985]) *Rivalry and central planning: the socialist calculation debate reconsidered,* Mercatus Center, George Mason University, Arlington.

Lavoie, M. (2013) The Monetary and Fiscal Nexus of Neo-Chartalism: A Friendly Critique, *Journal of Economic Issues*, 47(1): 1-32.

Lerner, A. (1947 [1944/1943]) Interest, Investment, and Employment III (Functional Finance), in. (1947 [1944]) *The Economics of Control. Principles of Welfare Economics*, The Macmillan Company, New York, pp. 302-321.

Lindbeck, A. (2007) János Kornai's Contributions to Economic Analysis, *IFN Working Paper* No. 724.

Malle, S. (1985) *The Economic Organization of War Communism, 1918-1921*, Cambridge University Press, Cambridge.

Magnin, E., N. Nenovsky (2020) Calculating Without Money. Theories of In-Kind Accounting of Alexander Chayanov, Otto Neurath and the Early Soviet Experiences, *European Journal of the History of Economic Thought*, 28(3).

Mankiw, G. (2020) A Skeptic's Guide to Modern Monetary Theory, *AEA Papers and Proceedings*, (110): pp. 141-144.

Maskin, E. (2000) Planning, Shortage, and Transformation: Essays in Honor of János Kornai, MIT Press.

Mises, L. (1980 [1952/53]). *The Theory of Money and Credit*, Liberty Fund, Indianapolis.

Mitchell, W., R. Wray, M. Watts (2019) *Macroeconomics*, London, Red Globe Press.

Nenovsky, N. (2020) Discussion on paper currency among Russian economist during the Great War (1914-1917) with special emphasis on Tugan-Baranovsky's contributions, *Revue d'histoire de la pensée économique*, 2(10): pp. 103-140.

Nenovsky, N. (2019) Money as a coordinating device of a commodity economy: Old and new, Russian and French readings of Marx, Part 1. Monetary theory of value, *Revue de la Régulation*, 26 (2), online: https://journals.openedition.org/regulation/15916.

Nenovsky, N. (2019a) Money as a coordinating device of a commodity economy: Old and new, Russian and French readings of Marx, Part 2: The theory of money without the theory of value, *Revue de la Régulation*, 26 (2), online: https://journals.openedition.org/regulation/15991.

Nenovsky, N. (2010) The Soviets monetary experience (1917-1924) through the perspective of the discussion on unity and diversity of money, *MPRA Paper* No. 79864.

Nenovsky, N., K. Hristov (2002) New Currency Boards and Discretion. The Empirical Evidence from Bulgaria, (with K. Hristov), *Economic Systems*, 26 (1): pp. 55-72.

Nuti, D. (1986). Hidden and repressed inflation in soviet-type economies: definitions, measurements and stabilisation, *Contributions in Political Economies*, (5): pp. 37-82.

Pasvolsky, L. (1921) *The Economics of Communism (with special reference to Russia's experiment)*, The Macmillan Company, New York.

Seurot, F. (1983) *Inflation et emploi dans les pays socialistes*, PUF, Paris.

Sinn, H-W. (2020) *The Economics if Target Balances. From Lehman to Corona*, Palgrave, Macmillan, Cham.

Shmelev, K. (1931) Public finances during the civil war, 1917-1921, in. and Associates (1931). Edited by L. Hutchinson and C. Plehn, *Soviet Policy in Public Finance, 1917-1928*, Stanford University Press, California, pp. 74-137.

Tymoigne, E., R. Wray (2013) Modern Money Theory 101: A Reply to Critics, *Levy Institute Working Paper* No. 778

Willes, P. (1962). *The Political Economy of Communism*, Basil Blackwell, Oxford.

Wray, R. (1998) *Understanding Modern Money. The Key to Full Employment and Price Stability*, Edward Elgar, Cheltenham.

Wray, R. (2015) *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*, Palgrave Macmillan, London.