

## The Meaning of MMT

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### ABSTRACT

In the last few years in the U.S. and especially since the publication of Stephanie Kelton's book, *The Deficit Myth* (Kelton, 2020) in Europe, the so-called Modern Monetary Theory (MMT) has been gaining prominence in the media and the public. This paper exposes the main proposals of MMT in the light of their doctrinal sources, also confronting them with economic facts and with other currents of economic thought. The first part deals with the approach to money and monetary policy developed by MMT, the second part with its recommendations regarding fiscal policy and aggregate demand management, the third part with the structural policies it advocates, the fourth part with the international aspects of MMT. The fifth part concludes. Overall, it appears that MMT is based on an outdated approach to economics and that the meaning of MMT is a more that of a political manifesto than of a genuine economic theory.

**Keywords:** Chartalism, Fiscal Policy, Functional Finance, Modern Monetary Theory, Money, Monetary Policy, Structural Policies

**JEL classification:** B52, E12, E42, E43, E51, E52, E62, E63, H39, H62, H63, I38, J68, Q58

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## NON-TECHNICAL SUMMARY

This paper exposes the main proposals of the so-called Modern Monetary Theory (MMT) in the light of their doctrinal sources, also confronting them with economic facts and with other currents of economic thought.

Georg Friedrich Knapp's *State Theory of Money* (Knapp, 1905) – hereafter STM – provides the main theoretical underpinning of MMT's approach to money: money is a creature of the law; it is a means of payment; it is a token, a representation. The STM was received very mildly. Reviewers noted that the STM says nothing about the value of money and lacks correspondence with historical facts. Although this is not explicitly stated by MMT economists, they consider money as a pure asset that the state can create at will, whereas it is both an asset and a liability in the STM. In that regard, MMT represents a regression vis-à-vis the STM. Regarding money, MMT makes a confusion between legal (or fiat) currency (i.e. the euro or the dollar) and cash and does not signal the reason modern literature on money puts forward what makes legal currency “acceptable” by the public, i.e. monetary policy credibility. Moreover, MMT does not provide an explanation of monetary policy strategy or a description of the monetary transmission mechanism from monetary policy decisions to the broader economy. Instead, it considers that law should set the objectives of monetary policy and focuses on one specific aspect of monetary policy implementation, liquidity management by the central bank, conveying the false message that it is conducted under the instructions of the Treasury. Hence, MMT views the central bank as “the government's fiscal agent” and central bank independence as “a myth”. We highlight that both historical precedents and an attempt to measure the impact of the MMT program in the U.S. through public debt monetisation provide strong cautionary tales against such an approach.

Lerner's Functional Finance Theory (1943) – hereafter FFT – provides the fundamental building block for MMT's fiscal doctrine. FFT is referred to as “functional” because its focus is on the macroeconomic outcome of fiscal policy rather than on its budgetary impact. Stigler's comment according to which FFT has “an attractive simplicity” that is “purchased at the high price of avoiding real problems” nicely sums up reactions to FFT. MMT's fiscal policy doctrine builds on FFT's dismissal of debt constraints on government borrowing, arguing that a sovereign currency issuer is financially unconstrained. Moreover, MMTers believe that fiscal policy is much more effective than monetary policy at managing aggregate demand. A major criticism is that MMT is unable to prove its claims given the lack of formal modelling. MMT also argues that there is no relation between fiscal deficits and interest rates or between fiscal deficits and inflation. In fact, the shift to a MMT fiscal policy regime would obviously generate these relationships via the impact of changed expectations on financial markets. MMT proposes to complement fine-tuning fiscal policies with structural programs aiming at a directly controlling the allocation of resources. Full employment would be achieved through a Public Service Employment program, which would act as an automatic stabiliser, and by large-scale spending on infrastructure, climate change, and the environment, dubbed the “Green New Deal”. We show that these proposals reflect MMT's view that private indebtedness is supposed to be conducive to financial fragility while a government led expansion would enhance financial stability by providing safe assets and income to the private sector.

Finally, external policies are MMT's “benign neglect”.

The following table summarizes the main contrasts between MMT's approach and mainstream economics.

	Wrong	Right
Government expenditure is financed by...	... taxes	... issuing currency
Public debt sustainability...	... can be an issue	... cannot be an issue
Public bonds are issued...	... to finance the public deficit	... to distribute income as part of an interest rate maintenance strategy
Access of Government to central bank financing...	... should be limited	... is unlimited
Public debt purchased by the central bank...	... should be paid off	... is paid off
Crowding out...	... can be an issue	... cannot be an issue
Monetary policy...	... has a role to play to stabilize the economy	... has no role to play to stabilize the economy
Interest rates...	... are a market variable	... are set by the Government
Inflation...	... is a monetary policy issue	... is a fiscal policy issue
Unemployment...	... cannot be fully eliminated	... can be fully eliminated
Conventional structural policies...	... are positive	... are negative
A sovereign economy...	... should be competitive	... does not have to be competitive
Skills...	... are important determinants of income	... are loosely linked to income
Social welfare...	... has a cost	... has no cost

## De quoi la MMT est-elle le nom ?

### RÉSUMÉ

Au cours des dernières années aux États-Unis et particulièrement depuis la publication du livre de Stephanie Kelton, *The Deficit Myth* (Kelton, 2020) en Europe, la Théorie Monétaire Moderne (Modern Monetary Theory - MMT) s'est vue accorder une attention croissante dans les médias et par le public. Ce papier expose les principales propositions de la MMT à la lumière de ses fondements doctrinaux et en les confrontant aux faits économiques ainsi qu'à d'autres courants de la pensée économique. La première partie traite de l'approche par la MMT de la monnaie et de la politique monétaire, la deuxième de ses recommandations en matière de politique budgétaire et de régulation conjoncturelle, la troisième des politiques structurelles qu'elle préconise, la quatrième de ses aspects internationaux. La cinquième partie conclut. Dans l'ensemble, il apparaît que la MMT se fonde sur une approche dépassée de la science économique et que c'est davantage le nom d'un manifeste politique que d'une véritable théorie économique.

**Mots-clés :** chartalisme, politique budgétaire, finance fonctionnelle, théorie monétaire moderne, monnaie, politique monétaire, politiques structurelles.

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## 1. Introduction

In the last few years in the U.S. and especially since the publication of Stephanie Kelton's book, *The Deficit Myth* (Kelton, 2020) in Europe, the so-called Modern Monetary Theory (MMT) has been gaining prominence in the media and the public. This paper exposes the main proposals of MMT in the light of their doctrinal sources, also confronting them with economic facts and with other currents of economic thought. The first part deals with the approach to money and monetary policy developed by MMT, the second part with its recommendations regarding fiscal policy and aggregate demand management, the third part with the structural policies it advocates, the fourth part with the international aspects of MMT. The fifth part concludes. Overall, it appears that MMT is based on an outdated state of economic science and that its claims regarding economic policies are much exaggerated: the meaning of MMT is more that of a political manifesto than of a genuine economic theory.

## 2. An approach to money focused on the State, an erroneous representation of monetary policy

Georg Friedrich Knapp's *State Theory of Money* (Knapp, 1905) (2.1) provides the main theoretical underpinning of MMT's approach to money. We briefly expose the STM and its link with MMT and then analyse the recommendations of MMT related to money, monetary policy and the role of the central bank (2.2).

### 2.1 Knapp's *State Theory of Money*

Knapp published his *State Theory of Money* (STM) in German in 1905; the fourth edition was in 1924, two years before Knapp's death. The book was a bestseller, at least in its own field. However, it was only in 1926 that it was translated into English. We summarize the main ideas exposed in the book (2.1.1) and their appraisal at the time, also giving ours (2.1.2). We finally draw a parallel with MMT (2.1.3).

#### 2.1.1 Summary

The main ideas expressed in the *State Theory of Money*, which are used in MMT, can be summarized as follows:

- Money is a creature of the law. According to Knapp, in dealing with money, we must deal with legal history;
- Money is a means of payment. To remind, in modern monetary systems, cheques, transfers, and cards are means of payment whereas bank deposits are monetary assets, and only cash is both a means of payment and a monetary asset. In contrast, in Knapp's acceptance of the phrase, a means of payment is what the state accepts to discharge debts against itself (that which "is accepted at public pay offices", Knapp, 1924, vii-viii, or "accepted in payments made at the State's offices", Knapp, 1924, 95), i.e. primarily to pay for taxes. Consequently, for Knapp, "all means by which a payment can be made to the State form part of the monetary system (...) it is not the issue, but the acceptance (...), which is decisive. State acceptance delimits the monetary system". In defining a monetary system, in contrast with contemporary approaches, Knapp thus does not refer to the characteristics of the assets used to settle economic and financial transactions or to the way in which these assets are created. He rather identifies the monetary system with tax collection. As money is defined as a creature of law, this gives his approach a circular flavour;

- Money is a token, a representation, hence the reference by Knapp to the Latin word “charta” that he translates into token and that has given rise to the word ‘chartalism’ to refer to Knapp’s and his followers’ ideas. In this sense, Knapp is a “nominalist” and opposes the view then widely held by monetary economists, who were almost all “metalists”. However, in other works, he also opposed the idea that Germany could forego its gold-based currency, as well as the monetisation of fiscal deficits.

Money is thus “proclamatory”: it is the proclamation by the state that makes a means of payment money and, according to Knapp: “The definition of money is therefore a “Chartal” means of payment”. This definition is to be taken strictly, an even despotically. According to Knapp, quoted by Ehnts (2019), the state “is not, in fact, bound by its laws, which it only maintains for its subjects: from time to time, it of itself creates new rights and obligations to meet the facts administratively, and perhaps afterwards changes the law to make it correspond” (Knapp, 1924, 106-7). The proclamation of money by the state is thus arbitrary.

Finally, a point that is worth emphasizing is that, in spite of viewing money as “proclamatory”, Knapp does not consider it as a pure asset but rather as both an asset and a liability of the state.

### 2.1.2 Appraisal

Overall, the STM was received very mildly. In particular, reviewers noted:

- The lack or insufficiency of the theoretical economic background, as the STM says nothing about the value of money, i.e. purchasing power. This is perhaps the harshest critique of the STM, since it tends to portray it as an imposture. According to Mises (1912), cited by Ocampo (2020), the problem was not that the STM was “a bad” monetary theory but that it was “not a monetary theory at all”. Rist (1938) also points that it is “a juridical construction designed, like all such constructions, to provide an explanation of a number of legal decisions”. L. (1926), in his review for the *Journal of Political of Economy*, considers Knapp “has formulated a philosophy of money in which the power of the state is paramount”. In his obituary following Knapp’s death, Schumpeter (1926) writes about the STM: “in handling what are fundamentally questions of economic theory, it went wrong”, adding: “its influence on monetary science in Germany has been, in the main, an unfortunate one”. Later on, in his *History of Economic Analysis*, he would describe the STM as “simply a theory of the ‘nature’ of money considered as the valid means of payment. Taken in this sense, it was as true and as false as saying that the institution of marriage is a creature of law” (Schumpeter, 1954).
- The lack of correspondence with the historical facts, combined with a refusal to discuss the competing approaches, such as the quantity theory of money (QTM), that aim at providing a theoretical framework accounting for the observed facts. This portrays the STM as a rather narrow-minded and dogmatic approach to monetary phenomena. Schumpeter (1926) ironically ends his obituary praising Knapp as “remarkable man, who convinced many of what he could not prove, and often fascinated even when he could not convince”. Rist (1938) writes that, “even in trying to provide an explanation of legal decisions in the field of money, the STM is in direct contradiction with the principles adopted by certain States as the basis of their currency system”. As early as in 1906, Voigt, cited in Ehnts (2019), notes that Knapp builds up his theory a priori, without introducing empirical facts to the reader, and that he has a narrow definition of money that “does not fit the facts of monetary history nor the current phenomenon that prompted its development”. Although sympathetic to the STM, that he had translated into English with H. M. Lucas, Bonar (1922)

notes that “modern history tells us of “currency zones” and of invasion of dollar currency in North America (...) forcing its way into legal recognition” (the contemporary word for this would be “dollarization”). In his review of the STM, he also observes, “Professor Knapp usually answers an opposing theory by setting up its own against it (...). He sometimes leaves us with the impression that he has made his own theory plausible by narrowing the field of possibilities”. L. (1926) bluntly writes, “The frightful *débâcle* in Germany following the collapse of the value of the paper mark (...) puts the lie in a very disagreeable manner on the exposition of the author”. Knapp’s hasty rejection of the QTM is also criticized. In an appendix to the English translation, Knapp just writes, “There are always alterations in price, due to the condition of the market. They should not be explained as showing that the value of money has altered in the opposite direction, for that be mere tautology” (cited in Ehnts, 2019). Wicksell (1999) retorted that the so-called quantity theory of money, for all its shortcomings, was still the only possible or conceivable way of explaining the value of money (also cited in Ehnts, 2019).

The previous comments are correct. However, from a contemporary point of view, one can add that, it is striking that Knapp does not consider currency competition. This is not only the case for international transactions. According to the STM, the state would choose the metal for the money standard aiming at “influencing exchanges with the commercially neighbouring states” (Knapp, 1924, cited by Ehnts, 2019, whereas it is clear that the state is not able to impose the use of its currency to foreigners. MMT also ignores currency competition in domestic transactions. However, to appeal to reality, as MMT economists consistently contend they do, it is usually possible for residents of the same economy to contract in a unit of account different from the legal currency. Knapp was thus wrong to write, “Among civilized peoples in our day, payments can only be made with pay-tickets or Chartal pieces” (Knapp, 1924, 31-32). In fact, at least in normal times, reality is at the exact opposite of the STM approach: the use of the legal currency is compulsory only in the payment of taxes (furthermore, as noted above, the legal currency can be a foreign one in case of dollarization). In contemporary terms, the reason is of course that, if the state did not accept it, it would ruin the credibility of the legal currency<sup>1</sup>. In that regard, the contemporary approach to money is also there to show that, if the state usually does not impose the use of the legal currency in private transactions, it is because it would be ineffective and would hurt its own interests. Either the legal currency is credible, and the regulation would either be useless or create suspicion on the part of the public, or it is not and, by trying to force the public to use it, the government would lower the level of transactions and divert part of them to the underground economy, in both cases hurting tax receipts. That the state accepts the currency is defines in payment of obligations due to it is thus a tautology. Finally, and still in modern terms, the reason why a currency is used in a given area, provided it is credible, rests on network effects: it is convenient to use such a currency if one has enough assurance that it is, and will remain, accepted by one’s contractors. If the state defines a currency, it is for the better to act as a coordinator, just like when it defines any unit of measure. However, it can also be, for the worse, to rob its creditors, as repeatedly done in the past. Keeping in mind that the assurance that a currency will remain accepted in the future refers to its capacity to act as a reserve of value, one is just brought back to the definition of money given by Aristotle in his “Nicomachean Ethics” some twenty-four centuries ago: a unit of value, a means of transaction and a store of value. The state can dissociate

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<sup>1</sup> Although he does not cite the STM or Knapp, Lerner (1947) titles his contribution to the fifty-ninth Annual Meeting of the American Economic Association “Money as Creature of the State”, in an implicit tribute to both, and supports in it the STM. However, he also admits, “if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability”.

the three functions, notably for self-purpose motives as indicated above; it can also jeopardize one or several of these functions, notably the store of value function by having recourse to inflation to devalue its debt, at the risk of deteriorating social welfare. However social welfare is the great absent in the STM, where the point of view of money users has no place.

### 2.1.3 Parallel with MMT

Many parallels can be drawn between the STM and Knapp on one hand, MMT and MMT economists on the other hand:

- They both present themselves as unorthodox, at odds with “mainstream” economists. However, Voigt (1906, cited in Ehnts, 2019) notes that Knapp mentions names, which MMT economists rarely do.
- They both hold a narrow vision of money as a means of payment, and more precisely as currency (also including reserves in the case of MMT). However, Knapp’s approach is in conflict with what economists and the public regard as money nowadays, as the role of banks in creating money has sharply increased and many more assets are liquid than was the case in the early 20<sup>th</sup> century, and MMT is ambiguous in its definition of money. For instance, Wray (2014b) writes, “Most paper money (today, mostly deposits) is privately issued and derives its demand not from a promise of redeemability but rather from state acceptance at pay offices”. In writing that, he neglects that bank deposits have to be convertible (“redeemed”) into legal tender: this is the reason why the banking system is “hierarchized”. He also neglects that demand for both legal tender and bank deposits, and parity between the two sorts of money, can be maintained only if their issuers keep sound balance sheets (see 2.1.2 as far as the central bank’s balance sheet is concerned). He also endorses the “circular” approach of Knapp in defining the monetary system.
- More generally, both Knapp and MMT economists disregard facts and theories that do not fit with their approach and instead put forward their own views.
- Finally, the notions of currency competition and credibility are both absent of MMT as well as of the STM. This may be understandable in the case of the STM, but is in sharp contrast with most of the literature on monetary economics in the half-century that preceded MMT.

As in the case of the STM, the pretence of MMT to produce a theory has been seriously questioned (see above regarding the STM). Ocampo (2020) has for instance labelled MMT “Magical Monetary Thinking”. One important difference between the STM and MMT is that, although this does not seem to be stated in any MMT publication, money is considered in MMT as a pure asset that the state can create at will. This idea is already implicit in Lerner (1947), as he contends, “The modern state can make anything it chooses generally acceptable as money and thus establish its value quite *apart from any connection*, even of the most formal kind, with gold or *with backing of any kind*” (our emphasis). One consequence is that MMT considers purchases of government securities by the central bank – so-called quantitative easing (QE) – as a repayment. In that regard, MMT represents a regression vis-à-vis the STM.

## 2.2 Money, monetary policy and the role of the central bank

We first present MMT’s approach (2.2.1), then how it could be implemented (2.2.2).

### 2.2.1 Approach

Regarding money, MMT adopts what Tobin (1963) calls the “fountain pen” approach to money (i.e. the belief that money can be created *ad libitum*, by the stroke of a pen), applying it to the

government – systematically called “the state” - instead of the banks, as done in the Chicago Plan criticized by Tobin (Pfister, 2020). For instance, Wray (2014b) writes “There is no limited supply of either private or state IOUs – so long as either is willing to issue IOUs, they can be supplied” and he derives from this truism that “the limit is on the demand side” (page 28). He then details the distinction between banks and the “the state”:

- Regarding banks: Wray (2014b) writes, “There is no physical constraint on bank ability to create demand deposits as they make loans (...) the main constraint is the ability to locate borrowers”. He goes on listing constraints, mainly of a prudential nature, including the creditworthiness of borrowers, which bear on supply. This should lead him to nuance its previous assertion that “the limit is on the demand side”. However, most notable in his presentation is the slippage from “supply constraints” to “physical constraint”, as if economics were a part of physics and, since money is created in a few clicks, there were no economic limit to its creation. In any case, after have dedicated ten lines to the subject, he concludes, “We will not go further into the business of banking” (page 29). Clearly, MMT has nothing new to bring regarding money creation by banks, whereas private money represents the bulk of money creation in modern economies (e.g. more than 90 percent of the broad money aggregate M3 in the euro area).
- Regarding “the state”: Wray (2014b) writes, “What matters again is acceptability on the demand side. As a sovereign power, however, the state can mandate at least some demand for its IOUs by imposing obligations that must be paid in the state’s currency. Beyond that, by sitting at the apex of the “money pyramid”, the state’s IOUs are demanded for clearing purposes and also for reserves of the most liquid assets” (page 29). As Wray (2014b) does not define what he means by the “state’s IOUs”, we identify this notion with the more common one of “monetary base”, i.e. the sum of cash in circulation and reserves, themselves defined in the literature on money as the sight deposits held by monetary policy counterparties (i.e. banks) with the central bank. On that basis, also remembering that banks use reserves to settle their net positions after clearing (with a quasi-null impact on the aggregate demand for reserves)<sup>2</sup>, it appears that Wray (2014b) makes a confusion. This confusion, in line with the definition by the STM of money as a means of payment (see above), is between legal (or fiat) currency (i.e. the euro or the dollar) and cash (or forced course currency, i.e. currency that has to be accepted in payment and that cannot be exchanged for outside money, as was the case under the gold exchange standard). Legal money can be created by banks; in fact, as reminded above, most of money is created that way in modern economies, and taxes are nearly always paid in bank money, not in cash. Furthermore, in democracies, private agents, who are responsible for the bulk of transactions, are usually free to choose the currency they use for settlement: it is only taxes that have to be paid in the legal currency and currency competition prevails in other payments, even though network effects usually play in favour of the domestic currency (2.1.3). In some countries, the use of cash is also restricted in order to limit tax evasion and illegal uses of currency. Finally, it is true that banks use reserves to make transfers from their accounts at the central bank to the Treasury’s account, also held at the central bank. However, in most cases, banks are not legally required to use reserves to make payments between them (they do so because they find it convenient, just like individuals use cash in

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<sup>2</sup> Reserves held by banks can be broken down into two components: required reserves held for regulatory purposes, and excess reserves held for settlement purposes or for a precautionary motive to avoid missing the regulatory requirement. The ECB (2008) writes, “Excess reserves are a tiny (...) need at the margin” and they reached a then maximum level of €1251 million in July 2007, whereas banks’ current accounts stood at €194 billion as at 30/10/2007.



small transactions and for hoarding). Furthermore, as explained further, when we discuss MMT's approach to monetary policy, there no need that the Treasury's account should be with the central bank. To summarize, the use of cash by economic agents is nowadays limited and reserves are used by banks only as a vehicle to settle transactions, with almost no impact on the aggregate demand for them; instead, economic agents use private money in most of their payments.

Beyond the confusion made by Wray (2014b), which is common to other MMT authors (see *e.g.* Kelton, 2020, Chapter 1), none of them ever signals the reason modern literature on money puts forward for what makes legal currency “acceptable” by the public, i.e. monetary policy credibility (Barro and Gordon, 1983). Neither do they envisage the possibility of currency competition. Instead, they prefer to insist on the constraints “the state” puts on the public. In doing so, they implicitly assume that these constraints suffice to create a potentially unlimited demand for money that is posited to match supply: in MMT, the demand for money is exogenous, making it superfluous to exhibit a money demand function. This is consistent with an approach that considers money as an asset with no corresponding liability (see 2.1.3 and developments below on monetary policy and the role of the central bank).

Finally, before we turn to MMT's approach to monetary policy, we can highlight one important consequence of its approach to money regarding fiscal policy: the absence of physical limit to the creation of bank money also applies to “state money”. In MMT, the monetary base can be expanded *ad libitum*, thus waiving any limit to the monetisation of public deficits. To remind, “monetisation” refers to the process through which a monetary institution (a commercial bank or the central bank) transforms a financial or real asset into a monetary asset when purchasing it, providing its previous holder with money in the form of a bank deposit or reserves. Wray (2014b) and other systematically uses the word “monetisation” with quotation marks, perhaps to signify that monetisation is for them the normal practice (see below).

Regarding monetary policy and the role of the central bank, in contrast with standard monetary economics (see *e.g.* Drumetz *et al.*, 2015, Chapters 3 and 5), MMT does not provide an explanation of monetary policy strategy or a description of the monetary transmission mechanism from monetary policy decisions to the broader economy. Instead, it considers that law should set the objectives and the conduct of monetary policy, possibly in the details – *e.g.* prescribing a given interest rate level – and it focuses on one specific aspect of monetary policy implementation: liquidity management by the central bank usually regarded as the “nuts and bolts” of monetary policy. Even more specifically, it focuses on the interaction between this management and the operation of the Treasury's account with the central bank. Accordingly, MMT does not refer to monetary economics literature beyond debates of the 1960s between Keynesians and monetarists. In doing so, MMT economists rightly stress that both schools rely (implicitly in the case of the ISLM model) on a money multiplier approach that does not fit with reality. However, they neglect that others have made this point (for recent evaluations, see *e.g.* Carpenter and Demiralp, 2012, and Bussière *et al.*, 2020) and that this does not jeopardize the efficacy of monetary policy, since the latter relies on prices (interest rates) and not on quantities (monetary base) to influence the economy, including when they influence longer-term interest-rates through their unconventional monetary policies (Pfister and Sahuc, 2020). In line with its reduction of monetary policy to liquidity management by the central bank to accommodate the changes in the balance of the Treasury's account, MMT views the central bank as “the government's fiscal agent” (Kelton, 2020, page 28) and central bank independence as “a myth” (Wray, 2014a).

To recall (see Drumetz *et al.*, 2015, Chapter 6, for more details):

- Monetary policy is implemented through the provision of liquidity (“reserves”) to monetary policy counterparties (banks). The central bank is the monopoly issuer of reserves and the central bank’s balance sheet is a closed system, implying that only the central bank can create or destroy reserves. To provide or withdraw reserves, the central bank conducts open market operations either in spot or in the repurchase markets. In the latter case, which was customarily used by European central banks before the Global Financial Crisis (GFC), the yields on the underlying securities are not affected and the securities themselves, that can issued by private or public agents, serve as collateral for central bank refinancing. In all cases, banks make it their own business to have the necessary resources to avoid having to borrow at the end of the day from the central bank at a penalty rate (the discount facility in the U.S., the marginal lending facility in the euro area), be it to settle public securities they would have subscribed during the day or for any other reason. For an individual bank, these resources are made of the reserves it holds at the beginning of the day, of its capacities of net borrowing in the interbank market, and of the collateral it can pledge if the central bank conducts a refinancing operation in the course of the day and accepts the bid the bank will possibly make (at the aggregate level of the banking system, the second resource does not exist).
- The Treasury does not have to have its account with the central bank; it does for historical reasons but it could as well auction the management of its account to the banking system. In fact, this would suppress one source of perturbation in the liquidity management by the central bank. Indeed, all flows from and to the Treasury’s account impact the level of reserves since they give rise to flows between the accounts of reserve holders (the banks) and of the Treasury that itself is not a monetary policy counterparty. In the language of central bankers, these flows generate an “autonomous factor”, i.e. a factor that influences the level of reserves, and thus short-term interest rates, and that, just like for instance the demand for cash from the public, is beyond the direct control of the central bank. To the extent that the central bank is not permanently in the interbank market, where reserves are traded, which would amount to totally administering this market, there is thus a need for some “coordination”, of a purely technical nature (provision of information), between the central bank and the Treasury.

MMT never explains what this “coordination” consists in, instead letting the reader assume that the central bank would receive instructions from the Treasury that dictate the amount of liquidity to be provided or withdrawn. In fact, the central bank receives no more than the forecast by the Treasury of the changes it expects to take place on its account with the central bank over the forecasting period of the “autonomous factors” (i.e. the period before the next open market operation). Provided the quality of this forecast is not too poor, it helps the central bank in calibrating its liquidity auctions (see e.g. ECB, 2008). Instead, Wray (2014a) suggests that the Treasury would *de facto* dictate monetary policy through its issuance policy and thus that central bank independence would be a myth. Without citing any legal text, Kelton (2020) even allusively writes, “The Fed makes sure the primary dealers have all the funding they require to make it profitable for them to place reasonable bids for the entire [Treasuries] allotment” (page 120), thereby suggesting a double financial and fiscal dominance. However, implementing monetary policy in the context of a structural liquidity deficit in the interbank market implies that the central bank has to supply exactly the amount of liquidity needed to clear the market, so as to be able to

reach its operational target (i.e. a given interest rate), thus making the liquidity supply endogenous.<sup>3</sup> Thus, in contrast with the MMT analysis, the central bank would let fluctuations in the account of the Treasury determine the level of short-term interest rates if did not take them into account.

In fact, even within this very narrow approach to monetary policy, MMT economist neglect several factors:

- The Treasury does not just sell public bonds. It also spends, collects taxes, redeems previous issues and conducts one-off operations such as the sale and purchases of assets. All these factors contribute to changes in the balance of its account with the central bank and thus affect bank liquidity.
- However, this impact is of a purely transitory nature. As Wray admits, if it provides liquidity at some point, “the Fed will need to reverse its previous operation” (Wray, 2014a, page 17). However, Wray (2014a, page 24) contradictorily asserts, “budget deficits push rates down since they lead to reserve credits to the banking system”. The bottom line is that, by clearing the overnight interbank market, the central bank does not clear the public bonds market.
- Furthermore, and contrary to what MMT economists suggest, banks do not keep the public bonds they have purchased in the primary market, where they are the only authorised subscribers, but resell them in the secondary market where they have to offer conditions that meet investors’ demands. Instead, Wray (2014a) insists, “During World War II, the Fed agreed to keep interest low on treasuries (...). What can we learn from that experience? Even with budget deficits of 25% of GDP, a central bank can keep interest rates low across maturity structures” (page 23). Tellingly, Wray (2014a) does not mention that this episode took place in an environment of financial repression and with rates of inflation above 10%. The key issue – i.e. whether MMT wishes such an environment to be restored in order to implement its recommendations – is thus eschewed.

MMT economists consider the monetisation of public debt that takes place through central banks asset purchase (so-called Quantitative Easing – QE<sup>4</sup>) as “business as usual”: Felipe *et al.* (2020) write that monetisation “is already happening in normal times” (page 1). In doing so, mirroring the confusions made by the other MMT economists (see above), they neglect that, unlike liquidity management operations, asset purchases do not specifically aim at providing (or withdrawing) liquidity to (from) the banking system. Rather, they have a lasting impact on the monetary base and aim at influencing directly longer-term maturities with the objective of influencing asset allocation and the broader economy. The authors build on that confusion between liquidity operations and asset purchases programs to assert that “central banks can set the yield curve on government debt (...) they are already doing this and have been doing so for decades” (page 25). Clearly, for MMT, the best monetary policy can do is to set the yield curve on government debt, with the objective of keeping it as low as possible and the corresponding risk for the central bank of having to absorb a large part of public debt. In that regard, Kelton (2020), apparently considering money as an asset that the government could create *ex nihilo*, a sort of celestial manna, gives the example of Japan. There, “half of its [the government’s] debt has been retired (i.e. *paid off*, our emphasis) by its central bank. And it could easily go all the way to 100 percent. If it did, Japan would become the least indebted country in the world” (pages 93-94). In fact, she overlooks that reserves created by the

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<sup>3</sup> Conversely, when the structural liquidity surplus is very high, as has been the case after central banks have implemented unconventional monetary policies, changes in the holdings of the Treasury with the central bank have only a marginal impact on short-term interest rates.

<sup>4</sup> For an overview of asset purchase programs as part of unconventional monetary policies, one can refer to Pfister and Sahuc (2020).

central bank to purchase public securities would leave the amount of public liabilities unchanged, which is clear when one consolidates the balance sheets of the government and of the central bank. Even if one leaves out this extreme example, it appears that, in MMT's approach to monetary policy, fiscal dominance is the rule.

### 2.2.2 Practice

Both historical precedents and an attempt to measure the impact of the MMT program in the U.S. through public debt monetisation provide strong cautionary tales against such an approach.

Regarding historical precedents, according to Edwards (2019), "Almost every one of the Latin American experiments with major central bank-financed fiscal expansions took place under populist regimes and all of them ended badly (...). In most of these episodes (...), policy makers used arguments similar to those made by MMTers to justify extensive use of money creation to finance very large increases in public expenditures" (page 3). In more details, Edwards (2019) distinguishes:

- Four phases in Latin American populist experiments. In the first phase, the increase of public expenditure financed by central bank money creates a boom. In the second phase, bottlenecks and imbalances emerge, leading authorities to implement exchange rate and price controls. In the third phase, fiscal dominance gets more acute and consumers ditch the domestic currency; at this stage, the use of the domestic currency for paying taxes becomes critical to avoid its total disappearance. In the fourth phase, the populist regime is replaced and the next government has the difficult task of restoring the economy.
- Four populist episodes in Latin America: Chile (1970-1973), Peru (1985-1990), Argentina (2003-2015), and Venezuela (1998 to now). Edwards (2019) also notes that the four countries had a sovereign currency, in the sense that they had not a strictly fixed exchange rate. Indeed, this is a condition that MMT economist deem essential to implement the policies they recommend (see *e.g.* Kelton (2020), pages 18-19, who also emphasizes, in pages 84-85, that Greece ran into difficulties precisely because it did not have a sovereign currency). Finally, Edwards (2019) underlines that inflation was very high in all these episodes (*e.g.* 500% in Chile in 1973, 7000% in Peru in 1990, and more than 1000% in Venezuela in 2017), as the demand for domestic money collapsed, with economic agents running on it.

Ocampo (2020) also mentions:

- The case of Argentina under Peron (1946-1955) or Peronist regimes, particularly the years 1946-1948, 1973-1974, 2007, 2012 and 2020. Under Peron, the central bank did not directly finance the budget deficit, but rather granted refinancing to state-owned banks that financed off-budget public expenditure. The average 1945-2019 Argentine inflation rate was 143%, including three bouts of hyperinflation.
- The case of Nazi Germany between 1937 and 1945, when there was first covert and then open financing of the budget deficit. Ocampo notes that, when Dr Schacht wrote Hitler, in 1939, that the Reichsbank would refuse to grant the Reichstag further credit, as the statutes of the central bank allowed it, he was dismissed.

Palley (2019a) evaluates that the full monetisation by the central bank of the increase in the public deficit caused by the implementation of the MMT program in the U.S. would imply a fifty-fold

increase in the monetary base-to-GDP ratio relative to the 2018. He highlights that “those money supply dynamics (...) would almost certainly trigger high inflation in both asset markets and goods markets, as well as causing significant inflationary and destabilizing exchange rate depreciation” (page 153).

Indeed, already in 1982, Sargent had studied the end of four big inflations (Austria, Hungary, Poland and Germany in the 1920s) showing that “Once it became widely understood that the government would not rely on the central bank for its finances, the inflation terminated and the exchanges stabilized” (page 89). Conversely, “it was not simply the increasing quantity of central bank notes [in modern economies, reserves] that caused the hyperinflation (...), it was the growth of fiat currency that was unbacked, or backed only by government bills, which there never was a prospect to retire through taxation” (page 89). Indeed, one common feature underlined by Sargent (1982) among the four big countries was a rapid rise in the “high-powered” money supply in the months and years after the rapid inflation had ended, thus reversing the “flight from currency” that had taken place during the big inflation episodes. One reading of Sargent’s paper is therefore that a central bank is a bank: its liabilities are susceptible to runs. The difference with commercial bank deposits is that, since the institution of forced tender, central bank money cannot be exchanged for gold or silver: it is not a claim on the issuer anymore. The only way the public can rid themselves of central bank money they not want to hold is to “fly from currency”, chasing assets, goods and services. In particular, foreign currency can then act as a proxy asset for outside money to domestic currency, triggering a depreciation of the exchange rate that fuels inflation. In a fiat currency system where central bank money and commercial bank money are at par, this deteriorates the purchasing power of both of them, by increasing the level of prices. Consequently, if a Government considered that, as suggested by Kelton (2020), the central bank would have paid off its debt when purchasing it, the monetary base would become partly or entirely unbacked, which at some point would trigger a “flight from currency”<sup>5</sup>. In fact, the mere anticipation of a Government default on the debt held by the central bank might suffice to trigger such a “flight from currency”.

However, as noted by Edwards (2019), Wray (2015) declares that he is surprised by the notion that during hyperinflation economic agents reduce their domestic currency holdings to a minimum. This tends to show that the notions of “flight from currency and the implied high levels of inflation are outside the scope of MMT. Some forty years ago, Sargent (1982) emphasized money demand does not necessarily match money supply. He also showed that a central bank must possess a healthy balance sheet in order to issue a credible currency and that this implies the government should respect central bank independence Unfortunately, MMT economists do not seem to read Nobel Prize winners in economics beyond 1976, when Milton Friedman was awarded it...

### **3. A limitless « fiscal space », a minimal aggregate demand management**

We briefly expose Lerner’s Functional Finance Theory (1943) – hereafter FFT – which has provided the fundamental building block for MMT’s fiscal doctrine and then analyze MMT’s recommendations related to fiscal policy and to aggregate demand management.

#### **3.1 FFT**

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<sup>5</sup> Pfister and Valla (2020) show that such policies as “helicopter money”, or more generally policies that entail the transfer of fiscal duties to the central bank, create the same risks.

FFT and its critical reception are presented successively.

### 3.1.1 Theory

FFT builds on Knapp's STM and on Keynesian theory. Lerner (1943) adds a radical fiscal doctrine, referred to as "functional" because its focus is on the macroeconomic outcome of fiscal policy rather than on its budgetary impact (Wray, 2018). Fiscal policy should be judged only by "the *results* of [its] actions on the economy and not by any established traditional doctrine about what is sound or unsound" (Lerner, 1943, emphasis in the original). Indeed, FFT "rejects completely ... the principle of trying to balance the budget over a solar year or any other period".

Contrary to the traditional "sound" view according to which the government faces a budget constraint and taxes pay for government spending, FFT (Lerner, 1943) prescribes three principles to achieve full employment and price stability:

- In order to eliminate both unemployment and inflation, public spending should be increased when aggregate demand is too low and taxes increased when aggregate demand is too high. Lerner's framework tacitly relies on three key assumptions. First, inflation is solely the result of aggregate spending growing faster than aggregate output. Second, excess-demand inflation and involuntary unemployment cannot coexist; the notion of "structural" unemployment, which would not be responsive to increasing demand, is absent. Third, the role of taxes is primarily to reduce private demand since government spending can be financed much more easily by printing money. However, Lerner does not envisage the consequences of a high level of taxes or of public spending on incentives.
- Public borrowing should be adjusted "in order to achieve the rate of interest which results in the more desirable level of investment", i.e. the level conducive to full employment. In Lerner's view, public debt should be increased to raise the interest rate if its level is judged too low, and decreased in the opposite case. Implicitly, because FFT posits an unlimited access of the government to the printing press and reduces monetary policy to liquidity management by the central bank to accommodate the changes in the balance of the Treasury's account (2.2.1), there is a disconnection between the impact of public spending on aggregate demand and the impact of public debt on interest rates. Moreover, Lerner's view of the financial market implicitly refers to a closed economy framework.
- The government should "print, hoard or destruct" money as needed to carry out the first two principles. In keeping with contemporary views characterized by a disillusionment with monetary policy's apparent incapacity to stem the Great Depression, it is assigned a subdued role, i.e. directly financing budget deficits and helping to maintain low interest rates, to assist the government in maintaining a high level of aggregate demand. The central bank is absent from FFT's framework which only considers "the government". Lerner (1943) does not expand on the technical modalities and on the consequences of "printing money", except for a brief sentence according to which printing money "does not increase the debt at all" (Lerner, 1943). Indeed, monetisation leaves total debt unchanged by substituting reserves for government debt in the aggregate balance sheet of the central bank and the government. For Lerner, printing money has also no impact on inflation, which is not a monetary phenomenon: either he dismisses the QTM and the money multiplier, or he anticipates the reasoning of Sargent (1982) presented above (only if the government defaults on the public debt held by the central bank - or if economic agents anticipate such a default - will inflation reach a high level) and he excludes such a default.

Lerner (1943) envisages that the achievement of this program may result in a continually increasing national debt if “the maintenance of prosperity” did not permit “the budget to be balanced even over longer periods” and “if the additional spending were provided by the government’s borrowing of the money and not printing the excess of its spending over its tax revenues”. However, Lerner sees no reason for assuming that the government must always be borrowing more money and increasing the national debt because the application of Functional Finance would maintain the proper level of total demand for current output and provide an automatic tendency for the budget to be balanced. Moreover, he sees “no danger for society” of a continually increasing national debt - because debt “is not a burden on the nation in the same way as an individual’s debt to other individuals is a burden on the individual”.

However, Lerner acknowledges that FFT would be invalidated if government debt were foreign-held or foreign currency- denominated. The level of debt would then be a constraint because the government would not be able to print money to service the debt. According to Lerner, FFT is only applicable to countries that can borrow long-term in their own currency.

### 3.1.2 Critical reception

Stigler’s comment (1945, cited by Ocampo, 2020) according to which FFT has “an attractive simplicity” that is “purchased at the high price of avoiding real problems” and that it would be “essentially irresponsible” to “jump from a textbook on theory to Capitol Hill” nicely sums up reactions to FFT, both from Keynesian and non-Keynesian quarters.

Was Lerner the “perfect prophet of Keynes” (Colander, 1984)? FFT “carried the policy implications of the Keynesian model to their logical conclusion”, even though Keynes, while seemingly endorsing the theory, explicitly mentioned in various comments risks facing the mechanical application of a FFT policy such as public debt stabilizing at an undesirably high level (Colander, 1984). Aspromourgos (2014) disputes this “logical corollary” view: FFT cannot be the uniquely valid approach to full employment, inferable from Keynes’ theory. Indeed, Lerner does not demonstrate that growth of government expenditure to ensure full employment and effective demand over time cannot be reconciled with budget balances that are consistent with stabilizing the public debt to GDP ratio, at some desired level, over some appropriate time horizon. In addition, building on Keynes’ general comments on public debt in the 1930s and 1940s, Aspromourgos (2014) infers that Keynes may have envisaged other difficulties facing a FFT policy than those he explicitly mentioned, notably its potentially damaging effects on debt sustainability, private sector confidence and on inflation. Keynes had *inter alia* stressed the need to promote “a sense of confidence in what the future borrowing policy of the Treasury is going to be”, i.e. the need to manage the debt market’s expectations to avoid an upward pressure on yields on longer maturities and a steepening of the yield curve. Furthermore, a major Keynesian, Meade (1945, cited by Ocampo (2020)), considered Lerner’s theory as “incomplete and “inconsistent”. FFT did not consider the efficiency with which available factors of production were employed and ignored the impact that the higher taxes needed to pay interest on a growing public debt would have on the incentives to work and invest. Therefore, the overall size of the public debt and the fiscal deficit could not be a matter of indifference to society.

From a modern perspective, Krugman (2019) stresses Lerner’s neglect of the tradeoff between monetary and fiscal policy. According to FFT, the interest rate should be set at a level resulting in a desirable level of investment, and then fiscal policy should be chosen to achieve full employment given the level of the interest rate. However, FFT does not provide a guide to what should be the optimal level of the interest rate. Krugman (2019) further notes that FFT does not address the

technical and political limitations on tax hikes and/or spending cuts decisions. If public debt reaches rapidly unsustainably high levels (i.e. if the interest rate on public debt is higher than the growth rate of the economy), exerting an upward pressure on interest rates, the government finds itself forced to run large primary surpluses, which may be politically difficult to achieve. The temptation to engage in some form of financial repression or debt restructuring or to ignite inflation would be irresistible, Argentina's example being a case in point (Ocampo, 2020).

With the rise in inflationary pressures beginning in the mid-1960s, even heterodox economists dropped FFT, which was revived in the late 1990s only with the creation of MMT. Lerner himself had second thoughts (Lerner, 1977, cited by Wray, 2018): he admitted that FFT had been too focused on the macro level, ignoring institutional realities, and had neglected micro or market analysis and the possibility of stagflation.

### 3.2. Fiscal policy and aggregate demand management

We present and discuss successively MMT's fiscal doctrine and its recommendations regarding aggregate demand management.

#### 3.2.1 Fiscal policy

According to Krause et al. (2021), MMT, in which fiscal policy becomes responsible for the traditional monetary policy domain, could be labelled "modern fiscal theory." The authors note that MMT should not be confused with the fiscal theory of the price level according to which monetary policy does not necessarily control inflation and fiscal policy influences prices even in countries with an independent central bank (Drumetz et al., 2015, pp 155-157). In addition, MMT should of course not be confused with mainstream economists' recent reappraisal of fiscal and welfare costs of higher debt when the safe interest rate is lower than the growth rate (Blanchard, 2019). These mainstream economists do not believe that fiscal deficits should be financed through limitless money creation nor that fiscal imbalances and debt accumulation do not matter. MMT's radical fiscal theory is presented and discussed.

Indeed, MMT's fiscal policy doctrine builds on FFT's dismissal of debt constraints on government borrowing (Mitchell, 2020) and also argues that a sovereign currency issuer (i.e. with debts denominated in its own currency and a floating exchange rate) is financially unconstrained. Therefore, it "should pursue functional targets and allow its budget outcome to adjust accordingly" (Connors and Mitchell, 2013). Following MMT, as a monopoly supplier of its currency, such a government does not face a budget constraint, cannot "run out of money", can always meet its obligations by paying in its own currency and can set the interest rate on any obligation it issues (Wray, 2019). Therefore, assessing solvency thresholds, such as a ceiling on a debt to GDP ratio, is groundless.

According to MMT, increased government spending is not inflationary if there is fiscal space available, i.e. according to its own sense of the notion idle real resources that can be brought back into productive use. Indeed, MMT rejects the "orthodox" notion of fiscal sustainability and adopts a very specific conception of "fiscal space". Within this approach, when the economy is at full capacity, the emergence of inflationary risks can be controlled through a tax increase. Tax adjustments serve to control aggregate demand, not to finance the fiscal deficit, because government spending creates its own government-issued fiat money ((as mentioned above, MMT confuses money with the monetary base - i.e. currency and reserves). Therefore, there is no operational or financial constraint requiring that its spending be "prefunded" (Fullwiler, 2007). If, obviously, governments do not need to hoard money before they spend, they do however need to



plan public spending and its financing, including the issuance of debt. Following the same line of reasoning, bond sales are not viewed by MMT as financing operations. As indicated above, bond sales are viewed as interest rate management in which the issuance of government debt, weighing on bank liquidity, increases interest rates, as if the central bank were not neutralizing these effects, precisely in order to make its monetary policy stance prevail.

MMT rejects the orthodox loanable funds theory, deemed irrelevant for understanding the inflationary risk attached to fiscal expansion. The crowding-out effect on private spending does not exist in MMT because expansionary fiscal policy is supposed to lower interest rates by providing liquidity to banks rather than raising them by crowding-out the private demand for debt financing. Therefore, they do not reflect the size of the current or expected future levels of deficits and debt as posited by the loanable fund theory (Fullwiler, 2007). In addition, with or without bond sales, what matters for MMT concerning the potential inflationary impact of a given government deficit is the non-government sector's decision to spend or save. Hence, the traditional orthodox opposition between monetisation, whose use could lead to spiralling inflation, and bond sales, which are deemed to reduce the inflation risk of public spending, is viewed by MMT as a false dichotomy. Mitchell (2020) concludes that (i) "the elaborate accounting and institutional processes, which make it look as though tax revenue and/or debt sales fund spending, are voluntary arrangements with no real economic consequence. They are designed to impose political discipline on government spending"; (ii) MMT economists see no need to issue debt to match deficits.

Claims that a sovereign currency issuer is financially unconstrained are not new. In the Keynesian literature (e.g. Blinder and Solow, 1973), money financed deficits can be used, albeit temporarily - i.e. until the economy returns to full employment - to increase real financial wealth which increases in turn aggregate demand. When full employment is reached, an inflationary gap appears and the budget has to be balanced to avoid inflation. However, the conclusions drawn by MMT are overstated:

- Even a temporary monetized fiscal stimulus could trigger expectations, especially from the government, that a one-time use could easily become permanent. In turn, a permanent recourse to monetary issuance would lead to a flight from currency and to hyperinflation.
- MMT's claim that government spending is only constrained by the "inflationary" ceiling, which binds when all productive resources are fully employed (Mitchell, 2020), is incomplete. MMT does not address the opportunity costs and distribution consequences of the "monetisation" of deficits by the central bank - e.g. impact on asset prices ...- that may affect both the demand and the supply side of the economy and therefore the inflation constraint, even before full employment is reached.
- MMT argues that the normal interest rate for government debt should be very low or even zero. This assumption begs the question of the plausibility of interest rates permanently below the growth rate of the economy.
- Markets and economic agents' expectations and feedbacks may limit a sovereign currency issuer's ability to finance spending. In particular, MMT's neglect of financial markets and expectations tells an incomplete story. According to the doctrine, the government is financially unconstrained and does not operationally need to borrow, which breaks the link between interest rates and public deficits. Even if the government decided to borrow, there would not be, according to MMT, any straightforward correlation between increased deficits and rising long-term rates. However, a government deficit may lead to an increase

in longer-term rates (Lavoie, 2019; Palley, 2019b) if financial markets expect high future inflation, well before full employment has been reached. If the debt is not willingly absorbed by the market, the recourse by the government to financial repression would not prevent interest rates rising in private credit markets with adverse consequences in terms of monetary and financial stability (De Bandt et al., 2021, pp 262-263).

- According to MMT, a sovereign currency issuer will not default on a debt issued in its currency because the central bank can always print the money needed to service and repay this debt. This assumption is overstated (Buiter and Mann, 2019; Ocampo, 2020; Palley, 2019b).

Finally, is there a country in the world that could apply MMT's policy prescriptions on a sustained basis? The answer is negative (Buiter and Mann, 2019; Ocampo, 2020; Palley, 2019b). Even the U.S. "exorbitant privilege" is not immutable because the U.S.'s role as a supplier of the world's leading reserve currency (associated with its deep, liquid market for government debt) is critically dependent on the credibility of its policymakers. If MMT principles were to be applied, increasing fiscal deficits and deficit monetisation by the central bank would lead to rising inflation, thus ex ante reducing global investors' demand for U.S. dollars, with negative consequences for the exchange rate, long-term interest rates and growth (4).

### 3.2.2 Aggregate demand management

MMTers believe that fiscal policy is much more effective than monetary policy at managing aggregate demand. Therefore, fiscal policy should be adjusted when necessary to maintain full employment and moderate inflation while monetary policy should passively support the financing of the fiscal deficit by printing money and keeping interest rates at very low, near-zero levels.

A major criticism that can be addressed to MMT is that its proponents are unable to prove their claims given the lack of formal modelling – "a glaring professional failure" according to Palley (2019b). In line with this criticism, the following appraisal reviews MMT's key assumptions on inflation, monetary policy, fiscal policy and their (lack of) feedbacks.

According to Palley (2019b), MMT is especially dismissive of the problem of inflation and lacks a doctrine. Indeed, its views appear simplistic, with differing assumptions among its proponents, and incomplete (Buiter and Mann, 2019). All MMT authors reject the QTM but they differ in their approach to the drivers of inflation. For some of them, excess demand and cost-push drive inflation (e.g. Carnevali and Deleidi, 2020). For others, inflation is "intrinsic to the power relations between workers and capital (class conflict), which are mediated by government within a capitalist system" (Mankiw, 2020). According to Ocampo (2020), this second, less orthodox view is reminiscent of the structuralist theory of inflation (i.e. structural bottlenecks and distributive pressures are the source of inflation), which was popular in Latin America during the 1960s and 1970s and inspired less than successful policies. A third, utterly unorthodox view (e.g., Tcherneva, 2002; Mosler and Silipo, 2017) considers that government policy and prices paid by the government are the ultimate source of the price level. The implementation of a public job creation program that would serve, according to MMT authors (Tcherneva being one of its major proponents), as a price and wage anchor, may be reminiscent of this third view (see below).

In addition, the dynamics of inflation in the MMT framework are oversimplified (Palley, 2019b). They do not rely on a Phillips curve but on a threshold model where inflationary risks appear only once the economy is at full capacity. Therefore, they ignore the trade-offs between inflation and unemployment and the effects the adoption of a MMT policy regime would likely have on inflation

expectations, themselves largely absent from the MMT literature, and their immediate consequences. In any case, whatever the views of its exponents, MMT does not seem to consider inflation as a serious threat, e.g. Wray (2019): “Fortunately – or unfortunately depending on one’s view – modern economies usually operate with sufficient slack that even large boosts to aggregate demand are not likely to put much pressure on wages and prices. Our critics continue to fight an inflation battle that was won almost two generations ago”. In this context, monetary policy, which MMT deems as ineffective at managing aggregate demand (see below), is ignored. Finally, and most importantly, MMT does not address the effects of the “monetary financing” of deficits on inflation (they seem implicitly to assume none, which is unrealistic) and inflation expectations (absent in their framework), on interest rates, asset prices, the income and wealth distribution etc.

As regards monetary policy’s role in managing aggregate demand, MMT’s discarding of interest rates as a tool of stabilization policy is problematic. First, the arguments generally put forward (e.g. Tymoigne and Wray, 2013; Shirai, 2019) are not substantiated and are unconvincing:

- The “sensitivity” of aggregate demand to interest rates is posited to be low. As an illustration, Tymoigne and Wray (2013), who do not otherwise provide empirical evidence, put forward central banks’ gradualist management of interest rates and their increased transparency, which “have made it much easier for economic units to anticipate adverse changes in interest rates and to protect themselves against them”. The fact that (modern) central banks’ gradualism and increased communication (e.g. forward guidance on interest rates) help them, on the contrary, to influence interest rate expectations and therefore to increase the leverage that monetary policy has on the economy (Drumetz et al., 2015, pp 294-305) is ignored.
- Interest rates affect the cost of borrowing, which influences costs of production and prices. Therefore, according to Tymoigne and Wray (2013), low interest rates may lead to lower inflation. However, such a cost-push argument (whose magnitude is not quantified by the authors) is purely of a short-term nature: the stimulation of aggregate demand will exert an upward pressure on activity and prices.
- A related argument concerns the fact that a cut in interest rates will reduce interest income and could therefore discourage private spending (Shirai, 2019). However, households save but also borrow and when interest earnings decrease, interest payments decrease too. If net interest income is largely unaffected, as is the case in the euro area (ECB, 2016), lower interest rates redistribute resources from net savers to net borrowers which have a higher marginal propensity to consume than net savers, which further supports aggregate demand. Moreover, in the case of both households and firms, the substitution effects of interest rate changes (penalizing savings) should outweigh income effects, possibly with a lag (Drumetz et al. (2015), p 197).

Second, discarding interest rates as a stabilization tool would create a host of political economy and instrument shortage problems (Palley, 2019b):

- From a political economy point of view, monetary policy is the preferred instrument to manage aggregate demand because fiscal policy is difficult to use to stabilize the business cycle, due to political implementation problems (e.g. politicians’ aversion to decide to raise

taxes and cut spending) which reinforce the objective difficulty of fiscal policy timing and may introduce an inflationary bias.

- In addition, the loss of an instrument would compound the difficulty for a policymaker to achieve her policy targets (low inflation, full employment, containing the fiscal deficit and the level of debt etc.).
- Third, MMT's prescription to keep nominal interest rates at a very low, near-zero level would also foster macroeconomic instability, with, during the upward phase of the cycle (until, according to MMT's doctrine, full employment is reached and taxes are increased), real rates falling and potentially causing higher inflation which would, in turn, lower real interest rates. Moreover, Japan's experience (Shirai, 2019) of an increasing public debt and substantially low interest rates for long illustrates the pitfalls of MMT's prescription, such as zombie firms, declining productivity growth, distortions on financial markets, declining profitability in the banking sector and bubbly housing prices.

To sum up, MMT argues (erroneously) that there is no relation between fiscal deficits and interest rates or between fiscal deficits and inflation. Yet, the shift to a MMT fiscal policy regime would obviously generate these relationships via the impact of changed expectations on financial markets (Palley, 2019b).

Moreover, MMT does not meet the challenges associated with the use of fiscal policy as a countercyclical tool. MMT seems to rely on a highly simplified and implausible political economy (Palley, 2019b), which assumes that taxes can be abruptly and precisely increased at full employment to contain excess demand, despite the well-known difficulty of fiscal policy timing and politicians' aversion to raising taxes and cutting spending, which introduce an inflationary bias. Over successive cycles, MMT's fiscal policy would be destabilizing. In addition, no institutional arrangements for closing the deficit once the economy is running at full capacity are envisaged by MMT. Yet, ex ante rules would be all the more necessary that monetisation by the central bank severs the link with financial markets and the discipline they exert and that the central bank is under the direct control of the fiscal authority.

#### **4. Structural policies focused on full employment**

In MMT's view, fine-tuning fiscal policies should be complemented by structural programs aiming at a directly controlling the allocation of resources. According to Tymoigne and Wray (2013), "The government should be directly involved continuously over the cycle, by putting in place structural macroeconomic programs that directly manage the labour force, pricing mechanisms, and investment projects, and constantly monitoring financial developments". Full employment would be achieved through a government jobs creation program, which would act as an automatic stabiliser and by large-scale spending on infrastructure, climate change, and the environment, i.e. the "Green New Deal", which would employ workers in the job creation program. Both programs are presented and discussed.

##### **4.1 A Public Service Employment Program and a "Green New Deal"**

MMT, in line with Minsky who wrote extensively about the role of "employer of last resort" of the State, believes that a modern capitalist economy, which is inherently instable, will fail to produce

and maintain “true” full employment; involuntary unemployment is a persistent characteristic of such economies (Fullwiler, 2007; Tcherneva, 2012; Haim, 2021). Therefore, MMT advocates for the implementation of a U.S. public job creation program funded by the federal government, called Public Service Employment (PSE) program (Wray et al., 2018). The PSE program is “a “job guarantee” program that provides employment to all who need work by drawing from the pool of the otherwise unemployed during recessions and shrinking as private sector employment recovers. [...] the PSE program would pay a wage (whose level would be gradually incremented to reach \$15 per hour in 2022) for full- and part-time positions and offer benefits that include health insurance and childcare. In addition to guaranteeing access to work on projects that serve a public purpose, the PSE program establishes effective minimum standards for wages and benefits” (Wray et al. 2018). The program would not aim at competing directly with private sector employment: jobs created would provide public services in non-profit community organizations, public schools, and state and local governments.

According to MMT economists, the implementation of a PSE would bring many benefits (Tcherneva, 2012; Wray et al., 2018; Ehnts and Höfgen, 2019):

- It would stabilize economic activity and household incomes through the creation of a buffer stock of paid jobs that expands when private sector activity declines and shrinks in recoveries, thus providing an automatic stabilizer.
- The government’s budget would also move in a countercyclical manner as spending on the program would fluctuate with the cycle, which would further help to smooth cyclical fluctuations. Consequently, the PSE would provide an effective aggregate demand management tool for stabilizing the economy at a state of full employment, whereas orthodox stimulus policies do not control directly the determinants of effective demand (investment, savings etc.).
- Moreover, the PSE program would provide a price and wage anchor.

The Green New Deal (GND), a resolution introduced by U.S. Congresswoman A. Ocasio-Cortez and Senator E. Markey, is a comprehensive program calling for an economic mobilization in the U.S. at a scale not seen since the New Deal era. Its chief aims are to radically decarbonize the U.S. economy (with a set of policies combining public investment to create a carbon-neutral energy policy, retrofitting buildings and updating infrastructure to increase energy efficiency...) by 2030 while significantly reducing economic inequality. The goal of creating “millions of good, high-wage jobs and ensure prosperity for all” would be achieved through a job guarantee, a central component of GND (Galvin and Healy, 2020). Half of PSE workers could be engaged in those GND projects that would be able to utilize labor with below-average skills and experience. MMT exponents have inspired and actively defend the GND, e.g. Nersisyan and Wray (2020) refuting concerns about the costs of the GND, estimated at 2 % - 5, 7% of U.S. GDP (Galvin and Healy, 2020). According to Nersisyan and Wray’s (2020) estimates, which rest on very positive supply-side effects, the increase in demand provoked by the GND would not cause significant inflation; however, if the increase in demand turned out to be larger, they evoke the use of other methods used in WWII such as price controls, rationing and additional taxes.

#### 4.2 A central role but an uncertain success

Palley (2019b) notes that the government jobs creation program is much more central for MMT than would seem at first glance, because fiscal policy, as envisaged by MMT, would have trouble fine-tuning the economy. Therefore, the PSE would function as a counter-cyclical automatic stabilizer, delivering productive non-inflationary full employment. However, the success of such a

program rests on a number of conditions (Buiter and Mann, 2019) that may not be all met. In particular, the authorities must manage a permanent inventory of productive, meaningful jobs and job openings, ready to be filled at short notice in the public sector. By contrast, public sector employment in activities that add little economic value or maintenance of skills at a guaranteed wage would simply be equivalent to unemployment benefits in disguise. The PSE may have other drawbacks, such as the displacement of private sector production if workers prefer better-paid or less intensive PSE jobs. Moreover, the fact that the PSE sets the effective minimum wage floor for the entire economy may have inflationary consequences and cause job losses in other parts of the economy. When the economy approaches full employment, rising inflation may trigger a higher PSE wage, spreading inflation throughout the economy or inciting workers to drift to PSE jobs if their employer fails to match the PSE wage increase.

More generally, even if public policies have obviously a key role in responding to global climate change, the GND and the PSE nevertheless reflect MMT's view that government debt is more desirable and sustainable than private sector debt. Private indebtedness is supposed to be conducive to financial fragility while a government led expansion enhances financial stability by providing safe assets and income to the private sector. However, MMT's key assumption that a sovereign currency issuer is financially unconstrained is grossly overstated.

## **5. A U.S. centric open –economy analysis**

MMT's views on current accounts and on the applicability of its policy prescriptions to other countries than the U.S. are presented and discussed in turn.

Bonizzi et al. (2019) note that “MMT analysis of open economy issues, particularly those faced by developing and emerging countries, is relatively scant. In the recently published MMT textbook, a single chapter is devoted to the open economy [...]” Indeed, most of MMT's analyses rely on a closed economy assumption (Ocampo, 2019). When they do not, they appear as U.S. centric and closely aligned with long-standing U.S. government official views. For example, Kelton (2019) writes, “America's trade deficits are not optional. Much of the world simply *must* run trade surpluses with America” (page 143, author's emphasis). This statement mirrors the traditional U.S. official position according to which “The U.S. trade deficit is our commercial partners' problem”. More generally, MMT views current account deficits as a reflection of foreign demand for financial assets, rather than as the result of domestic consumption and investment exceeding productive capacity. The underlying assumption - that the liabilities associated with current account deficits are denominated in the currency of the deficit nation - does not match the reality of the majority of the international trading and financial system (Bonizzi et al., 2019), except for the U.S. and a few other major reserve-currency issuing economies.

MMT's framework is presented by its exponents as applicable to all sovereign currency issuers (i.e. with a floating exchange rate and debt issued in their own currency). According to them, even developing and emerging countries should adopt its prescriptions, as if external constraints on policy and development, driving them to choose an exchange rate peg or to borrow abroad in a foreign currency, were self-imposed and did not reflect limited macroeconomic policy autonomy. However, Bonizzi et al. (2019) consider that the criteria identified by MMT are insufficient to achieve policy autonomy and that “Advocating deficit monetisation under conditions of sustained current account deficits, exchange rate volatility and potential capital flight is at best misguided and at worst irresponsible”. In turn, Epstein (2019) considers that “MMT policy is relevant, at best, to only a few countries: those with significant international currencies” and that “MMT advocates need to grapple more seriously with the empirical evidence that bears on their proposals and on the institutional limits to their applicability”. Perhaps as a result of these critical remarks, Kelton (2020) advises developing and emerging economies to sign South/South trade agreements and put

in place capital controls to gain “monetary sovereignty” (page 155). However, such measures are likely to hamper the building of the “deep capital markets” that she deems necessary – and rightly so – to develop a demand for their currencies (page 144) and thus gain “monetary sovereignty”.

## 6. Conclusion

The following table summarizes the main contrasts between MMT’s approach and mainstream economics.

**What MMT deems wrong and right**

	Wrong	Right
<b>Explicitly</b>		
Government expenditure is financed by...	... taxes	... issuing currency
Public debt sustainability...	... can be an issue	... cannot be an issue
Public bonds are issued...	... to finance the public deficit	... to distribute income as part of an interest rate maintenance strategy
Access of Government to central bank financing...	... should be limited	... is unlimited
Public debt purchased by the central bank...	... should be paid off	... is paid off
Crowding out...	... can be an issue	... cannot be an issue
Monetary policy...	... has a role to play to stabilize the economy	... has no role to play to stabilize the economy
Interest rates...	... are a market variable	... are set by the Government
Inflation...	... is a monetary policy issue	... is a fiscal policy issue
Unemployment...	... cannot be fully eliminated	... can be fully eliminated
Conventional structural policies...	... are positive	... are negative
A sovereign economy...	... should be competitive	... does not have to be competitive
Skills...	... are important determinants of income	... are loosely linked to income
Social welfare...	... has a cost	... has no cost
<b>Implicitly</b>		
Currency...	... is both an asset and a liability	... is an asset “manufactured” <i>ad libitum</i> by the State
Currency competition...	... exists	... does not exist
Incentives and expectations...	... play an major role in economic dynamics	... play a minor role in economic dynamics
Competition in the goods and services markets...	.. exists and is useful	... can be ignored
Climate change...	... can be addressed primarily by setting a social price of carbon	... necessitates primarily public investment

Such a stark contrast with mainstream economics analysis and recommendations would be understandable if MMT economists engaged into a debate with their colleagues to explain and justify their positions, from both a theoretical and empirical point of view. However, they rather prefer to talk between themselves, repeating consistently the same ideas that others formulated in a distant past, disregarding facts and theories that do not fit into their approach, and accusing those

who do not share their ideas of being incompetent. Their academic publications are also very repetitive, lacking in empirical analysis and almost exclusively literary, which does not allow to verify their assertions or to compare them with the recommendations of other schools of thought. Symptomatically, *The Deficit Myth* (Kelton, 2020) does not address non-MMT economists, whom it very rarely quotes; it addresses the public to promise them a bright future at no cost, and policymakers, often aggressively, to give them a roadmap. As Hartley (2020) notes, MMT “is not a falsifiable scientific theory: it is rather a political and moral statement by those who believe in the righteousness – and affordability – of unlimited government spending to achieve progressive ends”. Its meaning is more that of a political manifesto than of a genuine economic theory.



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