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A monetary Keynesian view of modern monetary theory

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Both monetary Keynesian theory and modern monetary theory (MMT) place money at the center of the analysis and highlight the important economic role of the state in a monetary market economy in which full employment is neither the norm nor the center of gravity. Whereas monetary Keynesian theory implies that economic policy is considerably constrained by market forces, MMT considers economic policy to be all-powerful and able to ensure full employment. Polarizing MMT policy conclusions such as the proposition that modern states have no budget constraint result from MMT-ers' neglect of crucial elements of the Keynesian framework. As Hajo Riese tirelessly argued, monetary financing of budget deficits has limits even in the presence of unemployment because the stability of a monetary market economy hinges on the scarcity of its money.

Keywords: *modern monetary theory, budget deficits, monetary financing, fiscal policy*

JEL codes: *E42, E50, E63, B52*

1 INTRODUCTION

Both monetary Keynesian theory (MKT) and modern monetary theory (MMT) place money at the center of the analysis and highlight the role of macroeconomic stabilization policies in monetary market economies in which full employment is neither the norm nor the center of gravity. MMT economists polarize by arguing that a state with its own currency has ‘no budget constraint’ (Mitchell et al. 2019: 13) and a modern state could ‘never have a solvency problem’ (Kelton 2019).¹ Whereas former Federal Reserve (Fed) Chair Janet Yellen believes MMT authors to be ‘confused’ (Curran 2019) and European Central Bank (ECB) President Christine Lagarde (2019) interprets MMT as relevant only in times of deflation, Rogoff (2019) and Summers (2019) classify the ideas of MMT-ers as dangerous. Peter Bofinger (2019) and Brad DeLong (2019) represent a small minority among economists with a cautiously positive attitude towards MMT. From a monetary Keynesian perspective, the key flaw of MMT lies in failing to properly account for the pivotal role of money in regulating the economy (Riese 1995).

In Section 2 we provide an overview of modern monetary theory, and in Section 3 we present the strengths of this macroeconomic approach by showing that MMT is in essence Keynesian and as such provides a coherent and insightful analytical framework for a modern monetary economy. In Section 4, we discuss the weaknesses of MMT, which are particularly pronounced regarding the economic policy conclusions, and demonstrate that

1. ‘The most important conclusion reached by MMT is that the issuer of a currency faces no financial constraints’ (Mitchell et al. 2019: 13).

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those policy assertions stem from a neglect of several essential elements in the Keynesian framework. By failing to appreciate money as an asset, MMT-ers dodge those aspects of macro policy that are particularly tricky and make it necessary to assess risks and prioritize objectives. We conclude in Section 5 by summarizing the main points in the context of the tectonic shift in macroeconomics since the Great Recession.

2 MMT IN A MONETARY KEYNESIAN NUTSHELL

Monetary Keynesian theory draws on Keynes's *A Treatise on Money* (1930) and *The General Theory* (1936) to identify the key mechanisms of a monetary economy and the pivotal role of money. Its founder, Hajo Riese,² explained the term 'monetary Keynesian' as follows: 'I ... refer to myself as a Monetary Keynesian to distinguish myself from Paul Davidson, Hyman Minsky and others. ... I chose the liquidity theory of interest as the methodological pivot of my interpretation of Keynes ...' (Riese 2006: 187). Hajo Riese was adamant that all economic relations must be derived on the basis of individual decision-making processes rather than *ad hoc* behavioral or institutional assumptions. Therefore, he modeled the rate of interest as a monetary concept with both supply and demand rooted in decisions made by economic agents: given a certain supply of money determined by the central bank, the willingness of economic agents to part with money and grant loans (liquidity preference as a concept of money supply) and the demand for money resulting from the transaction and precautionary motive determines the level of interest. As in most Keynesian models, there is an unequivocal hierarchy of markets with capital markets at the top and the labor market at the bottom, thereby confirming the Keynesian view that the real wage is a residual and unemployment is neither caused nor resolved in the labor market. Three important conclusions of MKT are, firstly, that the profit rate is determined by the interest rate; secondly, that the quality of a currency affects the level of interest rates and the stability of a monetary economy; and, thirdly, that inflation is characterized by the interaction of income inflation and profit inflation as in Keynes (1930) with mark-up pricing as an essential component that stabilizes the profit rate (Riese 1986: 85ff). Accordingly, monetary Keynesians hold that decisions pertaining to money and credit play a key role in determining economic outcomes and, at the same time, constrain economic policy.

Only a decade after MKT gained prominence in Germany, MMT emerged in the 1990s in the US (Mosler 2010; Wray 2015). MMT-ers reject not only the various supply-side economic theories, but also the standard IS–LM-based model neoclassical synthesis of the 1970s and 1980s as well as New Keynesian theory, the new economic mainstream since the 1990s.

MMT combines elements of the theory of effective demand in the writings of Keynes and Kalecki with Knapp's theory of state money (Knapp 1905), Godley's stock–flow consistent approach (Godley 1996), Lerner's functional fiscal policy (Lerner 1943), and Minsky's financial market analysis (Minsky 1986). Analyses focus on the fiscal policy of a sovereign state with its own currency. In such a modern market economy, budget deficits are rightly not interpreted as intrinsically harmful.

In Keynesian fashion, MMT argues that whether a balanced budget, a surplus, or a deficit is warranted from a macroeconomic perspective depends on aggregate demand and thus on whether the private sector aims at a spending surplus or an increase in

2. Hajo Riese (1933–2021), an economics professor at the Free University of Berlin, and his pupils developed monetary Keynesian theory in the 1980s.

financial assets. The latter can only be realized if the state or the rest of the world run a corresponding deficit. It follows that a budget deficit is too high when signs of inflation emerge, while it is too low when there is unemployment.

MMT-ers also emphasize that the state cannot be equated with private economic entities. In particular, the government has greater control over the sustainability of its debt because it can affect the future stream of tax revenues by varying taxes (fiscal sovereignty), pursuing adequate macroeconomic policies, and employing general economic policies such as infrastructure investment (Kelton 2019). Up to this point, there is no conflict with other post-Keynesian or monetary Keynesian reasoning. As discussed below, however, monetary Keynesians do not share the further view that monetary policy can keep interest rates below the economic growth rate at will (Wray 2015: 66). Rather, the extent to which the central bank may keep its policy rates and longer-term rates below the growth rate while at the same time maintaining stability depends on the specific economic circumstances.

In line with most Keynesian theories, MMT views money- and credit-mediated economies as inherently unstable, with a tendency to produce persistent unemployment equilibria. According to MMT-ers, however, neither instability nor unemployment are inevitable, but can be eliminated through active fiscal policy, in particular a government job guarantee, and market regulation. The only constraint on government spending in a country with a sovereign currency and flexible exchange rates is inflation.

3 MMT'S KEYNESIAN STRENGTHS

One strength of MMT is to place money at the center of the analysis. Keynes (1936) had already worked out that money does not merely cast a veil over the real economy, but also affects both production and employment in addition to the price level. A modern market economy is not a barter economy in which a particularly suitable commodity assumes the role of medium of exchange (means of transaction). The specific role of money in a monetary economy does not result from it being used as a means of transaction but rather from its function as the means of contractual settlement and as a store of value. According to Keynes, money is 'that by the delivery of which debt-contracts and price-contracts are *discharged*, and in the shape of which a store of General Purchasing Power is *held*' (Keynes 1930 [1971]: 3, emphases in original). Riese emphasized furthermore that money is not just one means of settlement among others, but rather 'the ultimate medium of contractual settlement' (Riese 1995: 47), thereby setting it clearly apart from bank money which merely represents a claim on the currency.

The basic theoretical idea of MMT is 'Taxes drive money' (Wray 2015: 278). In line with Knapp's theory of state money, people accept a currency as money because 'there is an enforceable obligation to make payments to its issuer in that same currency' (ibid.: 278). Money has value because the state creates liabilities, especially taxes, which must be settled in this money. At the logical beginning of a monetary economy, therefore, citizens have a liability towards the state that creates a demand for the national currency to settle the debt (ibid.: 54).

MKT derives the specific role of fiat money in a monetary market economy similarly (Spahn 1988; Schelkle 1992; Tober 1999), and even neoclassical economists do the same, on occasion (Starr 1974). The state creates a demand for the national currency by imposing taxes or levies denominated in this currency. Subsequently, the national currency becomes a means of transaction as economic agents exchange their labor and produced goods for this money to pay their debts to the state. This initial acceptance of the currency

enables the state to stabilize the value of the currency by limiting its volume through monetary policy in the case of MKT (Riese 1995) or fiscal policy in the case of MMT (Ehnts 2017: 72). A widely accepted currency then also serves as a store of value.³

Another strength of MMT is the description of the interaction between the central bank and the banking system. Contrary to frequent representations in textbooks, the central bank does not determine the money supply, but sets its policy rates, whereas the money supply is endogenously determined by the interaction of banks and non-banks. Accordingly, MMT-ers felt vindicated when the Bank of England clarified in 2014 that 'in reality, the theory of the money multiplier operates in the reverse way to that normally described' (McLeay et al. 2014: 21) and the Bundesbank wrote in a monthly report three years later that 'the ability of banks to lend and create money does not depend on whether they already have free central bank balances or deposits' (Deutsche Bundesbank 2017: 13). The idea that money and credit are created 'out of nothing' (Riese 1995: 60) and initiate income formation is found already in Keynes (1930) and Tobin (1963). Yet two leading central banks recently felt the need to deal with the topic in detail, suggesting persistent confusion caused by some defunct economist.⁴

A strength of MMT, closely related to the endogeneity of money, is the Keynesian savings paradox underpinned by the balance mechanics developed by Wolfgang Stützel (1978) and Wynne Godley. MMT-ers, like most Keynesians, argue that only central-bank money and government bonds can represent net financial assets for the private sector in a closed economy. Therefore, a balanced government budget implies that the private corporate sector and the private household sector in aggregate do not accumulate savings (Wray 2015: 212). If, on the other hand, the private household sector seeks to save more than the corporate sector intends to invest, output and income will fall. After the global financial crisis and the Great Recession, this linkage became apparent when governments aimed for budget surpluses at a time when the private sector also attempted to deleverage (IMF 2015: 111ff; Krugman 2015). Whereas individuals can save more by reducing their spending, society as a whole can only save more if more is spent (Wray 2015: 27; Keynes 1936). Consequently, MMT-ers were part of the predominantly Keynesian opposition to the view that overcoming the global financial crisis and the euro crisis required governments, like private households, to reduce and consolidate spending. Not only is the budget constraint of the state less rigid than the budget constraints of private households, the state, furthermore, has the responsibility of stabilizing effective demand given the lack of endogenous forces to bring about full employment in a monetary economy.

MMT-ers also point out that the combination of a private-sector surplus and a balanced government budget is possible only if the economy runs current-account surpluses. They emphasize the obvious but often neglected insight that it is impossible for all countries

3. The loss of money functions takes place in reverse order. As a result of higher inflation - after a war, for example - the currency first loses its role as a store of value, then it is replaced as a means of transaction by more stable currencies or even goods (cigarettes after the Second World War) (Robinson 1938; Riese 1986: 214ff). Its declining use as a store of value and a means of transaction increases the velocity of circulation of money, so that inflation accelerates even without further monetary expansion (Riese 1986: 224; Wray 2015: 253). However, insofar as taxes continue to be paid in the national currency and longer-term contracts are denominated in the national currency, the function as a means of contractual settlement is the last one to vanish.

4. We are paraphrasing Keynes, who wrote in *The General Theory* that people 'who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist' (Keynes 1936: 383).

to have current-account surpluses: the surpluses of some must be matched by the deficits of others. Like Keynes (1936), MMT interprets the mercantilist strategy of ‘closing an output gap’ by tapping demand abroad as a beggar-thy-neighbor strategy that shifts the problem of insufficient demand onto trading-partner countries (Mitchell et al. 2019: 201; Spahn 1988; Robinson 1937).

MMT’s job-guarantee proposal is, in principle, also a strength of MMT. The idea is to stabilize the economy at the lowest possible level of unemployment by guaranteeing the availability of jobs that pay the minimum wage. The job guarantee keeps people in the labor market reserve socially secured and active. On the one hand, the job guarantee mitigates the social problems related to unemployment, and on the other, theory and empirical data suggest that it may forestall qualification loss on the part of the unemployed and thus hysteresis in the labor market. According to MMT-ers, the job guarantee turns the minimum wage into an anchor for wages, thereby reducing inflationary pressure in upswings and deflationary pressure in downswings (Wray 2015: 223). Technically speaking, this policy proposal reinforces the rigidity of wages, which is seen as a market friction delaying the return to full-employment equilibrium in New Keynesian models. In more fundamentally Keynesian models, however, this rigidity is not a market imperfection, but rather a mechanism that prevents cumulative changes in the price level and output (Leijonhufvud 1990: 272). According to MMT-ers, the proposed job guarantee curtails inflation during upswings as workers may be hired from this pool if wage demands in the private sector increase sharply. In downturns, inflation and output are stabilized since workers can fall back on guaranteed minimum-wage jobs. The MMT job guarantee thus reinforces the traditional ‘deflation brake’ of minimum wages and social security in Keynesian models. Less compelling, however, is its suitability as an inflation deterrent (see below).

4 WEAKNESSES OF MMT

Notwithstanding its sound Keynesian elements, MMT’s weaknesses yield several questionable recommendations.

As part of the narrative that elevates fiscal policy to the rank of primary macro policy, MMT asserts that the state must first spend the money it subsequently collects as taxes. Accordingly, Wray (2015: 3) states that ‘households need the government to spend before they can pay taxes!’ This analytical error is all the more astonishing as MMT emphasizes the endogeneity of money based on banks borrowing money from the central bank. Banks increase their liabilities to obtain the central-bank money (reserves or bank notes) they need for lending. Consequently, there is no intrinsic linkage between the volume of central-bank money and government spending.

Furthermore, MMT-ers assert that governments pursuing expansionary fiscal policies do not have to pay heed to the volume of outstanding sovereign bonds or money. In the MMT framework, the only limit to fiscal expansion is full employment and the inflationary process it sets in motion. The reasons for the serenity concerning the money supply and the debt ratio are the flawed interpretation of money endogeneity and the similarly untenable thesis that a sovereign state whose liabilities are denominated in the national currency cannot become insolvent as it can always print enough money to service its debt (ibid.: 67).

It should be noted that in an environment of unemployment and very low interest rates, the latter assertion largely concurs with the verdicts of many mainstream economists: given a nominal policy rate near zero, the cost of additional government debt is low and policies that

increase output partly pay for themselves (Blanchard 2019).⁵ Moreover, budget deficits may even be necessary to prevent a crisis given the limited scope for monetary policy in such a scenario (Bernanke 2016; Bartsch et al. 2019).

However, MMT goes one step further and views fiscal policies aimed at high employment and output as expedient and risk-free in general. The reasoning is that the government is always able to service its debt by simply issuing more money. This is true in that it is a tautology: if the government has debt denominated only in its own currency, debt can under all circumstances be serviced by using newly created money. What MMT tends to neglect are the economic consequences of such monetary financing. According to most economic theories, a permanent and continuous expansion of the money supply would imply the risk of increasing inflation. MMT-ers do acknowledge the link between monetized budget deficits and inflation or hyperinflation, even if they rightly reject the simple monetarist version.⁶ In fact, Wray (2015: 258ff) correctly contends that, historically, several factors always coincided to produce hyperinflation, notably negative supply shocks and the government's inability to generate tax revenues.

From a policy perspective, stabilizing a monetary economy is not so much about preventing hyperinflation than about keeping inflation close to the central bank's target. Hyperinflation denotes monthly inflation rates of 50 percent or more,⁷ which translates to an annual rate above 10 000 percent. However, even high single-digit annual inflation is problematic because it gives rise to misallocation and distortions. Rates persistently above the central bank's target furthermore weaken the latter's role as nominal anchor and the effectiveness of monetary policy. MMT does not fully appreciate inflation as a cumulative process with wage-price spirals and currency depreciation that erodes the quality of the currency (Riese 1986: 128ff).

In an open economy, an increase in inflation triggered by money creation can be derived within a variety of models - many used and accepted by most post-Keynesians - before full employment is reached and even without recourse to income inflation. In its role as a store of value, money is an asset that competes with domestic securities and stocks as well as foreign assets. Just because it is the legal tender, it is not a foregone conclusion that recipients of a sum of money will wish to keep the cash in their portfolio at given valuations, even if their intention is to save.⁸

Within a portfolio model, an (endogenous or exogenous) increase in the supply of money or domestic securities creates a higher demand for foreign assets (Tobin 1982; Dullien 2004). All else being equal, the higher demand for foreign assets is satisfied by a depreciation of the domestic currency that increases the value of foreign assets.

The MMT literature does mention that currency depreciation increases the domestic price level through rising import prices, but this is interpreted as a 'one-time' increase (Wray 2015: 225). However, if the government continuously uses newly created money to service its debts, the argument falls flat. A continuous expansion of the money supply would lead to portfolio decisions that imply a continuous depreciation. A continuous fall in the external value of the currency, in turn, means that import prices no longer cause a one-time price hike, but rather an increase in the rate of inflation even

5. See also the model in Schmidt (2017).

6. 'In conclusion, there is a link among high (or hyper) inflation, budget deficits, and "money supply", although it is not a simple Monetarist dynamic' (Wray 2015: 263).

7. Cf. Cagan (1956) or Nicolini (2008).

8. See Goodhart (1989: 33), who writes: 'I will accept always any money offered me in payment for some sale at an agreed price, so that any addition ... is always snapped up, but it does not mean that I will want to hold that amount of extra money in ultimate equilibrium.'

without second-round effects. This effect becomes even more pronounced when expectations are considered. If investors anticipate the money expansion and the resulting currency depreciation, they are likely to shift their investments into foreign currency in advance, thereby amplifying the import price increase.

Inflation and depreciation moreover undermine the quality of the currency as a store of value and increase the risk premium for securities denominated in that currency. Higher interest rates, in turn, negatively affect the government's fiscal position and depress investment. Although the central bank could try to lower long-term interest rates by buying government bonds, the associated increase in the money supply would reinforce the portfolio shifts in favor of foreign assets.

The larger a price hike, the less likely are workers to accept the loss of purchasing power (Rudd 2021). As described by Mitchell et al. (2019), an increase in nominal wages would cause 'cost inflation,' which, if accommodated by economic policy, would lead to a further increase in inflation.⁹ The mechanisms for controlling inflation proposed by MMT are also less than convincing. MMT-ers argue for higher taxes or reduced government spending to lower aggregate demand and curb inflation. In addition, the government job guarantee is viewed as a suitable instrument. In this context, Wray (2015: 223) and Mitchell et al. (2019: 290ff) argue that firms can recruit workers from the pool of those employed in the job guarantee more easily than in a situation without a job guarantee, because, unlike the unemployed, those employed in the job guarantee would not lose their employability.

The effectiveness of the proposed fiscal instruments and the job guarantee is questionable: strong and frequent adjustments of tax rates are likely to lead to allocation distortions and adjustment costs; strong and frequent adjustment of government spending only makes sense if the government provides sufficient goods that are not considered necessary; otherwise, variation in government spending would lead to an unreasonable variation in the provision of public goods. Similarly, using discretionary spending to increase inflation presupposes sufficient projects in the queue.

The job guarantee called for by MMT does have the merit of being an automatic stabilizer. However, it is likely to be more effective in preventing deflation than inflation, since even in the most favorable case it merely allows the labor market reserve to be integrated more smoothly into the economic process, that is, the labor supply that can be activated immediately is larger.

Analogous to the difficulties of significantly varying discretionary government spending over the cycle, there is the question of what tasks these employees should perform, since their deployment would vary greatly over the economic cycle to compensate for fluctuations in private-sector demand. Important public goods are out of the question, as these must be provided in boom periods as well (when hardly anyone is employed in the job guarantee). If, on the other hand, the employees in the job guarantee are to produce substitutes for private-sector output, there is a risk of undermining private enterprises because the state emerges as a strong competitor in a downturn as employment in the job guarantee increases. However, if the employees in the job guarantee are to produce neither desired public goods nor goods for which there is a private-sector demand, it is unclear what they could produce and whether their capabilities are actually preserved as assumed by MMT.

9. From a monetary Keynesian perspective, a cost-push is a price shock, even when accommodated by economic policy. Inflation as a process is characterized by the interaction of income inflation and profit inflation (Riese 1986: 85ff).

5 CONCLUSION

Modern monetary theory achieved its breakthrough in the aftermath of the global financial and economic crisis because of its focus on the macroeconomic role of fiscal policy, which had been severely neglected in previous decades. The Great Moderation from the mid 1980s, characterized by relatively small fluctuations in economic activity, had fostered confidence in the ability of monetary policy to stabilize economic activity. As collateral damage, the cyclical importance of fiscal policy faded into oblivion. Accordingly, the response to the crisis was lopsided, particularly in the euro area, with fiscal consolidation substantially aggravating the downturn and thwarting the recovery.

From a monetary Keynesian perspective, both monetary and fiscal policy may be effective in stabilizing the economy, their relative efficacy contingent on the specific circumstances. In an economic slump, with interest rates near the lower bound, fiscal policy is deemed particularly effective as it can increase aggregate demand directly and multipliers are likely high, whereas monetary policy's scope is limited to the indirect effects of quantitative easing and entails risks to financial market stability. Investment expenditure should be prioritized because it has the highest multiplier and positively impacts potential output.

From a monetary Keynesian perspective, inflation targeting is the monetary policy strategy best suited to deliver stability because it is flexible enough to allow the central bank to reach its target, for example by 'looking through' price shocks, yet rigorous enough to hold the central bank accountable (Dullien/Tober 2021). In this respect, the new ECB strategy represents a vast improvement. The ECB finally owned up to the strategy of inflation targeting, adopted a symmetric target (2 percent) as a benchmark for expectations and wage bargaining, and acknowledged that its mandate is not limited to its primary objective price stability but rather requires the ECB to support the EU's general economic policies.¹⁰

Under the premise of economic stability, fiscal policy is constrained by the sustainability of sovereign debt, and the central bank by the need to uphold the internal and external value of the currency. Debt sustainability and the performance of the currency as a store of value impact the quality of the currency with knock-on effects on interest rates and the effectiveness of monetary policy. In the event of price shocks, large trade unions able to consider the macroeconomic repercussions of their actions can alleviate the pressure on central banks by focusing on the inflation target rather than actual inflation in the wage-bargaining process, that is, by aiming at wage increases corresponding to the sum of average productivity increases plus the central bank's inflation target. Ultimately, it is the sustainability of sovereign debt that determines the quality of the currency and the inherent stability of the economy.

Blanchard (2019) recently showed that the welfare losses and fiscal costs of budget deficits are small provided the risk-free interest rate is lower than the growth rate. He furthermore noted that, given a negative output gap and a near-zero money market interest rate, budget deficits are not only necessary, but may have no cost at all (ibid.: 31-32). The theoretical challenge for MMT is to specify the conditions under which government bonds

10. The hierarchy of the ECB's objectives is laid down in the EU Treaties. According to Article 127 of the Treaty on the Functioning of the European Union (TFEU), 'the ESCB [European System of Central Banks] shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union,' which include, *inter alia*, balanced economic growth, full employment, and a high degree of environmental protection, insofar as this can be done '[w]ithout prejudice to the objective of price stability' (TFEU, Article 127).

represent risk-free assets remunerated at the risk-free rate, and the domestic currency is the risk-free asset *par excellence*. The core elements are already included in MMT in that inflation represents the budget constraint for the government and there is awareness that even a government with a sovereign currency ‘can only buy what is offered in its currency’ (Wray 2015: 127). Nonetheless, to anchor MMT’s economic policy advice more firmly in reality, MMT-ers need to give more consideration to the fact that ‘confidence in the future solvency of economic agents’ is the ‘key variable of a credit-based economy’ (Riese 1995: 55).

MMT has many strengths including the emphasis on the long-neglected macroeconomic role of fiscal policy, the endogeneity of money, the savings paradox, and the beggar-thy-neighbor aspects of current-account surpluses. However, whereas monetary Keynesians view monetary policy as one of two critically important macroeconomic policies, MMT-ers subsume it under fiscal policy. Whereas MMT considers economic policy to be omnipotent, MKT sees economic policy as considerably constrained by market forces and individual decisions. Hence, a currency is an asset in competition with other financial assets as well as foreign currencies, and the central bank has to restrict the supply of money to uphold its quality as a store of value. From a monetary Keynesian perspective, MMT is Keynesian at its core but does not fully appreciate the core of Keynes’s theory.

REFERENCES

- Bartsch, E., Boivin, J., Fischer, S., Hildebrand, P. (2019): Dealing with the next downturn: from unconventional monetary policy to unprecedented policy coordination, Black Rock Investment Institute, Macro and Market Perspectives, August.
- Bernanke, B. (2016): What tools does the Fed have left? Part 3, Brookings Institution Blog, April, URL: <https://www.brookings.edu/blog/ben-bernanke/2016/04/11/what-tools-does-the-fed-have-left-part-3-helicopter-money/>.
- Blanchard, O. (2019): Public debt and low interest rates, in: *American Economic Review*, 109(4), 1197–1229.
- Bofinger, P. (2019): Modern monetary theory: the dose makes the poison, in: *Social Europe*, 16(April), URL: <https://www.socialeurope.eu/modern-monetary-theory>.
- Cagan, P. (1956): The monetary dynamics of hyperinflation, in: Friedman, M. (ed.), *Studies in the Quantity Theory of Money*, Chicago: University of Chicago Press, 25–117.
- Curran, E. (2019): Yellen says she’s ‘not a fan of MMT’ as list of detractors grows, Bloomberg, 25 March, URL: <https://www.bloomberg.com/news/articles/2019-03-25/yellen-says-she-s-not-a-fan-of-mmt-as-list-of-detractors-grows>.
- DeLong, B. (2019): What is Modern Monetary Theory?, DeLong’s Grasping Reality Blog, URL: <https://www.bradford-delong.com/2019/01/what-is-modern-monetary-theory.html>.
- Deutsche Bundesbank (2017): The role of banks, non-banks and the central bank in the money creation process, Monthly Report April, Frankfurt am Main, 13–33.
- Dullien, S. (2004): *The Interaction of Monetary Policy and Wage Bargaining in the European Monetary Union*, London and Basingstoke, UK: Palgrave Macmillan.
- Dullien, S., Tober, S. (2021): ECB strategy: best practice and new frontiers, IMK Policy Brief 105, Düsseldorf, April, URL: https://www.imk-boeckler.de/fpdf/HBS-008007/p_imk_pb_105_2021.pdf.
- Ehnts, D.H. (2017): *Modern Monetary Theory and European Macroeconomics*, Abingdon, UK and New York: Routledge.
- Godley, W. (1996): Money, finance and national income determination: an integrated approach, Levy Economics Institute, Working Paper 167, June, URL: <http://www.levyinstitute.org/pubs/wp/167.pdf>.
- Goodhart, C. (1989): Has Moore become too horizontal?, in: *Journal of Post Keynesian Economics*, 12(1), 29–34, doi: 10.1080/01603477.1989.11489778.

- IMF (International Monetary Fund) (2015): *World Economic Outlook*, April, Washington, DC: IMF.
- Kelton, S. (2019): Interview: Bernie Sanders' 2016 economic advisor Stephanie Kelton on Modern Monetary Theory and the 2020 race, URL: <https://www.cnn.com/2019/03/01/bernie-sanders-economic-advisor-stephanie-kelton-on-mmt-and-2020-race.html>.
- Keynes, J.M. (1930 [1971]): *A Treatise on Money: Vol. I, The Pure Theory of Money*, in: *The Collected Writings of John Maynard Keynes*, Vol. 5, London and Basingstoke, UK: Palgrave Macmillan for the Royal Economic Society.
- Keynes, J.M. (1936): *The General Theory of Employment, Interest and Money*, London: Macmillan.
- Knapp, G.F. (1905): *Staatliche Theorie des Geldes*, Munich: Duncker & Humblot.
- Krugman, P. (2015): Crowding in and the paradox of thrift, New York Times Blog, 19 April, URL: <https://krugman.blogs.nytimes.com/2015/04/19/crowding-in-and-the-paradox-of-thrift/>.
- Lagarde, C. (2019): Transcript of International Monetary Fund managing director Christine Lagarde's opening press conference, 2019 Spring Meetings, 11 April, URL: <https://www.imf.org/en/News/Articles/2019/04/11/tr041119-transcript-managing-director-christine-lagarde-press-conference-2019-spring-meetings>.
- Leijonhufvud, A. (1990): Natural rate and market rate, in: Eatwell, J., Milgate, M., Newman, P. (eds), *The New Palgrave: Money*, London and Basingstoke, UK: Palgrave Macmillan, 268–272.
- Lerner, A.P. (1943): Functional finance and the federal debt, in: *Social Research*, 10, 38–51.
- McLeay, M., Radia, A., Thomas, R. (2014): Money creation in the modern economy, Bank of England, Quarterly Bulletin Q1/2014, London, 14–26.
- Minsky, H.P. (1986): *Stabilizing an Unstable Economy*, New Haven, CT: Yale University Press.
- Mitchell, W., Wray, L.R., Watts, M. (2019): *Macroeconomics*, London: Red Globe Press.
- Mosler, W. (2010): *The Seven Deadly Innocent Frauds of Economic Policy*, Christiansburg: Valance Co.
- Nicolini, J.P. (2008): Hyperinflation, in: Durlauf, S.N., Blume, L.E. (eds), *The New Palgrave Dictionary of Economics*, London and Basingstoke, UK: Palgrave Macmillan, 1–4.
- Riese, H. (1986): *Theorie der Inflation*, Tübingen: Mohr.
- Riese, H. (1995): Geld: das letzte Rätsel der Nationalökonomie, in: Schelkle, W., Nitsch, M. (eds), *Rätsel Geld: Annäherungen aus ökonomischer, soziologischer und historischer Sicht*, Marburg: Metropolis, 45–62.
- Riese, H. (2006): Germany pays the price of unemployment for its economic miracle (Deutschland zahlt mit seiner Arbeitslosigkeit den Preis für das Wirtschaftswunder): interview with Hajo Riese, in: *European Journal of Economics and Economic Policies. Intervention*, 3(2), 187–193.
- Robinson, J. (1937 [1947]): *Beggar-my-Neighbour Remedies for Unemployment*, Essays in the Theory of Employment, Reprint, Oxford: Basil Blackwell.
- Robinson, J. (1938): The economics of inflation: review, in: *The Economic Journal*, 48(191), 507–513.
- Rogoff, K. (2019): Modern monetary nonsense, Project Syndicate, 4 March, URL: <https://www.project-syndicate.org/commentary/federal-reserve-modern-monetary-theory-dangers-by-kenneth-rogoff-2019-03?barrier=accesspaylog>.
- Rudd, J.B. (2021): Why do we think that inflation expectations matter for inflation? (And should we?), Finance and Economics Discussion Series 2021–062, Washington, DC: Board of Governors of the Federal Reserve System.
- Schelkle, W. (1992): *Constitution and Erosion of a Monetary Economy: Development Problems of India Since Independence*, Berlin: Schriften des Deutschen Instituts für Entwicklungspolitik.
- Schmidt, S. (2017): Fiscal activism and the zero nominal interest rate bound, in: *Journal of Money, Credit and Banking*, 49(4), 695–732.
- Spahn, H.-P. (1988): *Bundesbank und Wirtschaftskrise*, Studien zur monetären Ökonomie, 1, Marburg: Metropolis.
- Starr, R.M. (1974): The price of money in a pure exchange monetary economy with taxation, in: *Econometrica*, 42(1), 45–54.
- Stützel, W. (1978): *Volkswirtschaftliche Saldenmechanik: Ein Beitrag zur Geldtheorie (The Mechanism of Net Balances: A Contribution to the Theory of Money)*, Tübingen: Mohr Siebeck.

- Summers, L. (2019): The left's embrace of modern monetary theory is a recipe for disaster, in: *Washington Post*, 4 March, URL: https://www.washingtonpost.com/opinions/the-lefts-embrace-of-modern-monetary-theory-is-a-recipe-for-disaster/2019/03/04/6ad88eec-3ea4-11e9-9361-301ffb5bd5e6_story.html?noredirect=on.
- Tober, S. (1999): Die Beendigung extremer monetärer Instabilität, Studien zur monetären Ökonomie, 25, Marburg: Metropolis.
- Tobin, J. (1963): Commercial banks as creators of 'money,' Cowles Foundation Discussion Papers No 159.
- Tobin, J. (1982): Nobel lecture: money and finance in the macroeconomic process, in: *Journal of Money, Credit and Banking*, 14(2), 171–204.
- Wray, L.R. (2015): *Modern Monetary Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*, Basingstoke, UK and New York: Palgrave Macmillan.