

# A stagflation-proof bill of exchange circulation model – Presentation and evaluation

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## Abstract

As a continuation of a preceding article discussing liquidity creation based on promissory notes and bills of exchange, the present study introduces how the use of notes and bills can foster the particular economic sectors and public debt management at a time. A financial policy package of measures first suggested by Lautenbach then introduced by Schacht fought off recession and inflation within half a decade in the German economy. We make up for a professional hiatus in the Hungarian economic literature, in that we provide a detailed evaluation of the financial solution of Schacht which has appeared in many forms in the international literature.

The then used economic model is worth considering under current economic conditions, especially if combined with Fintech methods. Suggestions for potential applications taking into consideration stagflation and endogenous growth are the following: they (1) can stop and turn recession to growth, (2) do not require external financing, (3) mitigate the burden of public debt financing, (4) have an inflation moderating effect, (5) are worth implementing in, among others, sectors such as energy, environmental protection, agriculture, wholesale and retail trade, social protection.

**KEYWORDS:** liquidity creation, public debt, quantity theory of money and credit, inflation

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## Introduction

This paper builds on a recent paper entitled “Creating liquidity with bills of exchange”, see *Szalay et al.* (2022). As a continuation of that, our aim is to make the paper meaningful in its own right.

In addition to its role in providing liquidity creation, the use of bills of exchange also serves to ease the burden on general government in countries with high public debt. The essence of our paper is to outline a model of the use of bills of exchange in the service of the real economy, and to demonstrate that it can provide an economic policy tool for the state in times of stagflation. The sovereign crisis between 2009 and 2012 and the government interventions triggered by the coronavirus raised the issue of the increased stock of public debt. Drawing on historical examples, *Mayer-Schnabl* (2021) takes stock of the options that have been successfully applied in debt management in the previous century. According to this view, previous governments have sought to manage public debt by introducing austerity packages, by means of disguised debt reduction (see inflating away debt, inflationary tax revenues) and by restructuring general government in conjunction with currency reform. On this basis, *Mayer-Schnabl* proposes the issuance of digital central bank money backed by public debt for the countries of the eurozone. In our paper, also learning from a historical example, the authors propose the circulation of digital bills of exchange addressed to a public authority. This will help finance public debt and provide liquidity to entrepreneurs at the same time.

In the first chapter on theoretical foundations, following on *Lautenbach*, we review the possible lending processes in the economy. We will seek to emphasise market-based financing, i.e. the possibility of self-financing by the real sector, in addition to financing from the banking sector (which is almost exclusive today). The dominance of the banking sector over the real sector, the bubble economy based on the monopoly of money creation, which results in a series of crises, has brought about the need for circular economic models, local economic organisation, and the ‘new sustainable economics’ by the 21st century, also discussed in the work by *Matolcsy* (2023). Based on the above, we surmise the business community and the state, as an actor vested with the power to organise the economy, could implement more efficient financing alternatives with lower costs for the actors through different applications of the bills of exchange scheme.

As a theoretical background, we also draw on Richard Werner’s approach to the economic views that have reshaped contemporary thinking. *Werner* (2014) provides mathematical evidence that targeted lending to support the productive sector not only prevents bubbles from forming, but also has a real economic impact while reducing public debt.

In our paper, we provide a detailed description of the MEFO bill to corroborate that a well-chosen financial policy instrument can both increase the efficiency of the business sector and finance public debt.

## Theoretical bases

As a starting point, we should mention *Wilhelm Lautenbach's* theory of *credit mechanics* (Kreditmechanik) as a system of arguments for the issue of bills of exchange.

The basic idea is as follows: the process of credit expansion and its dynamics are not only determined by the *Asset side of banks' balance sheets*, i.e. the amount of credit currently outstanding, but also by the evolution of the *Liabilities side*. Changes in employment, wage bill, savings and investment are factors that require credit expansion. In addition, there are a number of economic transactions between debtor and debtor, debtor and creditor, and creditor and creditor which, although they do not affect the volume of credit (see intercompany transactions), have an impact on the volume of bank credit, due to the resulting changes in equity and bond markets.

*Lautenbach* (1952) drew attention to the following:

- If companies with surpluses do not keep their surpluses in deposits but invest them in companies with resource deficits, they will reduce their bank deposits; while companies with resource deficits will use the funds they have acquired to repay part of their liabilities to their banks, overall, the stock of outstanding loans is therefore decreasing.
- In the case of new bank lending, only then will the amount of loans increase, if its total amount does not appear on the balance sheet of another party as a reduction in liabilities to credit institutions.

*Decker-Goodhart* (2021) argues that *Lautenbach's* theory of the credit mechanics demonstrates that in a given situation (see the period 2007–2009), even if central banks expand the monetary base, the effect of this expansion will not necessarily be reflected in the larger monetary aggregates.

To conclude the presentation of the theory of the credit mechanics, let us note that the traditional theory of the money multiplier is not valid when it is not the volume of the money supply but the structure of the use of credit that is determining. Related to this is the approach of *Schacht*, who condemned inflationary monetary policy, which, he argued, while leading to a temporary economic boom, encourages excessive consumption that does not rely on income from saved capital. (*Schacht* (1967) p. 170). His model follows the quantity theory of money, arguing that money is only worth issuing if it is backed by an adequate commodity collateral.

The quantity theory of money is also the starting point for a system of arguments which, based on the lessons of recent sovereign crises, proposes the use of bills of exchange for public purposes as a new debt management method. Among the theoretical approaches underpinning new financial solutions, the proposal of *Richard Werner* (2014) deserves attention, which he introduced into the academic literature as 'enhanced debt management'.<sup>3</sup> In describing a new way of debt management, *Wer-*

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3 In his paper, he stresses that the term did not originate with him, but that he thanked Prince Max von Lichtenstein for suggesting the terminology.

ner (2014) calls for a revival of old techniques, referring also to Schacht's MEFO bill, which will be discussed in this paper.

Werner bases his ideas on his quantity theory of credit (Werner (2005)). Accordingly, the borrower essentially issues a promissory note to the lender at the same time as the borrowing act takes place. However, some of the increased money generated by lending is not used for real economic purposes. This latter quantity must be distinguished from the component that actually contributes to GDP growth. Multiplying this 'real economy' credit ( $C_R$ ), or its expansion, by its velocity of circulation, we obtain the right-hand side of the equation describing the quantity theory of money, i.e. nominal GDP, or nominal growth.<sup>4</sup>

The equation, however, does not include a significant part of lending, i.e.  $C_F V_F$ , which is used exclusively for the exchange of financial or other assets; and often results in asset price bubbles. If we use  $C_R V_R$  (i.e. credit for real economic purposes and its velocity of circulation) instead of nominal GDP, then already the public debt-to-GDP ratio can be expressed as  $D/C_R V_R$ .

To sum up, the higher the amount of productive lending by commercial banks, the lower the Maastricht debt ratio will be, i.e. it is explicitly worth encouraging commercial banks to lend for productive purposes.

The above is only one side of the argument. If we look at the growth of  $D$ , i.e. we look at the increase in the stock of government debt of a budgetary nature, it depends on the difference between taxes (and other revenues) and government spending in a given year, as well as net interest expenditure. When a crisis develops, the cost of capital for government bonds rises to an extreme, far above the prime rate that banks would charge their best debtors. As government bonds change hands on international markets, they are devalued here due to unfavourable ratings from credit rating agencies and rising risk premia. This makes it costly to finance higher-risk sovereign debtors, including the riskier eurozone economies, during these periods.

Using Werner's ideas, if the domestic banking system were to finance government borrowing, this would be possible even at *prime rate*. The capital adequacy of banks would not be at risk either, while in the case of purchasing debt securities from the market a let's say 10% loss in the value of their loan portfolio (including investment in government bonds) would already jeopardise capital adequacy if they

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4 The original relation  $MV=PQ$  in which the quantity of nominal money and the velocity of money circulation are the left-hand side of the equation and the right-hand side is the price level and the quantity of transactions realised with the use of money, can be further decomposed according to the origin of money, according to Weber (2005):  $MV=C_R V_R + C_F V_F$ , where  $C_R$  is the stock of credit for GDP-related transactions (multiplied by its velocity of circulation:  $V_R$ ) and  $C_F$  is the stock of credit for exclusively financial transactions but not real economic expansion (multiplied by its velocity of circulation  $V_F$ ). Of this, the  $C_R V_R$  is indeed equal to nominal GDP, i.e.:  $C_R V_R = PY$ , while  $MV \neq PY$  (because of the aforementioned lending that supports only financial flows)! However, if  $C_R V_R = PY$ , then the value of public debt ( $D$ ) as a share of GDP can also be expressed as  $D/C_R V_R$ , i.e. the increase in the stock of credit financing real economic transactions reduces the Maastricht debt indicator.

comply with the Basel rules<sup>5</sup>. Direct lending (prohibited under current legislation – *Authors’ note*)<sup>6</sup> would not threaten the banking system the above way, even if only domestic bills of exchange, government acceptance notes, were used to finance public spending. This last statement brings us back to the theory of the credit mechanics as a starting point.

Werner (2014) stresses that involving domestic investors other than the banking sector to finance public debt in order to reduce external vulnerabilities implies crowding out private consumption and investment. In the case of the banking system providing funds, the crowding-out effect does not exist because they do not sacrifice their savings when disbursing credit to the state, but are able to create money from ‘nothing’. Thus, public debt can be financed without reducing GDP (and hence tax revenues), moreover, even GDP growth can be achieved by lending for productive purposes.

To sum up, both the numerator and the denominator of the public debt indicator are positively affected by the lending of the banking system to the real economy. The above interrelationship of macroeconomic variables is empirically confirmed by Werner (2014).

The essence of ‘enhanced debt management’ is summarised below<sup>7</sup> (based on Werner (2014), p. 453):

- government debt securities that are not marketable (or have limited marketability – *Authors’ note*), do not need to be repriced daily by bank investors at market value, moreover, can even be registered at par value, are the most appropriate form of financing,
- this type of debt management is cheap, costing less than the increased government bond yields experienced during crises,
- is not subject to ratings by international credit rating agencies, including downgrades,
- can only be accessed at the domestic market, reduces external debt, strengthens fiscal and financial stability in the national economy, the eurozone and the European Union,
- improves the profitability of domestic banks, making capital increases and the creation of additional capital buffers unnecessary,
- contributes to economic growth, thus reducing the *deficit-to-GDP* and *public debt-to-GDP* ratios,
- it avoids major fiscal austerity, sale of assets and deflationary structural reforms (and inflating debt can be avoided as well – *Authors’ note*).

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5 Marketable securities must be marked to market by commercial banks.

6 Under Article 123 of the Treaty on the Functioning of the European Union (TFEU), the ECB and national banks cannot lend directly to the state (ban on ‘monetary financing’)

7 For reasons of space, we will abandon Werner’s proposals to avoid the use of tax revenues to finance the non-performing assets taken over from banks.

## The MEFO bill as quantitative easing and historically premature helicopter money but backed up by collateral

The operation of the MEFO bill can be seen as a model of economic development initiated through a bill of exchange-based liquidity creation, without the risk of inflation and without increasing the burden on the budget. The scheme, as *Werner* (2014) emphasises, meets the requirements for enhanced debt management detailed above. Introduced by German economic politician and banker *Hjalmar Schacht* (1877–1970) as president of the Reichsbank, the commercial bill of exchange served the economic policy objective of the German central bank. Some refer to it as a demand stimulus measure similar to helicopter money, others as an unconventional economic policy instrument, suggesting it as a crisis management tool to be followed, as *Bossone-Labini* (2016).

*Bofinger* (2016), in a paper criticising current German and partly eurozone economic policy, points out that our economic policy conception lacks the idea of full employment. In his view, the pursuit of fiscal balance and expansion through economic openness, as opposed to the Keynesian demand stimulus approach to economic policy, is exaggerated. According to him, current economic policy makers do not recognise the German economic policy set of tools between the two world wars, in which fiscal demand stimulus played a major role. Today, according to *Bofinger*, the German economy is receiving the incentive to achieve full employment from its trading partners. However, *Bossone-Labini* (2016) stresses the following (after *Stucker* (1953)):

1. The German economy between the two world wars emerged from recession and became a strong economy in just a few years thanks to the Schachtian economic policy, which combined Keynesian elements, while
2. achieved full employment and tackled inflation at the same time.

The above was made possible by the financial policy advocated by *Schacht*. Instead of issuing new government bonds, he entrusted the issue of securities to companies fulfilling government orders. The obligor of these securities, as commercial bills of exchange, was the German state, more specifically the company MEFO, which was thus obliged to pay for state orders.

Overall, *Schacht*'s financial policy implemented fiscal stimulus backed by the issuance of money, and in this respect it is similar to the use of helicopter money, and if we look at *Schacht*'s economic policy from the monetary policy point of view, it is akin to quantitative easing (QE).

## The economic policy precedents of the MEFO bills

The aforementioned *W. Lautenbach* had already proposed the issue of bills of exchange to finance public investment in the short term, before the introduction of MEFO bills. In 1931, the *Lautenbach Memorandum* initiated the issue of discount-

able bills of exchange to the German central bank. According to several papers (*Feld et al.* (2021) and *Decker-Goodhart* (2021)), this would have served to finance public investment for job creation and enhancing productivity in the short term. The proposal was not well received by the government at the time. German economic policy, if not directly at *Lautenbach*'s suggestion, had already used a bills of exchange schemes to restore the economy. Areas where the circulation of bills of exchange was implemented in practice and had a stabilising effect on the German economy are worth mentioning:

- Export promotion through bills of exchange played a role in the reconstruction through the Golddiskontbank (DEGO), which discounted the bills of exchange more cheaply than the Reichsbank.
- The Deutsche Gesellschaft für öffentliche Arbeiten AG (Oeffa), or German Public Works Corporation Ltd. founded in 1930, was involved in financing the postal and railway services by granting loans to public service providers in exchange for bill of exchange to ease the credit crunch. The banks accepted these bills of exchange, most of which had a maturity of three months (in line with the central bank's discount policy), which they could then re-discount at the central bank.
- A significant part of the job creation between 1933 and 1935 was achieved by issuing job-creation bills of exchange. Most of these were Oeffa bills of exchange, but a wide range of credit institutions were involved in the financing.

## The historical economic background and the operation of the Schachtian MEFO bill in practice

The objective of our paper is to outline a model of the use of bills of exchange for the real economy. Below we will provide a sketchy economic history of *Hjalmar Schacht*'s economic policy, explaining how it contributed to Germany's recovery from the post-World War I recession. We present how the German economy, which had been depressed and bankrupted by war reparations, recovered in the years following the Great Depression. *Schacht* was a respected economist for this very reason, but he was also regarded as the founder with dubious reputation of the German war economy in the run-up to World War II.

The German economic policy to combat unemployment between the two world wars is usually associated with *Keynes*, but *Schacht*'s measures preceded the 'General Theory' by *Keynes*. *Keynes* did not address the possibility of using the *Schachtian* monetary policy instruments (*Pentzlin* (1980)), but he did consider it appropriate to borrow by the state to stimulate the economy as required. According to *Giatrakis*, this was in line with Germany's credit expansion before 1933, which was later followed by new agreements with banking players (*Giatrakis* (2012)).

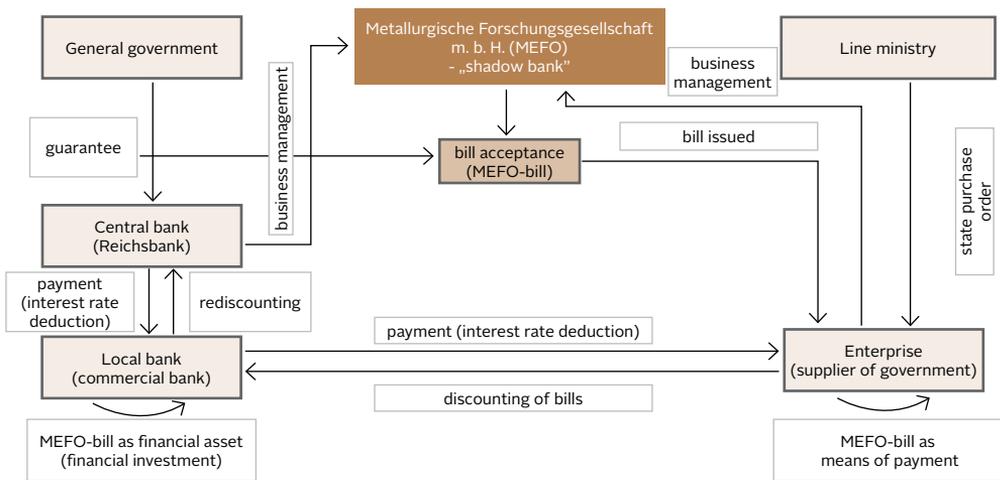
*Schacht*'s economic policy, including financial policy measures, relied on bills of exchange linked to the productive sector as a financial instrument. According to his view, the collateral behind the issued commercial bill of exchange is always em-

bodied in a mass of goods. Bank credit in the form of commercial bill of exchange thus does not trigger inflation, in contrast with other forms of credit, which are less secure in terms of price stability.

The *Schachtian model*, an economic policy based on job creation, was implemented in three main forms from 1933 onwards: (1) construction and repair of housing and factories and purchase of machinery supported by a loan programme, (2) construction of highways, (3) a defence programme. (*Schacht* (1967) p. 111)

As part of Schacht’s programme, the German metal research company Metallforschung GmbH (MEFO) was established, with capital from four major German companies. From 1934 onwards, suppliers fulfilling state orders issued bills of exchange, with MEFO as the drawee and obligor. The bills of exchange were not issued by the German state, and were issued not by state-owned but by private companies fulfilling state orders. The name MEFO bill was derived from the fact that the MEFO was the acceptor of the bills of exchange, which undertook to pay the state orders on behalf of the state. The MEFO was in fact nothing more than a financial fund or balance sheet entity, in today’s terminology a ‘shadow bank’, or more precisely as an SPV therein (special purpose vehicle)<sup>8</sup> (*Pfeffer* (2011) and *Roselli* (2014)).

1. Figure: The institutional set-up of the MEFO bill



Source: In Golla (2008), p. 181: own editing based on DeBrock - James (2019)

8 Shadow banking means credit intermediation outside the banking system, which was the activity of the MEFO. Within the group of shadow banks, SPVs may be defined as subsidiaries established for the purpose of providing specialised financial services or as off-balance sheet items (see: FSB (2017)).

These MEFO bills were secured by commodities (commodity bill, Handelswechsel). Both the liabilities of the MEFO company and the liabilities in these MEFO bills were fully guaranteed by the German budget, i.e. they acted as aval bills of exchange. The German central bank had undertaken to re-discount MEFO bills. The tripartite commitment on bills of exchange (issuer, recipient and the state) allowed the German central bank to undertake the rediscounting, thus making the discounting of bills of exchange attractive for the commercial banking system (see Figure 1). German central bank officials played an important role in the management of the MEFO company for monetary policy reasons (see the arrow for business management in Figure 1). Each bill of exchange was strictly checked to ensure that it was backed by the appropriate commodity, e.g. no bills of exchange for loan were acknowledged. This scheme was also used to finance job creation. (*Pentzlin* (1980)).

As a new solution, the central bank allowed the maturity of the receivables, initially covered by bills of exchange with a maturity of six months, to be extended by a total of five years, subject to the progress of production. The extensions were always for further periods of three months. The central bank accepted and converted all MEFO bills into cash, regardless of their face value, number or expiry date. It used a uniform discount rate of 4%, which was considered a favourable<sup>9</sup> rate compared to similar investments (*Preparata* (2002)). Because of their convertibility into central bank money, MEFO bills of exchange were similar to other money substitutes. It was worth holding them, and banks stockpiled their discounted bills of exchange in their vaults because they offered more favourable terms than many long-term securities.

Until 1938, bills of exchange were kept in circulation by the issuing corporate sector, a small number of them were only transferred to financial institutions, most of them were not discounted, and they brought additional liquidity into the economy without the issue of banknotes (*Ritschl* (2012)).

It took four years, i.e. until 1938, for the MEFO bills to be marketed, with a total stock of 12 billion marks, corresponding to an average annual output of 3 billion marks (*Schacht* (1967), p. 113). The volume issued had to be in line with the central bank's monetary and exchange rate policy. *Schacht* had already set a ceiling of 12 billion marks as a system parameter at the time of the launch. Central bank money control was simplified by the fact that half of the value of the bills of exchange issued was gradually absorbed by the market, but this changed from 1937 onwards as full employment was achieved. The German central bank considered their redemption risky from an inflation point of view, and stopped all transactions involving MEFO bills in 1938.

According to *Schacht*, further increases in the money supply through the bill of exchange would lead to an undesirable rise in price levels once full employment was achieved. He placed emphasis on ensuring that the fulfilment of the claims con-

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9 The discount rate is justified for commercial bills of exchange, as the amortisation of the underlying commodity has to be taken into account, and the bill of exchange can be considered as bearing zero interest.

tained in the bills of exchange was not hindered and was in line with the performance of the economy. The five-year grace period was intended to provide the state with sufficient tax revenue thanks to the gradual increase in income for the payment of the claims contained in the bill of exchange.

*Schacht* (1967) stressed that the financial system he represented was viable under the conditions typical of the economic situation in post-World War I Germany, i.e. when shortages of raw materials, empty stores, stagnating manufacturing production, high unemployment prevailed. To restart unused capacity, huge amounts of credit were needed, credit that advanced the missing capital in a way that it was backed by real entrepreneurial initiative, work done, production or service provided. The afterlife of the 1933-39 MEFO bill system was no longer determined by the Schachtian policy. Schacht gave up his post as central bank president on 20 January 1939. As a result of the preparations for war, from 1939 the repayment of bills of exchange was further on made by means of uncovered money issues, by allowing direct central bank lending for German financial policy – the balance between the quantity of goods and the quantity of money was upset, which was the essence of the MEFO model. (Ritschl (2012))

The economic policy and theoretical assessment of the MEFO bills is not yet complete, but its parallel with Keynesian theory is noteworthy.<sup>10</sup> The success of the MEFO bill is said to be that the Germans implemented Keynes' theory before it became known, *Schacht* added appropriate financial policy considerations and turned it into a successful practical instrument (Ritschl (2001), *Gitrakis* (2012), *Vigvári*, (2003)).

This assessment is refuted by *Pentzlin* (1980), who argues that it was only the level of turnover of MEFO bills that was surprising and that made them such an effective instrument. From 1935 onwards, *Schacht* did not use the job creating bills of exchange already introduced earlier, as described in Chapter 3 of this paper, but switched completely to use MEFO bills. This was meant to prevent a further widening of the budget deficit.

The Swiss economist *Erbe* (1956) (cited in *Pentzlin* (1980)), who evaluated the economics of German economic policy between the two world wars, argued that *Schacht* could not be considered a Keynesian. *Schacht* recognised the dangers of excessive deficits early on, and can therefore be seen as an economist who anticipated the economic policy phenomena of the 1960s and 1970s. Furthermore, while Keynes did not consider the rate of inflation as a primary economic concern, Schacht (learning from the hyperinflationary era of the German economy in the early 1920s) attached extreme importance to price stability (*Gitrakis* (2012)). *Vigvári* (2003) acknowledges the parallels between German public works programmes, capital controls, clearing agreements and Keynesian ideas, but points out that high tax rates and other compulsory fiscal payments offset fiscal expansion, so that the expenditure multiplier ef-

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10 Keynes is said to have been asked by the German leadership to develop a job creation programme between the two world wars, but the famous economist did not accept the request. (Pogány (2019))

fect was not felt. The cartelisation, monopolisation and planned economy solutions of the German state were neither in line with Keynesian economic policy.

## Criticism of Schacht's economic policy

*Schacht's* economic policy and its innovative approach in the MEFO bill have been refuted and critically assessed by many economic thinkers. According to *Abt* (2017), on the one hand, the whole National Socialist economic policy was an unsustainable system, and on the other hand, he did not consider the MEFO bill as an appropriate solution for price stability. While large public investments allowed full employment, the negative welfare effects of external public debt also manifested themselves. The Germans' endeavour was to negotiate advantageous contracts to overcome food shortages and other essential resources in the framework of unequal clearing arrangements, primarily with the countries of Central and Eastern Europe. All this, and even the annexation of Austria, did not help to replenish the stock of international reserves.

In addition to the above, German economic policy imposed significant capital restrictions, including making repayments conditional on the purchase of German products. (*Kern-Seddon*, (2020)) *Kern-Seddon* argues that the issuance of the MEFO bill was a circumvention of the act on the central bank or Reichsbank, which prohibited direct financing of the budget. The import restrictions reduced the room for manoeuvre for investment banks which then were degraded to act as custodians of MEFO bills, while the central bank was able to control savings banks, which had become the primary institutions of money creation. (*Abt* (2017)) Some economists even assessed the MEFO bill and the monetary and fiscal accounts of the 1930s as a statistical and accounting trick to mask real economic processes (*Ritschl* (2001)).

The postponement of the discounting of MEFO bills has only delayed inflation, but not prevented it, argues *Abt* (2017). The maintenance of price stability was greatly facilitated by the introduction of strict price and wage restrictions by the National Socialist economic policy. (*Abt* (2017)) Similarly, the sustainability of the system was called into question by the failure of growth in welfare (see: *Vigvári* (2003)), due to the gradual depletion of resources, which forced the German state to expand.

The expansion in public demand did not coincide with a classical Keynesian expansion in demand due to low propensity to consume and a moderate multiplier effect, but it did have a significant crowding-out effect on private investment, as assessed by *Ritschl* (2001). According to him, the expansion of the economy in the 1930s (at least until 1938) was not stimulated to any significant extent by monetary policy, since the expansion of the money supply was always lagging behind the increase in income, even though Germany had left the gold standard system in 1933. Overall, *Ritschl* (2001) considers the spectacular boom of the 1930s in Germany to be independent of economic policy (*Pogány* (2019)). *Kern-Seddon* (2020) criticises the German economic policy between the two world wars and the *Schachtian* concept within it from the point of view of the requirement of central bank independence.

In their view, the breakdown of unity among foreign creditors in Germany led to a situation where the separation of fiscal and monetary policy had not been fully achieved and central bank independence had been gradually eroded.<sup>11</sup> *Kern-Seddon* (2020) compares the MEFO bill scheme to the current PPP (public-private partnership) schemes.

Overall, the above criticisms underline that the *Schachtian* economic policy can only be assessed as a temporary solution. In the long term, its contradictions manifested themselves. Here it is worth noting, however, that if Germany had not increased its war spending and had stayed on the moderate *Schachtian* path, it would have been able to avoid abandoning price stability and rationing of consumer goods typical of a war economy.

## The feasibility of the use of a state-led bill of exchange similar to the MEFO model in the domestic economic policy

The financing solutions of the German economy between the two world wars – despite the above criticisms – can be instructive in several respects. A war rages in the neighbourhood, we are after and before pandemics, inflation and stagnation are occurring simultaneously in the economy. So the parallel – extreme as it may seem – is not without foundation.

Reconstruction and job creation always entail more and more budget spending, which obviously can lead to a further increase in the already high public debt, which is again soaring particularly as a consequence of extreme spending during the coronavirus.

Currently, the government can finance public debt at negative real interest rates thanks to the high inflation environment, which, by keeping the real interest rate-real growth differential at negative values, leads to a reduction in the public debt-to-GDP ratio. However, disguised debt reduction through an inflation tax (see: *Mayer-Schnabl* (2021)) may not be a solution in the event of an economic downturn or stagflation. In addition, as raised by Szalay et al. (2022), upcoming investments in energy and the environment are also expected to lead to a significant increase in public debt.

It is at this point that the *Schachtian* approach and the MEFO model become worth considering and thought-provoking, because it shows a possible way out in a stagflationary environment. Inflation is not an effective tool for managing public debt, especially when inflation targeting is used, even though it may benefit from an increase in tax revenues in a given year. The sustainable debt management aspects proposed by Werner need to prevail: the use of domestic savings, with as little crowding-out effect as possible.

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11 The independence of the central bank was formally withdrawn by decree in 1937, when unlimited access to central bank credit was announced by the German state administration.

The bill of exchange of the MEFO model is a financial instrument with a public guarantee and commodity backing that allows the targeted economic agents to raise funds even in the presence of high public debt. At the same time it is a tool which provides investors with a stable payout and contributes to the domestic economy through its domestic circulation, thus enabling endogenous economic growth, i.e. growth independent of funds from external markets.

On the basis of economic policy considerations, we consider the following areas to be feasible for the promotion and targeted introduction of the use and circulation of bills of exchange. The meaning of the term ‘promotion’ here is that in many cases it is proposed to replace the existing practice of lending, factoring (which is very costly for the producer) with the use of bills of exchange. The list below is not exhaustive and is intended only as a suggestive enumeration:

- Public warehouse receipts should not only act as collateral for loans, but also as negotiable instruments.
- Buyers of products subject to an export ban (building materials, agricultural products) should be required to issue a bill of exchange or promissory note.
- After the thirty-day payment deadline, food traders, as buyers, should issue a bill of exchange or promissory note.
- In many cases, the foreign buyer forces the importing Hungarian company to accept a bill of exchange. In such cases, if the buyer’s bank has a subsidiary in Hungary, it shall redeem the same at the discount rate prevailing at the buyer’s registered head office.
- Hungarian suppliers of multinational companies should not be disadvantaged in terms of payment deadlines, for other relations or after the expiry of the deadline in the home country, the buyer should issue a bill of exchange or promissory note.
- The level of cohesion of the Visegrad Cooperation would be increased if the mutual acceptance of the use of bill of exchange could be achieved among companies with a high import share and involved in relatively high export activity.
- Launching export promotion and/or import diversion programmes in the high import share business sector by means of vouchers negotiable as bills of exchange
- Extending the Factory Rescue Program to the SME sector on a bill of exchange/promissory note basis
- Supplementation of the Széchenyi Card Programme with options for the use and distribution of bills of exchange/promissory notes
- For social subsidies, if they are for the purchase of a consumer item of goods (e.g. firewood) at a discount, we recommend digital payment of the shopping vouchers (e.g. through the relevant pocket of the existing Széchenyi Card). The seller may negotiate the voucher received as a bill of exchange.
- A programme based on the use of bills of exchange would be ideal for expanding the capacity of the national electricity grid, thus solving the bottleneck to the further expansion of solar panels.

It is proposed to implement the above alternatives with a state guarantee and/or with an issue addressed to a public entity (e.g. a ‘shadow state bank’) as the drawee. The central bank or another public credit institution entrusted with this task could implement the re-discounting. In line with the technological requirements of the time, the placing on the market and registration of the bills of exchange would be done electronically. (Szalay *et al.* (2020)) Digitisation would eliminate many legal difficulties, prevent misunderstandings between parties, and provide full traceability for all participants, in addition to other technical advantages. ■

## Conclusions

After having shown the macroeconomic context of the circulation of bills of exchange, Lautenbach’s theory of the credit mechanics and Werner’s new theory of debt, we became convinced that bill of exchange-based liquidity creation works against the emergence of a bubble economy, because the use of bills of exchange is always backed by a real amount of commodities. The stimulative role of the bill of exchange as a successful crisis management tool is a historically proven economic policy solution, which has become relevant again today in the light of enhanced public debt management. This approach is one of the possible alternatives, combining a number of macroeconomic benefits and technical-innovation opportunities. Expanded lending for productive purposes increases added value, helps create jobs and allows for higher tax revenues. The debt instrument is backed by commodities, so its conversion into cash does not cause excess inflation in the economy. In addition to strengthening the lending role of banks, all sectors of the economy that are characterised by a temporary savings surplus can participate in its financing.

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