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Article

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European Journal of Economics and Economic Policies: Intervention (EJEEP)

Provided in Cooperation with:

Edward Elgar Publishing

Suggested Citation: Leclaire, Joëlle (2023) : Modern money theory: some basics in response to Drumetz/Pfister, European Journal of Economics and Economic Policies: Intervention (EJEEP), ISSN 2052-7772, Edward Elgar Publishing, Cheltenham, Vol. 20, Iss. 1, pp. 34-42, <https://doi.org/10.4337/ejeep.2022.0089>

This Version is available at:

<https://hdl.handle.net/10419/280732>

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Modern money theory: some basics in response to Drumetz/Pfister

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This article examines the misconceptions about modern money theory (MMT) put forward by Drumetz/Pfister (2021). The author divides her critique into three categories. First, the Drumetz/Pfister article erroneously indicates that MMT focuses exclusively on the means-of-payment function of money, that it considers money as a pure asset, that it does not distinguish between inside and outside money, and that it does not distinguish between money and the monetary base. Second, Drumetz/Pfister (2021) falsely represent MMT as leaving monetary policy to law and as belittling the impact of quantitative easing. Drumetz/Pfister misunderstand what is meant by government debt being monetized. Third, their article puts forward the incorrect idea that increased government spending could lead to increased long-term interest rates, and that a zero interest rate could supposedly bring about macroeconomic instability and inflation.

Keywords: *modern money theory, fiscal policy, monetary policy, interest rate, government bonds, money*

JEL codes: *E12, E43, E51, E52, E58, E62, H62*

1 INTRODUCTION

This article handles misconceptions about modern money theory (MMT) brought up by the Drumetz/Pfister article ‘Modern monetary theory: a wrong compass for decision-making’ (2021). We divide our critique into three broad categories which encompass both the misrepresentation of MMT in their work and also an MMT reading of Drumetz/Pfister’s ideas regarding the preferred conduct of monetary policy based on their neoclassical frame of reference. First, the article erroneously indicates that MMT focuses exclusively on the means-of-payment function of money, that it considers money as a pure asset, that it does not distinguish between inside and outside money, and that it does not distinguish between money and the monetary base. We will show that MMT follows a taxes-drive-money theory of money demand and that it views money as the relationship between an asset and a liability. Second, Drumetz/Pfister (2021) falsely represent MMT as leaving monetary policy to law and belittles the impact of quantitative easing. Their article misunderstands what it means that all government debt is monetized. Our response shows that monetary policy is decided by committee, that central banks buy and sell securities daily, and that the creation and destruction of money and bonds is a normal part of monetary and fiscal policy. Third, their article puts forward the incorrect idea that increased government spending could lead to increased long-term interest rates, that discarding the interest rate (as they say MMT does) creates a lack of instruments to handle the economy, that monetary policy is supposedly preferred,

Received 1 May 2022, accepted 12 May 2022

and that a zero interest rate could supposedly bring about macroeconomic instability and inflation. Our response shows that a zero interest rate favors production over interest income and that setting the interest rate at zero does not prevent the conduct of monetary policy.

2 MMT'S VIEWS ON MONEY, ITS FUNCTIONS, ITS DEFINITION, BANK MONEY, AND GOVERNMENT MONEY

The Drumetz/Pfister (2021) article mistakenly indicates that, for MMT, money demand is based on legal-tender law. On the contrary, MMT is based on the taxes-drive-money theory of money demand. Their article states that MMT focuses only on the means-of-payment function of money and neglects the other two functions, namely the store-of-value and the unit-of-account functions. In fact, MMT places a lot of emphasis on each of the functions of money, probably most on the unit-of-account function, followed by the other two functions. This understanding of money and its functions derives from Keynes's *Treatise on Money* (1930). The Drumetz/Pfister article states that MMT considers money to be a pure asset but MMT works with the financial view of money as the relationship between a credit and a debit, between an asset and a liability. MMT also makes a distinction between government money and bank money, which is the same as the typical distinction between inside and outside money, in contrast to what Drumetz/Pfister have written. Moreover, the monetary base and money (as the money-thing) are not necessarily synonymous for MMT, as Drumetz/Pfister falsely indicate.

MMT uses a taxes-drive-money theory of money demand as opposed to the legal-tender theory. In all, there are three theories of money demand which outline the reasons why individuals may choose to hold government money. The first is the legal-tender theory of money demand, which states that the reason we hold government money is that this specific money-thing was designated by the government as the exclusive means of payment (Davidson 1972). Many economists, including some post-Keynesians, hold this view but MMT does not. A second theory of money demand, which is more common in Europe than in the US and Canada, is that we choose to hold government money due to convention. I hold government money because my mother used this money, because my grandmother used this money. Government money is demanded because it is a social convention, a social tradition (Orléan 1985; Aglietta/Orléan 2002; Dequech 2013). A third theory of money demand, which is the one held by MMT, is the taxes-drive-money theory, which states that we hold money because we need it to pay taxes. The demand for money in an economy is driven by the fact that government money is needed to pay taxes (Wray 1998; Bell 2001).

The Drumetz/Pfister article incorrectly states that MMT places more emphasis on the means-of-payment function of money and neglects the other functions, which is untrue. Post-Keynesians, including MMT, define money separately from its functions. Money is defined as a relationship between an asset and a liability, and the money-thing as the means of payment. This follows from Keynes's *Treatise on Money*, where he made the distinction between money and the money-thing (Keynes 1930 [1935]: 3). Keynes defined money as a relationship and the money-thing as the thing that served as the means of payment. This distinction is significant because it indicates that the term 'money' is used to mean both the relationship and the thing. The three functions of money as a unit of account, a store of value, and a means of payment/medium of exchange are still important, but now we define money independently from its functions. This is perhaps where Drumetz/Pfister's article misunderstood the MMT definition of money,

basing their understanding of the MMT position solely on Knapp, Lerner, and a few articles which are important but don't encompass the entirety of MMT/post-Keynesians' ideas on money (Knapp 1924; Lerner 1943). In MMT/post-Keynesian analysis, all the functions are still valuable and used. For example, the unit-of-account function shows how we measure value using money units which are determined by the government (dollars, euros, yuan). The store-of-value function expresses how money's value operates across time such that we can save money today for retirement tomorrow. Finally, the means-of-payment/medium-of-exchange function describes how the money-thing can be used to pay off debt, or to make payment. Post-Keynesians, including those who are working in the MMT tradition, view money in this way, as the relationship between an asset and a liability, separate from its functions.

In MMT and post-Keynesian work, it is essential that money takes on a financial nature because the role of banks, the central bank, and the government Treasury in creating and destroying money is central. In the Drumetz/Pfister article, the authors write about confusion between outside money and currency competition as if the bank deposits did not circulate at par with government money (outside money) for day-to-day transactions. According to MMT, there are two levels of transactions in finance that work together to enable the smooth functioning of the economy. The first is the horizontal level where banks create money through creating loans, which is perfectly in line with what is called inside money. The second level is vertical transactions, where government money enters the economy through government spending and exits through taxes. Government money is the same as that which is commonly referred to as outside money. Government money can be used to pay taxes but it can also be used to pay down private debt.

The Drumetz/Pfister article wrongly indicates that MMT does not distinguish between money and the monetary base, which is false. Money is typically understood as the relationship between an asset and a liability, or the money-thing. Depending on the context, money might mean the money-thing or cash, which is part of the monetary base. The monetary base is both cash and reserves outstanding. The monetary base is offset on the central bank's balance sheet by many different assets: government bonds, collateralized debt obligations (CDOs), and even gold. The central bank's balance sheet might have a positive net worth, where the value of the assets it holds exceeds the value of its outstanding liabilities (cash and reserves). It could also potentially have a negative net worth, where the value of its liabilities (cash and reserves) exceeds the value of its assets. For the economy as a whole, the monetary base (cash and reserves) equals the value of outstanding government bonds held in the economy's three financial sectors: the private, government, and foreign sectors, as shown in Table 1. Even at the vertical transactions level, money is the relationship between an asset and a liability.

MMT uses a taxes-drive-money theory of money demand as opposed to the legal-tender theory. The demand for money in an economy is driven by the fact that government money is needed to pay taxes (Wray 1998; Bell 2001). Money is defined as a relationship between an asset and a liability and the money-thing as the means of payment. Post-Keynesians, including those who are working in the MMT tradition, view money in this way, as the relationship between an asset and a liability, separate from its functions. According to MMT, there are two levels of transactions in finance, horizontal and vertical, that work together to enable the smooth functioning of the economy. These are the same as inside and outside money. Government money can be used to pay taxes but it can also be used to pay down private debt. For the economy as a whole, the monetary base (cash and reserves) equals the value of outstanding government bonds held in the economy's three financial sectors: the private, government, and foreign sectors.

Table 1 Net worth for the three-sector whole economy at each point in time with reserves and bonds

Assets	Liabilities
<i>Private sector</i>	
\$500 loans	\$500 deposits
\$800 government bonds	
\$800 reserves and cash	
Net worth: \$1600	
<i>Government sector</i>	
	\$1000 government bonds (Treasury liabilities)
	\$1000 reserves and cash (CB liabilities)
Net worth: –\$2000	
<i>Foreign sector</i>	
\$400 loans	\$400 deposits
\$200 US government bonds	
\$200 US reserves and cash	
Net worth: \$400	

Note: CB = central bank.

3 MMT ON MONETARY POLICY, FISCAL POLICY INTERACTION, INTEREST-RATE DETERMINATION, AND NET GOVERNMENT MONEY AND BOND CREATION

This section of our critique handles the false representations of MMT made by the Drumetz/Pfister article regarding monetary policy, monetary and fiscal policy interaction, interest-rate determination, and net government money and bond creation. The article falsely represents MMT as not explaining the monetary policy transmission mechanism and leaving it to law. It accuses MMT of belittling the impact of quantitative easing. The article also misunderstands what is meant by all government debt being monetized.

The Drumetz/Pfister article states that MMT leaves monetary policy to law without explaining monetary policy strategy or the transmission mechanism. This is incorrect. In MMT, just as in post-Keynesian economics generally, the interest rate is determined as a policy variable. The strategy of monetary policy is to maximize employment and stabilize prices in the US, and only to stabilize prices in Canada and the European Union (EU). In the US, the federal funds rate target is determined by the Federal Open Market Committee in eight meetings throughout the year to meet the objectives of full employment and price stability. In the EU, the European Central Bank (ECB) Governing Council meets every six weeks to determine the rate on the main refinancing operations (loans to banks for over one week), on the marginal lending facilities (overnight loans to banks), and the deposit facility (interest rate banks earn on deposited reserves). The overnight rate targeted by the central bank is the rate paid by banks with reserve deficiencies when borrowing overnight to meet the requirement. In the overnight market, banks lend excess reserves and banks borrow when they are short of reserves. The overnight target is the expected rate that banks will charge on average for borrowing. In the US, the Federal Reserve Board of Governors also determines the discount rate at which banks can borrow reserves overnight if they cannot obtain reserves from the

overnight open market. In the EU the discount rate is called the marginal lending facility and is determined by the ECB Governing Council every six weeks along with the other basic interest rates. This rate is a mark-up on the overnight target and the deposit rate. The discount rate is set higher than the rate the central bank pays on reserves. All other interest rates in the economy are considered to be mark-ups on this overnight rate paid on reserves, which is targeted by the central bank to meet specific policy objectives of full employment and price stability (in the US), and price stability only (in Canada and in the EU) (Wray 1998; Lavoie 2011; 2014: 189). Explaining that the interest rate is determined as a policy variable by a committee with the specific strategy of maximizing employment and stabilizing prices is not leaving monetary policy to law. It is explaining that a committee of individuals makes the decision to undertake certain actions to meet the socially determined and legal target established. In this way, MMT explains how the monetary system currently works rather than stating a preferred way about how it should operate as insinuated by the Drumetz/Pfister article.

In Drumetz/Pfister (2021), there's criticism of the MMT idea that all public debt is monetized, suggesting that quantitative easing is not typical behavior on the part of the central bank. I would suggest that the scale of private asset purchases by the central bank during the period of 'quantitative easing' was greater than it was normally, but that the central bank buys and sells government bonds and can buy and sell other private-sector assets regularly. It is less difficult to understand the MMT position regarding how the central bank buys and sells bonds, or other private-sector assets, when one looks at how MMT views the cycle of money creation and destruction.

In line with this thought, one of the key insights that Parguez, Graziani, and other circuitists brought forward is that in our economies money is both created and destroyed regularly (Parguez 1984; Graziani 1989). When you see money as a relationship between an asset and a liability, or between a credit and a debit, this fluid nature of money as a relationship becomes much clearer. When the central bank makes a payment on a government pension check, the 'money' it uses is a newly created deposit in my grandmother's name at her local bank. From the government ledger side of things, the deposit is offset on their balance sheet by a Treasury bond sold to the central bank. For the central bank, my grandmother's deposit is a liability which is offset by an asset on their balance sheet, which might be a Treasury bond, but could just as well be a collateralized debt obligation issued by another local bank. Every day government checks are deposited, which means new money is created. Every day taxes are paid, which means money is destroyed. Every day newly issued bonds are sold, and every day existing bonds mature, are rolled over, and are retired. There's no time, once a day, once a month, or once a year, for someone to check to see whether the bonds issued and retired over that time period (day, month, year) match the value of government spending in excess of taxes paid. However, approximately every year, it happens to be that the excess of government spending over taxes paid matches the value of new bonds issued. How we explain this process is how we understand the workings of government finance.

The goal of monetary policy is to help foster an economy where investors choose to produce goods and services. The central bank can help make this happen through many mechanisms. It can keep the interest-rate target low and steady or zero. It can buy Treasury bonds or other securities across the term structure to help manipulate the yield curve and expectations. It can make certain investments good when the market views them as worthless, as it did during the 2008 global financial crisis. Therefore, central-bank purchases of government bonds across the yield curve, or assets (performing or underperforming), are a normal part of the functions of a responsible central bank. The central bank can choose to reinforce market outcomes by making more of those purchases during difficult times, ramping up its influence, as it did during the global financial crisis.

4 GOVERNMENT SPENDING, INTEREST RATES, AND INFLATION

In contrast to the previous two sections which dealt with how Drumetz/Pfister (2021) misrepresented MMT ideas, this third section criticizes their handling of certain issues based on their use of the neoclassical model. Drumetz/Pfister (2021) put forward the false neoclassical idea that increased government spending could lead to increased long-term interest rates. They mistakenly believe that a zero interest rate could engender macro instability and inflation, and that discarding the interest rate, as they say MMT does, creates a lack of instruments to handle the economy and that monetary policy is supposedly preferred.

MMT authors view the economy as shaped by the following tenets, which are uncontroversial. First, government spending is determined by government priorities which change over time. Second, interest rates are determined by central-bank policy. Third, the term structure of interest rates today is a reflection of expectations of our current and future expectations of rates of return on investment over time. Drumetz/Pfister (2021) consider that government spending today will increase future interest rates, which is based on an old economic model that does not integrate essential financial components. When we think of how the future interest rate is determined, we need to look at the yield curve. When today, future interest rates are higher than current interest rates, this is a normal yield curve and indicates that we expect that current investments will be profitable in the medium and short term. This is a sure sign of a healthy and well-functioning economy, not an economy which is suffering, as intimated by Drumetz/Pfister (2021). On the contrary, new government spending is likely to make the economy stronger today and tomorrow by investing in public priorities, which will support a positively sloped yield curve, showing that our expectation is that the future will be brighter than the current situation.

At every point in time, the central bank chooses the interest-rate target which means that tomorrow the interest rate may be lower or higher than what we today expect it to be. More government spending today puts pressure on the rate today to fall. The rate itself is determined in the market but targeted by the central bank. One of the important discernments of MMT, which is also present in a lot of other economic and finance work, is that it is essential to understand the system as one of stocks and flows at each point in time and across time (Godley/Lavoie 2007; Mitchell et al. 2019). Looking at the economy from this financial perspective prevents the mistake of thinking that changes in government spending today influence interest rates ten years from now, among many other common mistakes that are made by using non-finance-based models.

In MMT, the rate of interest should be zero. Drumetz/Pfister (2021) argue that this means discarding the interest rate as a tool for monetary policy, which their article states is preferred to fiscal policy. Moreover, their article falsely suggests that a zero interest-rate policy could engender macroeconomic instability and inflation. This pushes us to ask the question: why is the interest-rate target zero in MMT? Wray, one of the founders of MMT, explains that the Federal Reserve (Fed) uses a concept of a neutral rate which it believes is linked to a supposed 'natural rate of interest' which is similar to a 'natural rate of growth' of the economy (Wray 2007: 123). Post-Keynesians, including MMT, reject the idea of a natural rate of interest and instead explain that the rate of growth of the economy depends on how money is used for actual production and employment (Seccareccia 1998: 181; Wray 2007: 126). For MMT, the rate of interest enters the rate of growth by providing a hurdle which new production must jump over to be undertaken profitably. Setting the interest-rate target at zero, besides not meaning that actual market rates end up at zero due to liquidity preference, makes more production opportunities profitable. Production of new goods and services, and employment, are considered

to be more beneficial to society than a return to simply holding money, which is what the rate of interest offers for rentiers (Hudson 2012). In *The General Theory*, Keynes also adopted the same principle in his argument for the euthanasia of the rentier (Keynes 1936 [1973]: 376; see also Wray 2007: 136). What this means is that he feels there should be no reward to the rentier for simply holding money. Money's scarcity is the only reason that rentiers earn interest. Because money can be created in unlimited amounts by the government, Keynes sees no need to have interest as a rate of return on money for its scarcity. In the same line of thought, MMT considers that the interest rate should be set to zero because the interest rate, which is the price of money, is a return to holding money, not to production of something real – a good or a service – that benefits society.

There are several other reasons why most post-Keynesians, including those who adopt MMT, consider a zero interest-rate target to be the best choice. These include that monetary policy has no effect on the economy, and that rules are better than discretion because increasing the interest rate can lead to more inflation rather than less inflation and can disrupt financial markets (Wray 2007: 132). In contrast to the confused idea that setting the interest rate to zero could cause some change in real rates over the course of the business cycle, with real rates falling during expansion thereby causing higher inflation (Drumetz/Pfister 2021), MMT considers that when nominal interest rates increase, they are more likely to increase inflation. Setting the nominal rate to zero would prevent that inflation.

In this same line of thought, there is also the idea that inflation expectations enter into the decision to invest, therefore increasing the interest rate to include some measure of expected inflation will not have any effect on the decision to invest, which has not already been taken into account (Wray 2007: 126). This principle applies across the term structure of interest rates. Kregel argues that long-term inflation expectations are not actually correlated with long-term rates (Kregel 1996, quoted in Wray 2007: 128). This indicates that the decision to invest is based on the expected rate of return, which already integrates inflation expectations. If the Fed decides to increase the interest-rate target to incorporate expected inflation, this has no (or very little) impact on investment, real or financial, that has not already been taken into account.

The idea, then, is that setting the interest rate to zero allows investors to determine how much and when they want to invest in productive and financial activities without providing a return to investors for just holding money. It provides a playing field which is fair and removes potential undesired inflation created by higher interest rates.

When Drumetz/Pfister (2021) indicate that the central bank will lose the ability to use monetary policy when they set the interest rate to zero, they might not have considered the plethora of possible means by which the central banks act in the market. For example, the central bank can provide lending facilities when needed; it can buy and sell Treasury securities and any other security on and off its balance sheet across all maturities of the yield curve. These other tools at the central bank's disposal to undertake monetary policy may perhaps work even more effectively than moving the interest-rate target. Various committees in the US, specifically the Federal Reserve's Board of Governors and the Federal Open Market Committee (FOMC), decide how and when to use these other tools to ensure we have a stable, functioning, and supportive financial system. Setting the interest rate to zero would not prevent the operation of monetary policy.

5 CONCLUSION

Drumetz/Pfister (2021) provided a critique of MMT, but we have shown that many of the tenets of its critique were based on false ideas of what constitutes the basics of

MMT and on an outdated neoclassical framework. MMT uses a taxes-drive-money theory of money demand as opposed to the legal-tender theory. Money is defined as the relationship between an asset and a liability and the money-thing as the means of payment. For MMT, there are two levels of transactions in finance, horizontal and vertical, that work together to enable the smooth functioning of the economy. These are the same as inside and outside money. Government money can be used to pay taxes but it can also be used to pay down private debt.

The Drumetz/Pfister (2021) article states that MMT leaves monetary policy to law without explaining monetary policy strategy or the transmission mechanism. This is incorrect. In MMT, just as in post-Keynesian economics generally, the interest rate is determined as a policy variable. The strategy of monetary policy is to maximize employment and stabilize prices in the US, and only to stabilize prices in Canada and the EU.

There's also a criticism of the MMT idea that all public debt is monetized, suggesting that quantitative easing is not typical behavior on the part of the central bank. I would suggest that the scale of private asset purchases by the central bank during the period of quantitative easing was greater than it was normally, but that the central bank buys and sells government bonds and can buy and sell other private-sector assets regularly. Therefore, central-bank purchases of government bonds across the yield curve, or assets (performing or underperforming) are a normal part of the functions of a responsible central bank. The central bank can choose to reinforce market outcomes by making more of those purchases during difficult times, ramping up its influence, as it did during the global financial crisis.

MMT views the economy as being shaped by the following tenets, which are uncontroversial. First, government spending is determined by spending priorities which change over time. Second, interest rates are determined by central-bank policy. Third, the term structure of interest rates today is a reflection of our current and future expectations of rates of return on investment over time. Drumetz/Pfister (2021) consider that government spending today will increase future interest rates, which is based on an old economic model that does not integrate essential financial components.

In MMT, the rate of interest should be zero. Drumetz/Pfister (2021) argue that this means discarding the interest rate as a tool for monetary policy. Moreover, the article also falsely suggests that a zero interest-rate policy could engender macroeconomic instability and inflation. For MMT, the rate of interest enters the rate of growth by providing a hurdle which new production must jump over to be undertaken profitably. Setting the interest-rate target at zero, while it may not mean the actual market rates end up at zero due to liquidity preference, makes more production opportunities profitable. MMT considers that the interest rate should be set to zero because the interest rate, which is the price of money, is a return to holding money, not to production of something real – a good or a service – that benefits society. Likewise, regarding the zero interest rate and inflation, the decision to invest is based on the expected rate of return, which already integrates inflation expectations. If the Fed decides to increase the interest-rate target to incorporate expected inflation, this has no (or very little) impact on investment, real or financial, that has not already been taken into account.

When Drumetz/Pfister (2021) indicate that the central bank will lose the ability to use monetary policy when they set the interest rate to zero, they might not have considered the plethora of possible means by which central banks act in the market. The central bank can provide lending facilities when needed; it can buy and sell Treasury securities and any other security on and off its balance sheet across all maturities of the yield curve. These other tools at the central bank's disposal to undertake monetary policy may perhaps work even more effectively than moving the interest-rate target. Setting the interest rate to zero would not prevent the operation of monetary policy.

MMT provides a modern take on the institutional framework that explains the way our economy and financial system works. This helps us make better decisions because it is based on how the economy works in reality rather than a fiction of how we might want it to work in our minds or in some outdated model.

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