CARCHEDI AND ROBERTS VALUE RATE OF INFLATION IS REALLY A VOLUME RATE OF INFLATION.

A good presentation overall given at the recent Historical Materialism Conference. It clearly debunked money as the determinant of price and it dealt adequately with the shibboleth that wage rises cause price rises. I will not deal with the issue of wages in order to focus on the relation of money (M2) to prices.

Here is the first line of the fist slide. "*New value and money supply are the two factors: the first is determinant and second is determined."* This statement is clearly wrong. It starts by saying there are two factors with the second being determined by the first. This means there is only one factor - new value. We shall see this to be a weakness throughout the presentation because the authors have no modern theory of money following the displacement of gold as the universal money material.

The second slide is basically correct. Commodities are cheapened when s + v falls faster than the rise in c. It is worth adding in, capitalists only cheapen production in order to boost profits, not as an end in itself. Why is this important? The importance lies in this, capitalists will not invest to cheapen production should the increase in profits fall short of the increase in investment. On the other hand, in the lower stage of communism, the direct and immediate goal is to cheapen production to benefit society.

The third slide needs qualifying. By net value added or national income which is proximate, the authors here mean the deflated net product not the nominal net product. This should be stated. (See the BEA for the association between all these incomes and products. *NIPA Table 1.17.5. Gross Domestic Product, Gross Domestic Income, and Other Major NIPA Aggregates*). The graph contained there is abstract and while it serves the authors' purpose it is at odds with the concrete world. Also the choice of periods is not precise. I cannot understand why 1979 is chosen rather that the late 1990s when inflation fell markedly. The primary reason why inflation subsided at this time was the new division of labour produced by globalisation centred on China. The volume of consumption at this time actually increases but the prices at which they are consumed, at least for goods production, fell. What is important as we shall see is that the ratios of 78% and 74% are in the same ballpark.

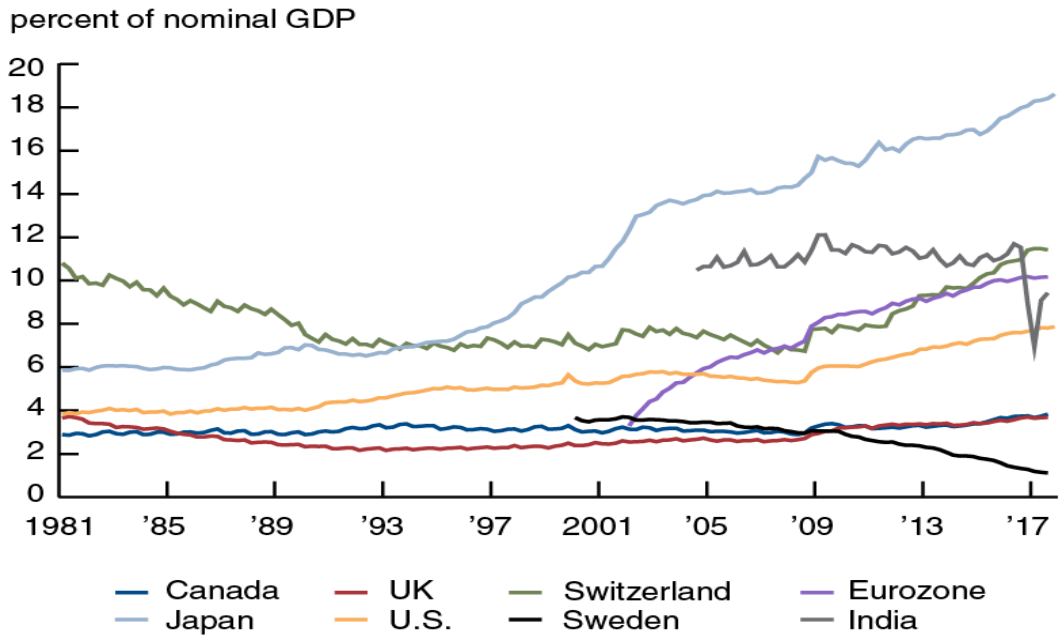
It is the following slide where things go off course. The first line of slide 4 reads: "*But money supply acts as a counteracting factor. Money is mainly the result of demand from money for transactions in commodity production. Banks provide money/credit for such and the central bank (where it exists) 'prints' money to meet this demand."* This is a school textbook version of the money supply and unworthy of the authors. Look at the graph below. Currency is only around 6% of GDP and in the case of the USA, of the $2.92 trillion issued, between 40 and 60% is held abroad especially $100 bills where nearly three-quarters are held abroad. Next let us look at the issue of temporary money or credit money (loans by banks). The Federal Reserve Table H-8 provides details of the net credit in existence, that is the difference between issuance and redemption which yields new credit. On average credit money grows between 5-6% of GDP annually. The government does not simply print money on demand. Instead the growth in permanent money is forged by fiscal deficits (and QE), where the government spends more than its takes in taxes, typically 3-4% of GDP. At this time I will ignore the balance of flows into and out of the speculative world.

So cumulatively, currency, new credit money and fiscal deficits (we will look at QE later) adds up to about 15% of GDP or **9%** of GDP when we remove actual currency as we move to a cashless society. Bear this 9% figure in mind. So where is the missing 90%. Well if we analyse the composition of M2 we find the bulk of it is represented by deposits. Sure some of these deposits will include new credit money but the vast majority of it will be unspent revenues, that is to say value produced previously then monetised through

exchange into revenues. It is important to bear in mind as well, that for Marx, production represented reproduction. As soon as we have experienced the present it has already become the past. We cannot experience the future only anticipate it. So it is with reproduction. As soon as value is converted into money at the point of exchange, its represents past labour, what I call legacy value. Or to put it more precisely, the buyer uses some of their unspent revenue to purchase a new product extinguishing this part of their revenue, while on the other side the seller converts value into revenue through the sale of their product. On the one side revenue has been extinguished while on the other side new revenue has been created. It does not even require a token to do this, as it can be done digitally removing any concerns about the nature of tokens. The US could bury its $2.92 trillion in currency and retrieve its $100 bills.

Thus while the authors speak of new value they do not include old value, or strictly speaking legacy value. For them value is pulsed rather than being reproduced. That is why they can talk of the quantity of money being purely determined by the changes to new value. This is wrong. And it is unfortunate because Michael at least is knowledgeable about my Modern Marxist Monetary Theory (MMMT) which for the first time introduces the concept of legacy value and is dealt with in detail on this website.

Graph 1. (Bank Notes in Circulation)



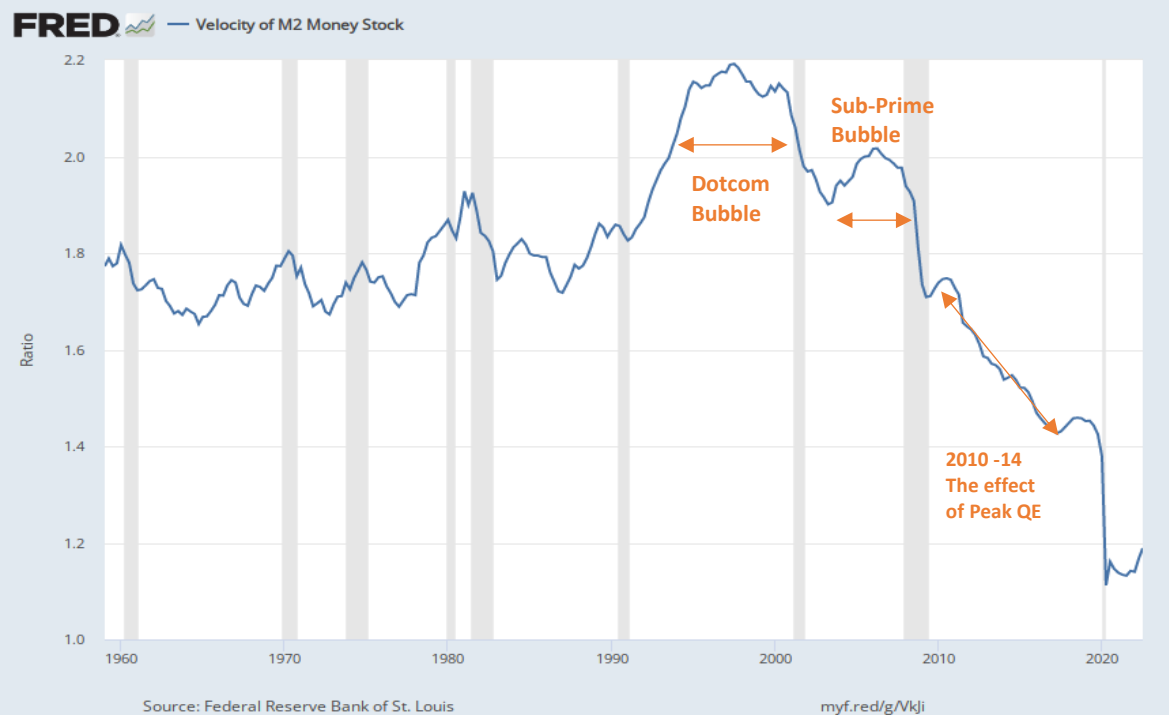
(Source: Chicago FED)

We find this sentence at the top of slide 5. "*In value theory, it is the opposite: money supply reacts to the production of value.*" This is as true as it is incomplete. The money supply strictly speaking reacts to investment, demand is set by investment mediating between the amount of value produced and the amount of money sucked in. This is clearly evident when viewing the industrial (business) cycle. During the down phases falling investment ensures not all the value is realised and prices therefore sit below values and vice versa in the up phases particularly the phase of overproduction. But let's put this aside. I am sure the authors intended a simplified version of money for their presentation.

In slide 6, with the graph we have a real problem. This slide is titled: *The reaction of money supply*. I have provided below the actual graph upon which the authors' graph is based because it is clearer. It is simply not the case that the rise in speculation slowed down the velocity of circulation. The velocity of circulation

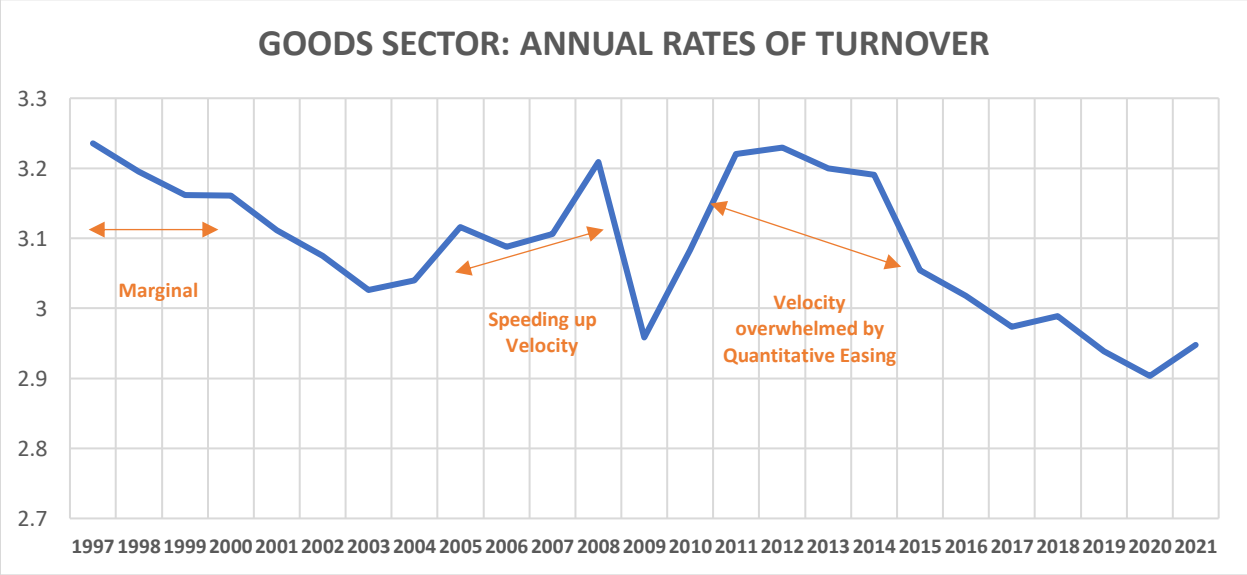
peaked in the run up to the biggest post war financial bubble at the time, the dotcom bubble. The velocity of circulation also rose in the run up to the financial crash in 2008 to a peak above that found in the 1980s.

Graph 2.



The velocity of circulation only plummeted after the Financial Crash. Why? The reason was not a slowdown in the rate of turnover, the primary determinant for velocity, but because of the introduction of Quantitative Easing. Between 2010 and 2014 QE (new money) was equivalent to 4% of GDP p.a..

Graph 3.



(Source: BEA Interactive Data, GDP-by-Industry, KLEMS using the formula GO/GVA +[GO – GVA]/GVA)

In slide 6 we find this definition. *In Marxist theory a decline in the velocity of money implies hoarding of cash or the switch of money out of transaction purchases for goods and services and into financial assets."* This is not incorrect, but for our purposes a better definition would be, the velocity of circulation is the velocity at which value is being consumed by workers and by capitalists (both productively and unproductively). The second definition stands out because it is synonymous with MMMT where the bulk of money, deposits, are based on unspent revenues, that is preserved legacy value. Thus the velocity of circulation in general is the rate at which revenues are spent and thus extinguished. The importance of this will be soon clear.

The final paragraph is wrong as I have shown above.

In slide 6 titled *The adjusted money supply,* the maths is wrong. 8.5% divided by 4.9% and 5.5% divided by 3.2% both yield around 1.72 or conversely .58. The fact that they are the same ratios is not inexplicable. As I have pointed out before, legacy value at around 90% of M2 is the ballast keeping prices upright. It is the way in which past value interacts with current value otherwise prices would not be restrained by value. (This is the correct view not the partial view provided by the authors namely that it is only new value that imposes itself on price. There is no such thing as a single sided equation.) In other words even if all the legacy value unspent was consumed faster it still could not raise prices by its faster circulation because the amount of legacy value itself has been fixed by previous exchanges. It is finite. The chain of value spanning reproduction does exist. What is not finite, but variable, is credit money and fiscal money.

The slide includes this observation: "*By deducting the change in the velocity ratio from the change in the money supply, we can obtain an effective or adjusted change in money supply."* Putting it simply what is being discussed is the active part of the money supply. The active part can increase if the total money supply increases while the velocity remains unchanged or the active part can increase if the total money supply is unchanged but the velocity increases. In other words we have a tautology. The total prices of production being circulated will draw in the active part of the money supply making them commensurate.

Let me offer a proof of this tautology using the author's own data. In slide 3 we are informed that between 1960 and 1979 new value growth averaged 3.8% falling to 2.4% between 1979 and 2019. In slide 7 we are informed that inflation grew by 4.9% in the first period falling to 3.2% in the second. Now mark, this rise in new value growth is really volume growth because the purpose of deflators is to reduce value to volume. I deal with this issue further down. So when the authors use **deflated or chained** Net Output data they are using **volume** data. Taking this into consideration, when we add new value growth (really volume growth) to price growth we end up with the adjusted supply of money as determined by the authors but using a different and simpler methodology. Here is the proof: 3.8 + 4.9 = 8.7% compared to their 8.5% and 2.4 + 3.4 = 5.6% compared to their 5.5% (the differences are statistically insignificant). So the active part of the money supply, the adjusted part, must be equal to the change in volume times the change in prices. Absolutely, but that proves nothing it is simply MV=PT or restated aM=PVo where Am stands for active money and Vo stands for Volumes which is not distinct from T but more accurate.

Let's tease this apart some more. Here we have three variables, volume, price changes and the active money supply. As all three are given we can determine each variable in turn by using the other two. So to obtain price rises we can subtract volume from the active money supply. To obtain volume we can subtract price rises from the active money supply. And as we have seen above, we can add volume to price to obtain the active money supply. Now we can understand why there is such a strong correlation (91)

between the variables. In fact the strong correlation merely confirms the tautologies, namely that deducting one from the other or adding up two variables confirms the third variable.

The authors have not so much combined the two sides of the equation as rearranged them which is interesting because it tracks prices instead of having a predictive quality. It is not a theory of money.

The authors were ill-advised to include the pandemic period. Here the VRI is fictitious mainly because a significant element of net output is fictitious. From April 2020 to March 2022 the US Government pumped $5.1 billion in Covid Funds into the economy and society. Much of these transfers bumped up Net Output because statistically it had to increase National Income otherwise the T accounts would not balance. Thus National Income at this time was not simply value based but value based and boosted by transfers. Theoretically stripped of these transfers - the fictitious element - GDP would have fallen much further than the official estimates indicated.

Now remember the net output used by the authors is a statistical construct obtained by national statisticians using deflators designed to reduce values to volumes. Deflators are notorious because they are based on modelling. To begin with, **real** net output is assumed to be less than **nominal** output because of the presence of inflation. In turn inflation speaks to the depreciation of money. However deflators do not appreciate money back to 1. That is because the statistical authorities necessarily underestimate deflators. Take this example. If the labour time per product is falling by 2% resulting in a volume increase of 2% while its price rises by 3%, the deflator should be 5% not 3% even if this 3% converts price into volume. Here the deflator used by statistical bureaus will be **3%** because its purpose is to reveal volumes whereas the depreciation of money in this case is **5%.** Thus volume changes and value changes are not synonymous. The point I am making is that the authors are trying to prove the unprovable.

The VRI is a tautology not a proof. Instead they would have been well advised to develop a theory of money. MMMT is that theory. Between 2020 and 2022 when the value of production fell because of lockdowns it resulted in a fall in legacy value while on the other side fiscal money soared by about 15% of GDP per annum (after adjusting GDP for transfers). This combination of falling legacy value and rising fiscal money reduced the share of unspent revenues (legacy value) from around 90% of M2 to 75%. It stripped money of its stabilising ballast. As much of this new fiscal money ended up in the hands of the bottom 80% of society who needed to spend it (unless they were speculating on Bitcoin) it had to fuel inflation.

What the Covid funds teaches us is to be cautious about being categorical about money always being sucked into circulation and not entering it of its own volition. That the arrow can only point in one direction. Money can be thrown into circulation under peculiar and specific conditions as found during the pandemic when it enters the pockets, not of the capitalist class who have no need to spend it, but into the pockets of workers who do not have the luxury of not spending it. The Keynesian string theory compares trying to push money into circulation with trying to push on the end of a piece of string. Both fail because the recipient is the capitalist not the worker, and the issue with capitalists during times of economic stagnation is not that they have too little money, but rather they have too much (idle) money.

This is why I have always insisted that for Modern Monetary Theory (mainstream theory) to be effective, it would be inflationary from the start because it would immediately increase the adjusted or active part of the money supply owing to the fact that in the hands of the bottom 80% it would be spent rather than being hoarded, how inflationary it will be depends on how quickly the unused capacities in the economy can be brought on line to increase supply which may require legislation to prevent profit gouging.

Conclusion.

The Value Rate of Inflation (VRI) is a misnomer. It should be called the Volume Rate of Inflation strictly speaking because volume and value are two different things. This renaming would not change its 91% affinity with the CPI. What is novel about their VRI is the use of a more circuitous route to determine it which they define as: "*The combination of both new value growth and adjusted money supply growth can be considered as the Value Rate of Inflation (VRI).*"

The strength of the presentation is its adherence to the observation that money is sucked into production by the volume and prices circulating therein powered by investment. In the end the real proof is this. If money drove prices it would be the case that the velocity of circulation of money divided by the turnover period would be 1. In Graph 3 we saw an average of about 3 turnovers per year or once every 4 months. Adjusting the velocity of money circulation calculated p.a. into per period turns an annual velocity of 1.2 currently into a velocity of 0.4 or well below 1. Consumption therefore lags production and yet prices are not falling, meaning that money itself does not determine prices.

I wrote previously to Michael Roberts expressing my dissatisfaction with VRI. I hope he will qualify it or at least debate the issue publicly.

Brian Green, 15th November 2022.