A simple MMT advocate's response to 'What you need to know about modern monetary theory' by Gavyn Davies (published in FT on April 28, 2019).

By Phil Armstrong¹, May 2, 2019.

'Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof'. (J.K.Galbraith)²

Gavyn Davies is in this majority, for sure. He introduces the article in a manner which is obviously antagonistic towards MMT. We are left in no doubt of the thrust of the article; the die is cast early. 'MMT has several different strands, some of which are inconsistent with each other³ and with established conclusions from more conventional schools of macroeconomics...It is often described as a questionable extension, made by fringe economists, of a doctrine that may be partially true, but only in extreme circumstances. I tend to agree with that'.

Having said that, it seems to me (given the increased volume of articles appearing in MSM and the financial press) change is in the air. Originally, mainstream thinkers ignored MMT, then second, they attempted to trivialize it by including such throwaway lines as, "It's obvious," or, "There's no magic money tree," or, "It's the easy way to hyperinflation, Zimbabwe-style" in their – usually hastily put together - comments.

Now it appears that we are in a new third phase - as exemplified by this patronising and wholly inadequate 'summary'. The increasing profile of MMT, enhanced by, for example, the support of rising US Democrat Alexandria Ocasio-Cortez has, to an extent, forced the hand of mainstreamers. Their new attitude might be summed up with the following aphorism: 'Well, there might be *something* in it, it's worth a brief look but really there's nothing of substantial value or interest about MMT to threaten the hegemony of mainstream economics'. From this perspective, a patronising summary followed a dismissive conclusion is all that is required. Mainstreamers hope and expect to go back to phase one normality, ignoring it, very soon. This misplaced complacency might well be considered as similar to a group of geocentric astronomers acknowledging some interest- even trivial merit - in heliocentric models but then dismissing them in a cursory fashion. We can only hope that mainstream economics ends up in the same place as geocentric astronomy...

In the second paragraph of the article, the use of quotation marks around "explain" is telling. By this the author surely implies that the explanations of economic phenomena provided by MMT, although perhaps of *superficial* value, don't stand up to serious scrutiny. The author's message pushes the point that it is mainstream economics that provides the *rigorous* explanations of macroeconomic phenomena. However, I would argue such a contention is well wide of the mark and, in fact the nature of mainstream economics and its practice has led to its being incapable of

¹ University of Southampton Solent and York College, UK.

² A Contemporary Guide to Economics, Peace, and Laughter (1971), 50

³ Davies does not elaborate on these alleged 'inconsistencies.'

providing meaningful knowledge and to its explanatory power being wholly inadequate. This is a point made by Willem Buiter (ironically, an author quoted in the article).

'Most mainstream macroeconomic theoretical innovations since the 1970s (the New Classical rational expectations revolution associated with such names as Robert E. Lucas Jr., Edward Prescott, Thomas Sargent, Robert Barro etc, and the New Keynesian theorizing of Michael Woodford and many others) have turned out to be self-referential, inward-looking distractions at best. Research tended to be motivated by the internal logic, intellectual sunk capital and aesthetic puzzles of established research programmes rather than by a powerful desire to understand how the economy works - let alone how the economy works during times of stress and financial instability. So the economics profession was caught unprepared when the crisis struck'. (Buiter 2009)

This point is reinforces an argument made earlier by Tony Lawson. Lawson is damning in his assessment of the 'achievements' (two can play at that game) –to say the least- that have resulted from the work of the mainstream economics profession;

'in the end it cannot be denied that, for the last fifty years or so especially, it is difficult to identify any obvious successes (explanatorily powerful, revelatory, hypotheses) of mainstream academic economics, let alone find results that can be held up to the achievements of the sciences of nature'. (Lawson 1997: 225)

Davies then follows the phase 3, 'there-might-be-something-in-it', narrative by acknowledging that MMT advocates are correct when they contend that countries face no default risk on debt denominated in their own currency and makes a link to Keynes and Lerner which might be taken as acceptance of the existence of *some* validity in MMT. However, true to the new phase, Davies then returns to criticism- and with renewed zest. However, his lack of understanding of the operational reality of the monetary system betrays him. He makes error after error both in terms of his analysis and his understanding of MMT. To understand the nature of the mistakes and their origins is not straightforward, however a good starting point would be look at the concept of the government budget constraint (GBC). The logic of the GBC conceptualises the government as a currency-user, which might finance its deficit spending by borrowing (debt issuance) and 'printing money'. According to mainstream thinking, each of these methods carries problems; 'excessive' borrowing leads to higher long term interest rates, in turn, generating 'crowding out' effects. Higher interest rates will lead to lower private sector investment and, should the state turn to 'money printing' to finance a deficit, then the inevitable result is inflation. An acceptance of the GBC underpins Davies's point 'I suggested to a very senior G7 government official that it was possible to cover a burgeoning budget deficit by printing money, thus avoiding any immediate upward pressure on government bond yields.' Davies clearly believes money printing and bond issuance to be *alternative* forms of financing a deficit and that money printing might be considered to be beneficial insofar as it reduces the need to sell bonds, in turn, contributing to lower long term interest rates. However, this approach can easily be shown to be erroneous.

Advocates of MMT correctly conceptualise the state as a currency-issuer. The power vested in the government allows it to place members of its community in its debt, in other words, to levy a tax

upon them. The state decides upon the unit of account ⁴ (for example, dollar, pound or peso). It then specifies the acceptable means of settling a tax liability, denominated in the unit of account. The government therefore has the power to decide both the level of the tax liability and the means required to satisfy it. Once it is realised that only state money is acceptable in payment of taxes an explicit recognition that the state must issue money before it can collect it follows. Spending (or lending) precedes taxation (or borrowing); the currency is a public monopoly. Only money that has already been issued by the state can be collected in taxes. When the government spends it does so by crediting the bank accounts of its target recipients, simultaneously increasing the target's bank's reserve account by the same amount. When taxes are paid by a private sector agent her deposit balance falls and her bank's reserve account balance at the central bank (CB) is correspondingly marked down. It is important to stress that private sector debt or bank money is not the final means of settling the tax bill. It may, at first glance, appear as though it is. However, on further reflection this view can be seen as illusion. If a private sector individual or institution pays taxes by means of a cheque its bank deposit falls by the amount of the payment but the settlement of the tax liability occurs when the taxpayer's bank's reserve account at the central bank is debited by the same amount. It is the transfer of bank reserves from the taxpayer's bank's reserve account to the Treasury account that settles the tax bill. To quote Mosler⁵, 'you can't have a reserve drain before a reserve add.' To reiterate; as matter of accounting logic it is the case that the Treasury or central bank must have spent or lent the money before the private sector can pay its taxes.

Some economists have attempted to trivialise the distinction by arguing that money is constantly being spent into existence by currency-issuing states and taxed out again thus the logical and temporal priority of government spending (or lending) over taxation (and borrowing) is a trivial one . However, such an argument is easily dismissed given the reality that the state always spends by data entry irrespective of prior tax revenues, whereas an absence of previous state spending or lending make paying taxes impossible.

We can now see that the GBC should not be considered as an *ex ante* budget constraint but rather as an *ex post* accounting record. Government spending not matched by taxes would leave excess reserves in the banking system which (if no action was taken by the CB) would result in the overnight rate in the market for reserves (fed funds in the US) falling to zero. The sale of bonds is *not a funding operation*, rather it is an interest rate management operation. The CB sells bonds or engages in repo transaction in order to manage the overnight rate at the policy rate⁶.

In this situation the state (in the form of its CB) acts as a price-setter and can always determine the interest rate for risk-free loans of any duration. In other words the whole spectrum of interest rates is always under the control of the CB. In the current situation in the UK and US, for example, the

⁴ Advocates of MMT reject orthodox origin of money stories based on the contention that money developed as a cost-saving alternative to barter (notably Menger, 1892), Instead they accept state (Knapp, 1924) and credit theories (Innes, 1913:1914). They argue that the state determines the unit of account (Knapp, 1924), rather than it springing up spontaneously- and the state also decides upon the means by which these debts might be settled. Such means are denominated in the unit of account (Keynes, 1930; Wray, 1998)

⁵ I consider Warren Mosler to be the founder of MMT. Although clear antecedents can be shown to exist, I believe MMT is best considered as following from Mosler's original thought.

⁶ For a detailed analysis of the way a CB determines the overnight rate see Mosler and Armstrong (2019)

CB sets the overnight rate and allows 'market forces' to determine the long-term rate structure. However, the state, via its CB, could directly set the entire term structure of risk-free rates, (the Bank of Japan is now doing this for its 10 year bonds, for example). This could be achieved if the CB stands by to purchase unlimited quantities of government debt at a price consistent with its interest rate target.

The rapidly increasing government deficits as a percentage of GDP that occurred in the immediate aftermath of the GFC provided excellent data with which to evaluate the mainstream contention that higher deficits tend to lead to higher long term interest rates⁷. Six countries are considered by way of example. Data regarding government deficits (as a percentage of GDP) and long-term interest rates in the period immediately preceding and following the GFC are shown in the in table 1, below. It is evident, in general, based on this data, that when nations issue their own sovereign currency and operate under floating exchange rates, the expectation of mainstream economists that expanding government deficits as a percentage of GDP tend to cause increased long term interest rates on government debt *is not borne out*. For the nations shown there is no clear relationship between deficits as a percentage of GDP and long term interest rates and, if anything, the general trend of rising deficits is accompanied by falling rather than rising long term interest rates.

Table 1 (countries with their own sovereign currency).

a. Government net lending/net borrowing as a percentage of GDP, surplus (+) or deficit (-) for selected nations, 2006-11(OECD data)

b. Long-term interest rates (secondary market yields of long term -usually 10 year- bonds, annu	al
percentage) for selected nations, 2006-11 (OECD data)	

Country	2006	2007	2008	2009	2010	2011
Australia; govt. deficit	2.1	2.1	0.5	-4.1	-4.8	-3.3
Australia; interest rate I. t.	5.59	5.99	5.82	5.04	5.37	4.88
Canada; govt. deficit	1.6	1.4	-0.4	-4.9	-5.6	-5.0
Canada; interest rate I. t.	4.21	4.27	3.61	3.23	3.24	2.78
Japan; govt. deficit	-1.6	-2.4	-2.2	-8.7	-7.8	-8.9
Japan; interest rate l.t.	1.74	1.67	1.47	1.33	1.15	1.10
United Kingdom; govt. deficit	-2.7	-2.8	-5.0	-11.0	-10.4	-9.4
United Kingdom; interest rate I.t.	4.50	5.01	4.59	3.65	3.62	3.14
United States; govt. deficit	-2.2	-2.9	-6.6	-11.6	-10.7	-10.0
United States; interest rate I.t.	4.79	4.63	3.67	3.26	3.21	2.79

We might now consider the government deficit (as a percentage of GDP) and long term interest rate data for Eurozone member nations in Table 2 (Eurozone nations):

⁷ For a full discussion of the data see also Armstrong (2018)

Country	2006	2007	2008	2009	2010	2011
France ; govt. deficit	-2.34	-2.54	-3.18	-7.16	-6.79	-5.10
France ; interest rate I. t.	3.80	4.30	3.98	3.22	2.74	2.61
Germany ; govt. deficit	-1.72	0.19	-0.18	-3.32	-4.22	-0.96
Germany ; interest rate I. t.	3.76	4.22	3.98	3.22	2.74	2.61
Greece; govt. deficit	-5.95	-6.71	-10.18	-15.14	-11.20	-10.28
Greece; interest rate l.t.	4.07	4.50	4.80	5.17	9.07	15.75
Ireland; govt. deficit	2.81	0.27	-6.98	-13.78	-32.03	-12.73
Ireland; interest rate l.t.	3.79	4.33	4.55	5.23	5.99	9.58
Italy; govt. deficit	-3.59	-1.53	-2.69	-5.27	-4.25	-3.71
Italy; interest rate I.t.	4.05	4.49	4.68	4.31	4.04	5.42
Netherlands; govt. deficit	0.21	0.21	0.22	-5.43	-4.99	4.29
Netherlands; interest rate l.t.	3.78	4.29	4.23	3.69	2.99	2.99
Portugal; govt. deficit	-4.33	-3.01	-3.77	-9.81	-11.71	-7.38
Portugal; interest rate I.t.	3.91	4.42	4.52	4.21	5.40	10.24
Spain; govt. deficit	2.20	1.92	-4.42	-10.96	-9.38	-9.61
Spain; interest rate I.t.	3.78	4.31	4.36	3.97	4.25	5.44
1	1	1	1	1	1	1

To a limited extent these data *do provide support the general expectation of mainstream economists; that higher government deficits lead to higher long term interest rates.*. However, this outcome is by no means universal. For France, Germany, Italy and the Netherlands there was no apparent significant relationship between deficit size as a percentage of GDP and long term interest rates; in fact if simple correlation coefficients are calculated for these four countries from 2006-11 the result is negative, i.e. an inverse relationship exists between higher deficits and long term interest rates⁸.

However, for Greece, Ireland, Portugal and Spain, higher deficits seem to be accompanied by higher long term interest rates⁹. Thus, there appears to be a relatively complex 'contrast' which has become manifest; one which may constitute a 'surprise', for mainstream economists at least. First, the expected relationship between elevated deficits and higher long term interest has been notably absent in countries with their own currencies operating under floating exchange rates, and second, even within the Eurozone, the relationship is apparent only in some cases. However from the point of view of the advocates of MMT, this *apparent* contrast is explained by their understanding of the different nature of the real underlying mechanisms at work in the monetary systems for Eurozone member states and those with their own sovereign currency operating under floating exchange rates¹⁰.

In his article, Davies fails to acknowledge the differing operational realities which exist under fixed and floating exchange rates. Looking back, we can see that under the Gold Standard both the government and the banking system were 'reserve constrained.' In turn, interest rates were inherently market-determined, as borrowers competed for a finite quantity of convertible currency and government interest rate policy, as a first priority, would have to be designed to protect gold reserves rather than as a means to pursue other public purpose. The same logic applied under the Bretton Woods system of fixed exchange rates. If conversion of the domestic to a foreign currency at a fixed rate was guaranteed, interest rates would need to be set at a level to deter conversion and protect the level of reserves. Deficit spending might lead to a potential drain of reserves and therefore higher interest rates were required as a protective response. The Treasury was effectively acting in competition with other borrowers and with the option to convert at a fixed rate. Although he is clearly blissfully unware of the reality of the situation, Davies's analysis only has any applicability under fixed exchange rates. From an MMT perspective, under a floating exchange rate, the state always has the power to choose the interest rate it pays when it wishes to borrow, regardless of the duration of the loan. Since the central bank is the monopoly supplier of net balances to the domestic monetary system (more colloquially, 'on its spread sheet') it necessarily has the option to act as a 'price setter'.

Returning to the data, it is clear that an understanding of MMT removes the supposed element of 'surprise' and its advocates are naturally inclined to posit the structures and mechanisms which explain this contrast. However, attempts to do the same have been notably absent in the case of the mainstream. Faced with trying to explain the fact that, say, Japan has very low interest rates on

⁸ Correlation coefficients for 2006-11 data for government deficits (as a percentage of GDP) and long term interest rates were as follows; France -0.74, Germany -0.65, Italy -0.2, Netherlands -0.8 (OECD data)

⁹ Correlation coefficients for 2006-11 data for government deficits (as a percentage of GDP) and long term interest rates were as follows; Greece 0.2, Ireland 0.44, Portugal 0.2, Spain 0.4 (OECD data)

government debt despite its relatively high debt to GDP ratio compared to say, Greece, which has a much lower ratio, they rely on an *ad hoc* explanation *par excellence* – that the assumed higher net savings desires of the Japanese domestic private sector and their supposed willingness to lend at lower interest rates than overseas investors provides the explanation. However, mainstream economists are also keen to suggest that this situation may end 'soon'- without specifying when. They continue with the same contention that, *ceteris paribus*, a positive causal relationship exists between heightened government deficits as a percentage of GDP and increased long term interest rates on government debt, using the cases of Eurozone countries (where nations are must act a currency users in the manner of US states and perceived heightened default risk would be expected to raise bond yields, for example Greece and Portugal) to support their contention but either ignoring data or producing *ad hoc* modifications (such as that used to 'explain' the apparent 'anomaly' of Japan) when faced with the mass of contradictory data from currency-issuing nations outside the Eurozone. MMT surely provides a more satisfying explanation, based on their understanding of the contrasting mechanisms that apply in euro-using nations and those with their own sovereign, non-convertible currencies under floating exchange rates.

Davies then merely misrepresents MMT –deliberately or otherwise- 'Even MMT enthusiasts (mostly) accept that an inflation constraint can limit this "exorbitant privilege" to print money.... The essential conclusion is that MMT's central tenet applies only when the economy is stuck in a deep recession, with interest rates at the effective lower bound of zero.'

The word 'mostly' should be removed (I have never met an MMT advocate who has said that spending beyond full capacity which generates inflation from excess demand is a good idea). *All MMT advocates recognise that constraints exist.* Any suggestion they don't is misrepresentation-pure and simple. From an MMT perspective, our core or operational reality is clear. Where the state issues its own non-convertible currency under floating exchange rates there is never an 'affordability' question in a monetary sense for the government. It never 'has' or 'doesn't have' money. It issues money *ex-nihilo* and can purchase anything available within its own sovereign monetary space. In such a situation the limits of production and consumption of goods and services are *real* not monetary. The quantity and quality of factors of production determine what can be produced and consumed domestically. The state must ensure the economy performs so as to ensure that the nation lives up to its means.

Davies's analysis then goes on by taking a leaf out Krugman's book with the idea that when monetary policy is supposedly ineffective at lower interest rates then, apparently, MMT-informed policies may be valid but in other circumstances- such as the current US situation - they should be avoided. Such reasoning abounds with errors. Firstly, it assumes the existence of some form of liquidity trap¹¹; in this case the CB will be unable to drive the interest rate any lower, monetary policy becomes ineffective, opening a window of opportunity for fiscal expansion without the usual inflation concern. However, under floating exchange the liquidity trap hypothesis (whichever variant of it is chosen) has no traction; as a price-setter the CB can always set the overnight rate at whatever rate it chooses. Of greater significance is MMT's denial of the whole idea that monetary policy is ever effective in the way mainstream theory suggests¹². Central bankers believe raising rates works to reduce inflationary pressures by reducing aggregate demand, and lowering rates

¹¹ For a good summary of the differing approaches to the liquidity trap concept see Kregel (2000)

¹² See Mosler and Armstrong (2019)

works to support aggregate demand and increase inflationary pressures. The primary channel for this effect is private sector lending, where higher rates discourage lending and lower rates support lending. However, close examination of the evidence refutes this idea. In the private sector, casually stated, for every dollar borrowed, there is a dollar saved. Therefore a shift in rates moves income between borrowers and savers. CBs agree with this, and then further assume that the propensities to consume out of interest income differ between borrowers and savers, such that when rates rise, for example, borrowers cut back on their deficit spending to a greater than savers increase their spending. Likewise, as rates fall, they believe that borrowers increase their deficit spending more than savers cut back on their spending. And therefore, central bankers conclude, higher rates are contractionary and lower rates expansionary.

However, although the propensity estimates of the central bankers may well be accurate, given the state is a net payer of interest to the economy, higher rates are adding interest income to the economy and lower rates are removing interest income from the economy. With debt to GDP ratios often approximating 100% of GDP, the interest added or subtracted by this channel is likely to dwarf the effect of the differing propensities between private sector borrowers and savers. Lower rates may help borrowers to service loans and qualify for new loans, but lower net income works against new borrowers' income levels and the general ability to service loans in the economy.

Thus higher rates are in fact an expansionary force rather than the contractionary force assumed by central bankers. That is, global central bankers have it backwards- they are easing when they believe they are tightening, and tightening when they believe they are easing. And experiences of Japan, the eurozone, and the US do not contradict this hypothesis, where decades of 0 and near 0 rates have not triggered aggregate demand or inflation from private sector credit expansions, and, to the contrary seem to be supporting low inflation and low demand.

Third, Davies considers the possible results of MMT's ideas being 'put into practice' and rehearses some old neoliberal myths in the process. He notes, 'With long-term interest rates above the growth rate of the economy, debt would be unsustainable in the long run, unless the government eventually runs a surplus on its non interest budget.' Such a view is based on the flawed GBC concept. In reality, higher long term interest rates would merely increase the rate of growth of non-government sector net saving¹³. This would only be a problem if the additional net saving, combined 'inside saving'¹⁴ led to actual saving exceeding desired saving at the full employment level of income. Should this be case, contractionary fiscal policy could be used to reduce the pressure on demand.

He then states (without any unpinning reasoning), 'In addition, the exchange rate would probably collapse....' Of course it is true that, under a floating exchange rate, a run on the currency is always possible but is such a 'doomsday' forecast reasonable? I would argue not. Forex traders are not ideologues and it may well be that, if full employment policies were pursued, dealers may react by selling currency. However, once initial sales have reduced the value of the currency international competitiveness increases and, importantly - from an MMT perspective - full employment policies

¹³ As a matter of accounting the public sector deficit must be equal to the non-government sector surplus. Higher deficits associated with higher state interest payments would merely result in a greater level of non-government sector net saving.

¹⁴ Debt and credit on private sector financial balance sheets must sum to zero, in other words 'net inside saving' must equal zero.

have started to contribute to making the economy more productive be it seems much more likely that the resulting increased demand for the currency will drive the exchange rate up, not down.

However, I might play devil's advocate and assume that Davies is right and speculators may drive down the exchange rate, as happened with the euro a few years ago¹⁵. Immediately after Mario Draghi suggested the ECB would begin QE and introduce negative policy rates the euro quickly depreciated over 40% against the \$US. However, no direct policy response was deemed to be required as inflation remained low and 'competiveness' improved, in turn, leading to an expanded trade surplus; a stated policy goal. So while there are options for direct intervention such as capital controls – specifically exchange controls, in this case - I am not suggesting they will be needed for economic reasons. Indeed, although I do not consider capital controls to be necessarily required to stabilise the currency, I might argue that they should be employed for 'ethical' reasons. Speculative buying and selling of currency is a non-productive activity and, in my opinion, should be made illegal¹⁶. Evidence suggests that free capital mobility does not necessarily contribute positively to growth and stability (contrary to neoliberal dogma) and, in addition, arguments that capital controls are impractical can easily be dismissed (Siddiqui and Armstrong 2017).

In his conclusion, Davies again shows he has not understood the nature of MMT. MMT is not a policy prescription- you can't 'implement MMT'. MMT provides a lens, or means, to understand the operational reality of the monetary system. It provides a coherent and accurate description of how the monetary system works in the here and now. Such knowledge enriches the policy debate, for sure. The idea that MMT advocates are not concerned about inflation is a myth. Time and time again, MMT writers have outlined a counter-inflation strategy based upon an employed buffer stock of labour (or Job Guarantee) and explained why this is likely to be more successful in maintaining fill employment with price stability than traditional monetary policy¹⁷, To reiterate, the idea that MMT advocates are in favour of increasing net spending beyond the inflation barrier is entirely wrong and the suggestion is put forward by mainstreamers as a way to discredit MMT.

Finally, Davies notes at the end of his article, 'In summary, MMT is not a "get out of jail" card for populist politicians who want to ignore the established constraints of macroeconomics....' It is true that MMT is no panacea. It provides a description of how the monetary system works. It highlights policy opportunities but, crucially, also points to the constraints facing states; for countries with their own currencies these constraints are *real* not, as incorrectly suggested by Davies and his mainstream colleagues, *monetary*.

In the final analysis it has to be noted that criticising mainstream theory is always too easy; the only problem with shooting fish in a barrel is that you tend to feel sorry for the fish.

¹⁵ The euro fell from \$1.40 in 2014 to \$1.05 in 2015. Exchange rate movements of the Japanese yen provide another case in point; the value of the yen fell from under 80 to the US\$ in 2014, to over 120 in 2015 (a fall of more than 50%) without prompting particular concern.

¹⁶ Foreign currency exchange for trade in goods and services, accompanied by its legitimate forex hedging would, of course, still occur without hindrance.

¹⁷ See for example Mosler and Silipo (2017)

Acknowledgements.

The author would like to thank Warren Mosler for very helpful comments and Catherine Armstrong for assistance in structuring the response.

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