



Centre of Full Employment and Equity

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An Introduction to Modern Monetary Theory

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1. Introduction

This introduction to Modern Monetary Theory is based on a presentation the author gave at Kyoto University, Japan on November 5, 2022.

The Global Financial Crisis (GFC) and the Covid-19 pandemic a decade or so later exposed the unsustainability of the neoliberal era in terms of economic policy and the underlying economics that guide that policy.

In most advanced countries, the last several decades have been marked by a reliance on household debt to maintain economic growth with governments biasing fiscal policy towards austerity. Governments also justified their lax oversight of financial markets that allowed private debt to skyrocket through appeal to the ‘efficient markets’ theorem, which denies that financial markets can act irrationally and misallocate investment funds. The dominance of New Keynesian macroeconomics also assigned counter-stabilisation responsibilities to monetary policy, even though that tool is largely ineffective in fulfilling that function.

Before the GFC, the principle economic models used by mainstream economists did not even include a financial sector. Denial and hubris prevailed in the economic debate. The GFC exposed the folly of that approach and policy makers around the world adopted very pragmatic approaches to stabilising their economies – implementing significant fiscal stimulus.

What we learned from that crisis was that fiscal policy is very effective at supporting aggregate spending in the face of a non-government spending withdrawal, a point that had been denied by economists for years prior to the GFC. We also learned that large deficits do not drive-up interest rates and that central banks, acting as an arm of government can always control yields on government debt should they desire to do so.

All the main precepts of the dominant New Keynesian theory were shown to be erroneous during this period. Even Queen Elizabeth of Britain, on a visit to London School of Economics in November 2008 asked the question: ‘If these things were so large, how come everyone missed them?’

The reason why the mainstream economics profession was oblivious to the signals of the impending crisis is because it increasingly exhibited what social psychologists identify as Groupthink. This syndrome is a pattern of group behaviour that facilitates resistance to change, even when the core theories no longer adequately explain the facts. There are many examples of this phenomenon across many disciplines, where new knowledge is ignored, and the existing practices (policies) are sustained even when they are based on false premises and undermine the intended goals. Typically, it is only when the weight of evidence becomes so compelling that paradigm shift occurs.

The dissonance that was evident in economics during that period helped facilitate the emergence of Modern Monetary Theory (MMT), which challenged these dominant belief systems in economics. The origins of MMT go back to the 1990s but it was not until the GFC that its ideas started resonating in the public debate as more people sought alternative understandings in the face of the poverty of mainstream economics.

MMT resonates more closely with the institutional and economic facts. The early MMT economists in the 1990s warned that the financial market deregulation and the reliance on increasing household debt for economic growth was unsustainable and would end in crisis. Further, the experience of Japan after the massive property market collapse in

the early 1990s provided ample evidence of the failure of mainstream economists to predict policy outcomes.

This paper introduces the basic concepts of MMT and demonstrates how they provide a better basis for understanding how modern, fiat monetary systems function. MMT also provides a sound framework for understanding the capacities of a currency-issuing government, the consequences of deploying those capacities, and the problems that emerge when a nation surrenders those capacities (such as in the case of the Eurozone Member States).

2. The evolution of monetary systems

In August 1971, a major historical event occurred which changed the way monetary systems worked and rendered much of the macroeconomic textbook knowledge about public spending and debt redundant. The international monetary system that had been created in 1946 to achieve currency stability at the end of World War 2 - the fixed exchange rate, Bretton Woods system – effectively collapsed in August 1971 when President Nixon abandoned US dollar gold convertibility.

Under the Bretton Woods system, central banks were responsible for maintaining the agreed parities with other currencies and thus had to closely manage the amount of their currency circulating in the system. If a currency was in excess supply in the foreign exchange markets, the issuing central bank had to purchase that currency with foreign currency reserves, and, increase domestic interest rates to attract foreign investment (and demand for the currency) to quell the downward pressure.

The problem was that the money supply contraction and higher interest rates pushed unemployment up and if expansionary fiscal policy was used too aggressively to reduce unemployment – putting currency back in the system – it would compromise the central bank’s efforts to maintain currency stability. Thus, without an increase in gold reserves, increased government expenditure (which injected currency) had to be matched by taxation (a currency drain). If the government was spending more than their tax revenue, they had to issue debt (a further drain).

However, the demise of the Bretton Woods system and the emergence of fiat monetary systems in most nations dramatically altered the opportunities available to currency-issuing governments.

First, unlike under the Bretton Woods system where all currencies could ultimately be converted into gold via US dollar holdings, ‘state money’ no longer had any intrinsic value. For an otherwise ‘worthless’ currency to be acceptable in exchange (buying and selling things) some motivation was required. The imposition of tax liabilities in that currency by the government provided the motivation.

Second, as the monopoly issuer of the fiat currency, the Bretton Woods restrictions to offset spending with taxation and/or borrowing were no longer binding because the central bank was freed from having to maintain currency parities. In other words, governments issuing their own fiat currencies were no longer financially constrained in their spending. Such governments were able to buy any goods and services for sale in its currency including all idle labour. The only meaningful constraint on spending became the ‘inflationary ceiling’ that is reached when all productive resources are full employed. This was a dramatic change. Any notion that such a government could ‘run out of money’ became inapplicable.

These changes provided the entrée for Modern Monetary Theory (MMT) and allowed us to shift from thinking about financial constraints on government spending and all analytics about the ‘government budget constraint’, to a focus on **real resource constraints** defined in terms of available productive resources and available final goods and services. Another dramatic shift in thinking.

Third, logically, the government no longer needed to issue debt, given it is the issuer of its own currency. The continued practice of issuing debt became an ideological practice rather than a financial necessity.

Reflecting on these changes, we now understand that politics was strictly freed from the perennial: ‘How are we going to pay for it’ question. The continued use of that challenge to government spending signifies the extent to which the populace is ignorant of those historical changes rather than any financial reality. The questions that should become the focus of the public debate about government spending and taxation are different and relate to functional outcomes we desire from public spending and availability of productive resources.

These insights about the modern fiat monetary systems are ignored by mainstream macroeconomics and invalidates their analysis of public deficits and debt. Mainstream analysis focuses purely on assertions about financial constraints and financial ratios (the ‘deficit is too large’) rather than grounding the analysis in institutional reality and the mechanics of the fiat currency system.

3. What is MMT?

A common misperception is that MMT is some sort of political regime or a set of policies. Rather, MMT should be understood as a lens which provides a better understanding of the monetary system and the capacities of currency-issuing governments. By linking the institutional reality of the fiat monetary system with behavioural theories, it provides a more coherent framework for assessing the consequences of policy choices.

By shifting the focus to real resource constraints, MMT allows us to understand that most choices that are couched in terms of ‘budgets’ and ‘financial constraints’ are, in fact, just political choices. The mainstream metaphor of the government as an income-constrained household is shown to be erroneous. We understand that if the currency-issuing government can purchase whatever is for sale in their own currency including all idle labour desiring work, then mass unemployment is a political choice rather than something ‘natural’ or inherent to the structure of the system.

It also makes no sense to talk about a suite of MMT policies. MMT is a framework for understanding policy choices that emerge from the currency capacity of government, but the specific policy decisions will reflect the ideology (values) of the government and the political reality it faces. In this sense, MMT is politically agnostic. The relevance of MMT for policy making is that we shift from an obsession with ‘how to pay for it’ to a focus on what the policy will achieve and whether it is the best use of available resources.

4. Understanding the constraints on government spending

When MMT economists note that a currency-issuing government faces no financial constraints on its spending they are merely emphasising the fact that the government

can buy whatever is for sale in its own currency whenever it chooses. This insight then leads to questions about what the constraints on such spending are.

To help answer this question, consider Figure 1, which is a 2x2 matrix with two broad dimensions: (a) Is the nation operating at full capacity? and (b) Does the nation enjoy monetary sovereignty. Figure 1 depicts 4 possibilities and allows us to summarise the different constraints that a government faces when designing fiscal policy interventions.

A monetarily sovereign nation issues its own currency, floats it on foreign exchange markets, does not borrow in foreign currency and sets its own interest rate. For example, the US, Australia, Japan, the UK, and many other nations fit into this category. Conversely, the 20 Member States that use the euro are not sovereign because they do not issue the currency they use. Further, if a nation is operating at full capacity, then all the available productive resources are currently being utilised and could only be reallocated through the market mechanism through increased price bids.

Figure 1 Government spending constraints

		Is the nation operating at full capacity?	
		Yes	No
Does the nation enjoy monetary sovereignty	Yes	1. Real	2. None
	No	3. Real and financial	4. Financial

In Case 1 (Yes-Yes), a monetarily sovereign government overseeing a fully employed economy faces no financial constraints on its spending. But should it desire to increase its use of the nation’s productive resources, say to introduce a large infrastructure program, then it would have to compete with the non-government sector at market prices for resources that are currently in use elsewhere. In that situation, demand-pull inflationary pressures will arise. In other words, government spending comes up against a **real resource constraint**.

To avoid inflationary pressures, the government would have to ‘free up’ some productive resources for transfer into the public sector. Taxation is one policy option because it reduces non-government purchasing power and creates the real resource space which the government can spend into without creating inflation. However, unlike the popular perception, the taxes do not provide any extra financial capacity to government.

In Case 2 (Yes-No), the idle productive resources can be brought back into productive use with higher fiscal deficits. There are no constraints – financial or resource – on such government spending. These resources have zero bid in the market and deploying them introduces no inflationary pressures. The responsibility of government in this case is to spend up to full employment. Once the economy reaches full employment the situation switches back to Case 1.

Case 3 (No-Yes) might define a Eurozone Member State operating at full employment. Such a government faces two spending constraints – financial and real. Without

monetary sovereignty, the government must raise tax revenue before it can spend, and, if that is insufficient to cover its spending ambitions then it must borrow funds from the private bond markets under conditions set by the investors. It also faces the same real resource constraints as in Case 1.

Finally, Case 4 (No-No) is the dreaded case for a Eurozone nation enduring mass unemployment and declining tax revenue. While there are no real resource constraints in this situation, the financial constraints persist. As the automatic stabilisers increase the fiscal deficit (lower activity reduces tax revenue and increases welfare spending automatically), the nation must increasingly access funds from private investors. Given the credit risk attached to such debt, the bond markets will require higher yields on newly issued debt as the governments capacity to raise taxes to repay the outstanding debt obligations becomes impaired when there is high unemployment.

So even though there is mass unemployment and chaos, the bond markets might refuse to fund such a government at sustainable yields because of fear of debt default. This is the situation that occurred in 2010 and 2012 in the Eurozone crisis as yields skyrocketed on the debt of various nations (for example, Italy and Greece). It was only the intervention of the ECB (as the currency issuer) that saved many nations from insolvency as bond markets pushed up yields.

5. How the experience of Japan shapes our thinking about MMT

The experience of Japan since the 1990s demonstrates why mainstream macroeconomics is a degenerative paradigm in the Lakatosian sense. In the 1980s, Japan embraced the neoliberal excesses of the time – a massive increase in private debt, speculative asset bubbles and more. The commercial property collapse that followed in 1991 required a substantial response from the government, which pushed fiscal and monetary policy to the extreme of conventional limits – continuously high deficits, high public debt, large-scale government bond purchases by the Bank of Japan, and a zero-rate monetary policy. Table 1 compares the predictions that mainstream economists made in relation to these policy shifts and the reality that followed. None of the predictions made by these economists came to pass.

The reason these predictions failed was that the ‘textbook’ models underpinning them ignored the reality that a currency-issuing government can always meet any liabilities in its own currency and never faces insolvency. Further, they failed to understand that the Bank of Japan can maintain yields and interest rates at very low levels, indefinitely. A similar story played out during the GFC. Bond markets can never overpower the financial capacity of the treasury and the central bank. Bond investors only determine yields if governments allow them to.

Undeterred, mainstream economists continue to promote their ‘fictional’ world, keeping citizens in the dark about the true capacity of government and the consequences of using that capacity to sustain full employment. They say fiscal deficits must be repaid, requiring onerous future tax burdens on our children. They claim government borrowing (to “fund” deficits) competes with the private sector for scarce available funds, driving up interest rates and ‘crowding out’ (reducing) private investment. They conclude that public use of scarce resources is wasteful because governments are not subject to market discipline. Finally, they assert that if government ‘print money’ inflation accelerates. Taken together, the mainstream litany supports a bias towards fiscal austerity.

Table 1 Japanese economic reality

Macroeconomic outcome	Mainstream Prediction	Reality
Consistently large fiscal deficits often above 10% of GDP since 1991.	Rising interest rates and bond yields.	Short-term interest rates around zero since 1991. Bond yields consistently low negative out to 10 years. Low unemployment despite exposure to many crises.
Gross public debt to GDP at around 250% - largest in world.	Bond markets demanding higher yields to cover increasing risk, leading to an unwillingness to make loans to government and eventual insolvency	Yields across all maturities consistently managed by Bank of Japan and kept close to zero in the 10-year bond case. Private bids in auctions consistently multiples of actual offer. Huge demand for JGBs. Short selling regularly incurs losses for speculators.
Bank of Japan has expanded its purchase of JGBs in secondary markets. Has been 'funding' fiscal deficits since around 2012. Bank of Japan now owns 45% of all Japanese government bonds.	Accelerating inflation from 'money printing'. Loss of credibility of central bank.	Fighting deflation (falling prices) since 1991. Mostly zero or very low inflation. Bank of Japan maintains total control of interest rates and yields to suit its policy purposes.

These claims are ingrained in public debate by decades of miseducation and daily onslaughts from the conservative media. MMT provides a framework for understanding why these predictions failed and why the mainstream assertions are inapplicable to understanding the way fiat monetary systems function.

6. How does MMT help us understand the real-world economy

The definitive MMT textbook *Macroeconomics* (Mitchell *et al.*, 2019) clearly shows how MMT differs from the mainstream.

MMT rejects the household budget analogy that mainstream economists use as a metaphor for understanding fiscal policy choices. While the household analogy resonates strongly with voters because it attempts to relate the more amorphous finances of a government with our daily household finances, it is wrong at the most elemental level.

We intuitively understand that we cannot indefinitely live beyond our means and neoliberals promote the analogy because they know we will judge government deficits as reckless. But a currency-issuing government is not a big household. It can consistently spend more than its revenue because it creates the currency.

Further, mainstream economists claim that governments must fund its spending via taxation, bond issuance, or ‘money printing’, which all have negative consequences (taxes distort behaviour, bonds drive up interest rates, and money finance is inflationary). As a result, fiscal deficits are largely eschewed.

MMT rejects this analysis. First, government spending is facilitated by central banks typing in numbers to bank accounts. New currency is spent into existence. There is no spending ‘out’ of taxes or out of bond sales. All the elaborate accounting structures and institutional processes, which make it look as though tax revenue and/or debt sales fund spending, are voluntary smokescreens. They are designed to impose political discipline on government spending.

In March 2009, the US program 60 Minutes asked Federal Reserve Chairman Ben Bernanke: ‘Is that tax money that the Fed is spending?’ He replied: ‘It’s not tax money. The banks have accounts with the Fed ... we simply use the computer to mark up the size of the account’. The same applies for all government spending.

Second, in Section 4 we analysed the spending constraints facing a currency-issuing government. We learned that if nominal spending growth outstrips the capacity of firms to respond by producing goods and services for sale then there will be inflationary pressures. Won’t continuous deficits be inflationary? The basic rule of macroeconomics is that spending equals income equals output. If the non-government sector desires to save overall (that is, not spend all its income) then output will fall unless that desire is funded by government deficits. As long as government deficits are scaled to fill the non-government spending gap then they are both desirable and sustainable.

Third, mainstream economists claim that if central banks just credit bank accounts on behalf of governments (erroneously called ‘money printing’) without bond issuance, then accelerating inflation will result. MMT notes that all government and non-government spending carries an inflation risk. If nominal spending growth outstrips the productive capacity of the economy, then inflationary pressures will emerge, irrespective of the source of that spending.

But the mainstream narrative argues that this risk is lower with bond issuance because, allegedly, rising interest rates ‘crowd out’ private spending. But these conclusions are not ground in the foundations of a fiat monetary system nor banking reality.

The crowding out story is based on Classical loanable funds doctrine, which claims that competition for a finite pool of ‘savings’ from government bond sales drives up interest rates and damages interest-sensitive non-government spending. John Maynard Keynes

exposed the fictions of this story in the 1930s by showing that saving is a function of income and rises with net government spending.

Further, mainstream banking theory claims that bank lending is constrained by deposits (reserves). But in modern banking, loans create deposits. Banks will extend credit to any credit worthy customers knowing they can always get reserves from the central bank to satisfy payment system demands should they fail to get the reserves from other sources. Banks do not loan out reserves. There is no scarcity of 'savings', squeezed by government debt auctions.

MMT also elucidates us about the dynamics that follow the issuance of government debt. Fiscal deficits generate excess reserves in the banking system, which influences the way the central bank manages monetary policy. The central bank has only two choices if its desires to maintain a positive policy target interest rate: (a) it can offer a return on excess reserves, or (b) it can drain the excess via open market operations. Otherwise, it loses control of its policy target as banks try to rid their excess reserves in the interbank market which drives the short-term rate down to zero. So, without an open market operation or the functionally equivalent interest support, the interest rate is biased downwards when there are fiscal deficits.

When the government issues bonds to match the deficit, the central bank marks down reserve accounts and marks up a 'treasury debt' account. There is no reduction in bank deposits created by the fiscal deficits. The bond sales do not alter the net worth in the non-government sector. Only the asset portfolio composition held in the non-government sector changes.

If we understand that, then we more clearly see that bond issuance does not alter the inflation risk inherent in government spending. Funds used to purchase the bonds are not currently being spent on goods and services. Thus, bond sales do not ordinarily reduce non-government spending. And the funds to purchase the debt came from past deficits that had not yet been taxed away by government and were left in the non-government sector as accumulated net financial assets.

History supports the MMT depiction. Over the last three decades, central banks have significantly expanded their balance sheets through the purchase of government bonds as a strategy to prevent deflation. The strategy was driven by recourse to the erroneous mainstream notion that injecting reserves would increase the money supply and trigger inflation – too much money chasing too few goods! The strategy failed.

While these bond-buying programs have effectively been funding fiscal deficits, there were no inflationary consequences because spending was not pushed beyond the real resource constraints that MMT places at the centre of its analysis of the constraints on government spending. Only MMT economists articulated the causation correctly.

MMT stresses that the size of the fiscal deficit *per se* should never be the focus. Mainstream economists obsess over financial ratios (public debt to GDP, etc.). But a responsible government will allow deficits to be whatever is required to maintain overall spending at the level consistent with full employment. No more, no less. Fiscal sustainability is about fulfilling the government's responsibility to maintain an inclusive society in which everyone who wants to work can.

7. But what about the current inflationary pressures?

Mainstream commentators seized on the price pressures that have manifest as a result, initially of the Covid-19 pandemic, and then exacerbated by the Russian invasion of the

Ukraine and the oil price gouging by the Organization of the Petroleum Exporting Countries (OPEC) as evidence that MMT is deeply flawed.

They argue that the fiscal support provided by governments during the early stages of the pandemic created strong aggregate spending pressures which resulted in a demand-pull inflation.

The problem with this narrative is that the major pressures driving this transitory inflation experience have been on the supply-side. In the early months of the pandemic, governments introduced many income-support schemes while also imposing restrictions on businesses (for example, preventing large gatherings at some retail and hospitality locations). More extreme lockdowns were imposed in some nations. The upshot was that the service sector contracted while the supply of goods faltered. The problem was that the demand for goods remained high because of the on-going income support and the reduced opportunities for households to spend. This temporary imbalance was always going to generate inflationary pressures, which would ease once factories resumed production and the service sector was reopened for business.

The mainstream approach to this problem has been for central banks to increase interest rates in the hope of choking off what was considered to be a spending excess. Only the Bank of Japan has eschewed this policy path.

However, the mainstream response was misguided because the main inflationary drivers have not been interest rate sensitive and have been abating on their own accord. What the central banks have done is produce a major redistribution of national income from low-income mortgage holders to those who hold financial wealth.

The other aspect of the central bank policy shift towards higher interest rates is that there is strong evidence that it has fuelled inflationary pressures itself. All businesses with overdrafts or other debt have experienced cost pressures as a result of increased borrowing costs and those with market power have passed those cost rises on as higher prices. There has also been evidence that corporations are using the cover of the inflationary pressures to increase their profit margins – a practice that has been termed ‘profit gouging’.

Central bank interest rate hikes have also made the cost of providing rental accommodation more expensive for landlords and in tight housing markets (such as in Australia, for example), these costs have been passed on in the form of higher rents. In many nations, rents make up a significant component of the Consumer Price Index (CPI) and thus the interest rate rises have, themselves added to CPI pressure.

While central banks have attempted to justify their policy decisions by appealing to the fear of increasing wages, which was a phenomenon that drove inflation in the 1970s after the OPEC oil price shocks, the evidence has been contrary. This inflationary episode bears very little similarity to what happened in the 1970s.

In summary, the current inflationary episode does not negate the insights of MMT, which always emphasises the inflation risk of excessive spending.

8. Conclusion

This paper has provided a brief introduction to some of the basic concepts of MMT and demonstrated how it departs from mainstream macroeconomics.

References

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