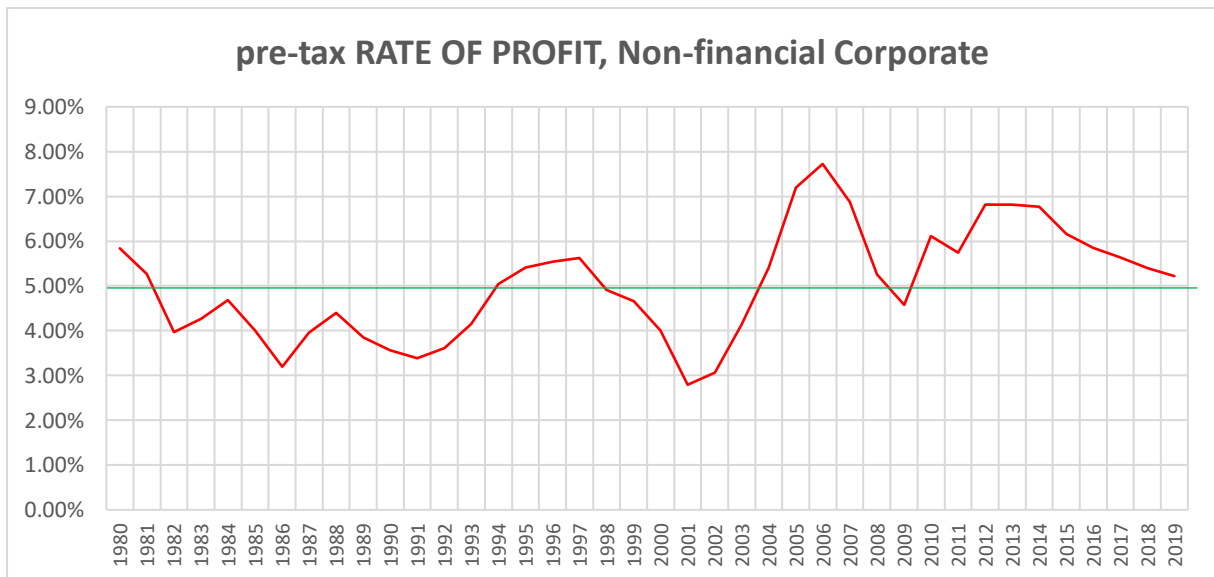


UPDATED ASSET TABLES, VERIFYING THE RATE OF PROFIT. Why fixed plus circulating capital provides the best estimate.

The BEA released its latest fixed asset tables (Table 4.1) on the 2nd September, shortly after my last posting. There is no need to revise the rate of profit previously provided. The BEA figure for 2019 non-financial corporate fixed assets came in at \$18001.3 versus my estimate of \$17993.2 a difference of .0005% or \$8 million.

Using the updated asset tables, the annual rate of profit from 1980 to 2019 is found in the Graph below. I have extended the average rate of profit to 1980 (I find the 1970s a troubled decade for US statistics). Over this 40-year period the rate of profit averaged 5.0% which appears as the horizontal green line. The rate of profit in 2019 was 23% below its previous peak and sits adjacent to the average for the period. It has thus given up most of the gains derived from globalisation, sinking towards the levels found in the early 1990s. In the 2020s, regardless of what lies ahead, the average rate of profit will be at best, no higher than that found in the 1980s.

Graph 1.



(Sources: NIPA Table 1.14 for profit and Table 4.1 for fixed assets)

There is only one operative measure for the rate of profit, one that influences the investment decision taken by capitalists, and therefore the trajectory of the economy, and that is the enterprise rate of profit, which is either based on pre-tax or post-tax profits divided by fixed and circulating capital. Some will argue that the net surplus (net output less workers' compensation) is the better metric. After all it represents undivided profits, that is profits before it is divided into rent, interest, tax and enterprise profit. I disagree.

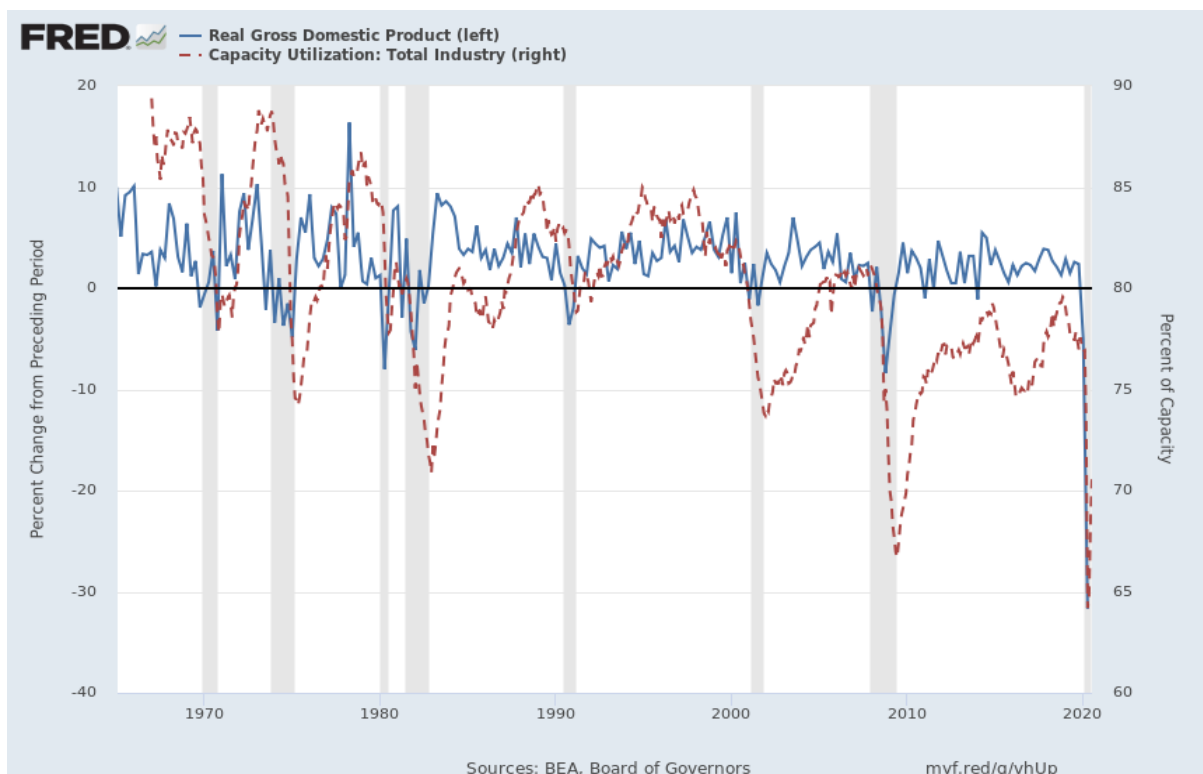
True the enterprise rate of profit can be heavily influenced by interest payments and its movement, but in the end, it is the resulting enterprise rate of profit which is the determining factor. Only the enterprise rate of profit when set against the cost of capital, can determine the return on any investment or not. On the other hand, what is best served by the net surplus figure, is the calculation of the rate of exploitation (net surplus/compensation) or better still, the rate of surplus value (net surplus*turnover/compensation). When contrasted to the rise in the composition of capital, the rate

of surplus value will indicate whether or not the underlying rate of profit should be falling or rising. (As I have shown previously, the rate of exploitation does not.)

Are capacity utilisation adjustments important? Anwar Shaikh is one of the foremost proponents of this metric, namely, that the rate of profit should be adjusted for capacity utilisation, the result of which provides a modified rate of profit. In Chapter 6 titled “Capital and Profit (section VIII pages 243 to 256) of his book *Capitalism, competition, conflict, crisis and competition*, there are a number of graphs which show various rates of profit based on adjustments including capacity utilisation. I see no merit in adjusting for capacity utilisation. It is a mere tautology. It is axiomatic that the rate of profit responds to capacity utilisation, tending to fall when utilisation falls and rising when utilisation rises.

But why should capacity fall, is the more important question? And the answer to this is the industrial cycle as Marx called it or as it is popularly known, the business cycle. And this cycle is driven by the oscillation in the rate of profit, the very rate Shaikh seeks to modify by taking into account, the business cycle. In the graph below the correlation between capacity utilisation and GDP is demonstrated. We see that falls in utilisation are associated with recessions and rises in utilisation with the growth in GDP. We could show exactly the same correlation between the inventory cycle and GDP growth or recession. Generally, the economy is on the up when the inventory ratio falls and conversely, a recession becomes imminent when inventories pile up unsold congesting the metabolism of capital. And if output lies unsold it arrests production and with it, capacity.

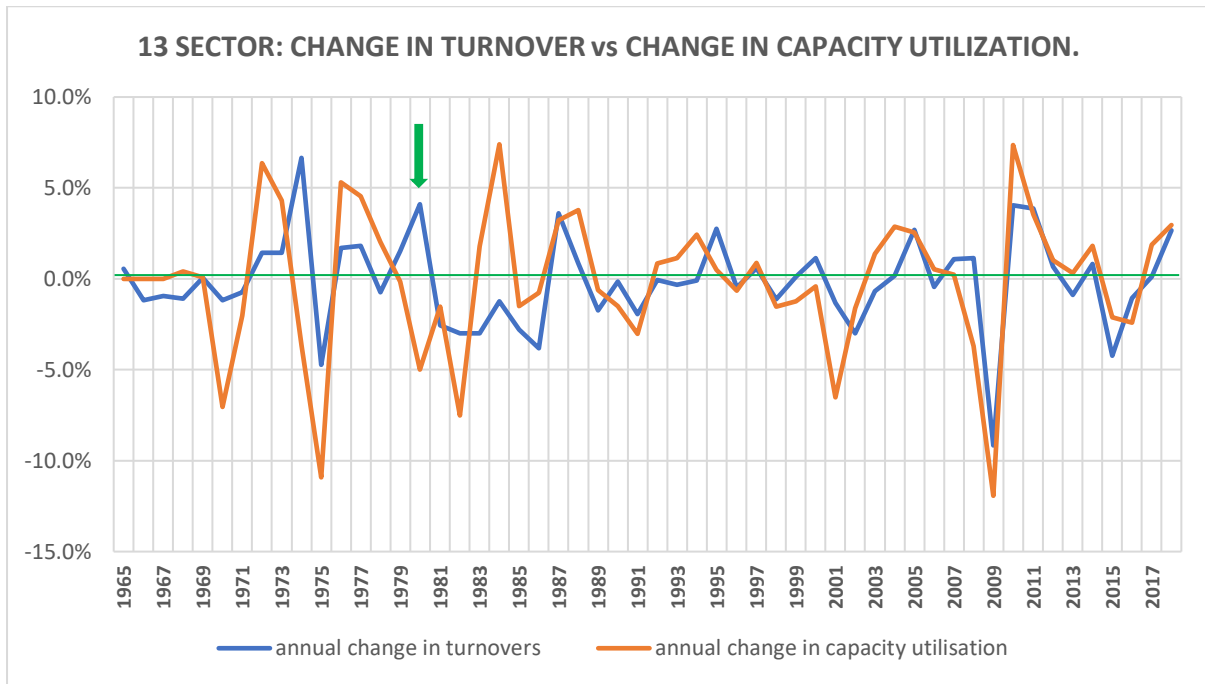
Graph 2.



The use of metrics like capacity utilisation is an instinctive recognition of the inadequacy of a rate of profit based on fixed capital only. Something is missing - circulating capital. I have always used the analogy that the rate of return is the equivalent of a two-legged stool (profits v fixed capital) – very unstable, intellectually uncomfortable and difficult to keep upright. So, let us introduce circulating capital to show how it corresponds to capacity cycles. We can predict this correspondence, because a slowdown in the rate of circulating capital means it is taking longer to clear (sell) output leading to a

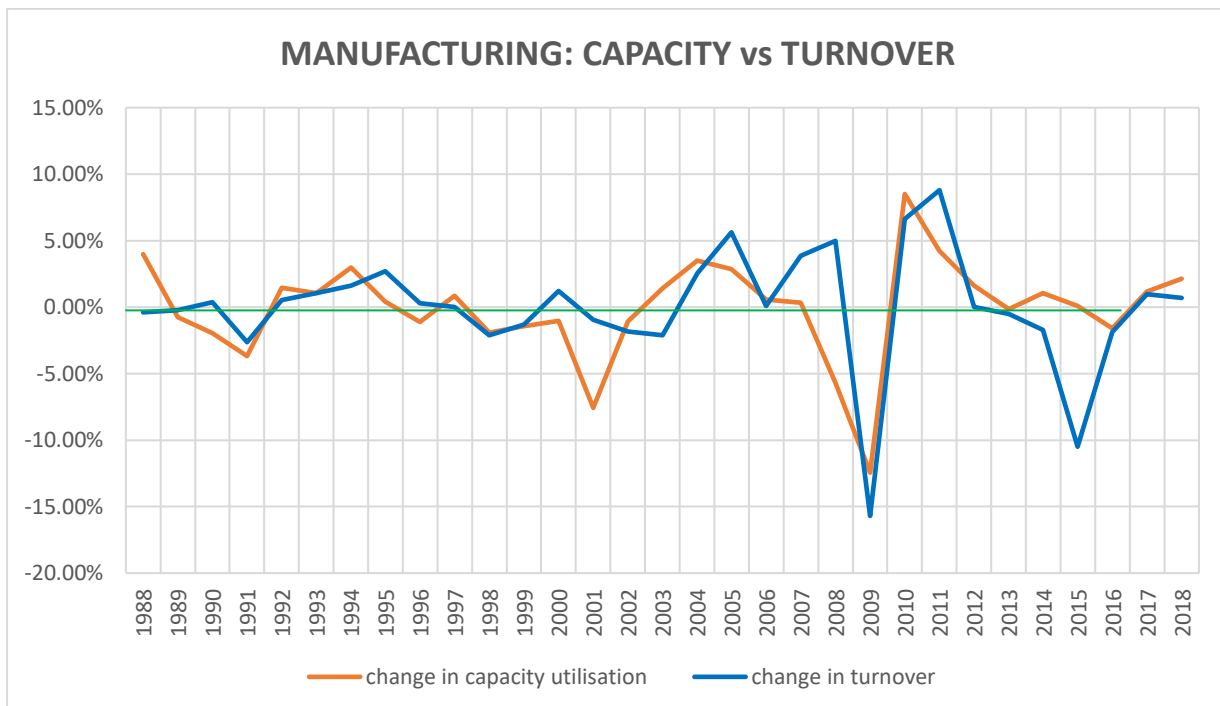
fall in output (capacity). Graphs 3 and 4 show the correspondence. The change in capacity is more volatile. Peaks and troughs with one exception (green arrow Graph 3) tend to align, with the peaks in capacity utilisation tending to precede that of turnover. (The green line marks out the zero line.)

Graph 3.



Spreadsheet "RATE OF TURNOVER FOR THE ECONOMY 1947 – 2018"

Graph 4.

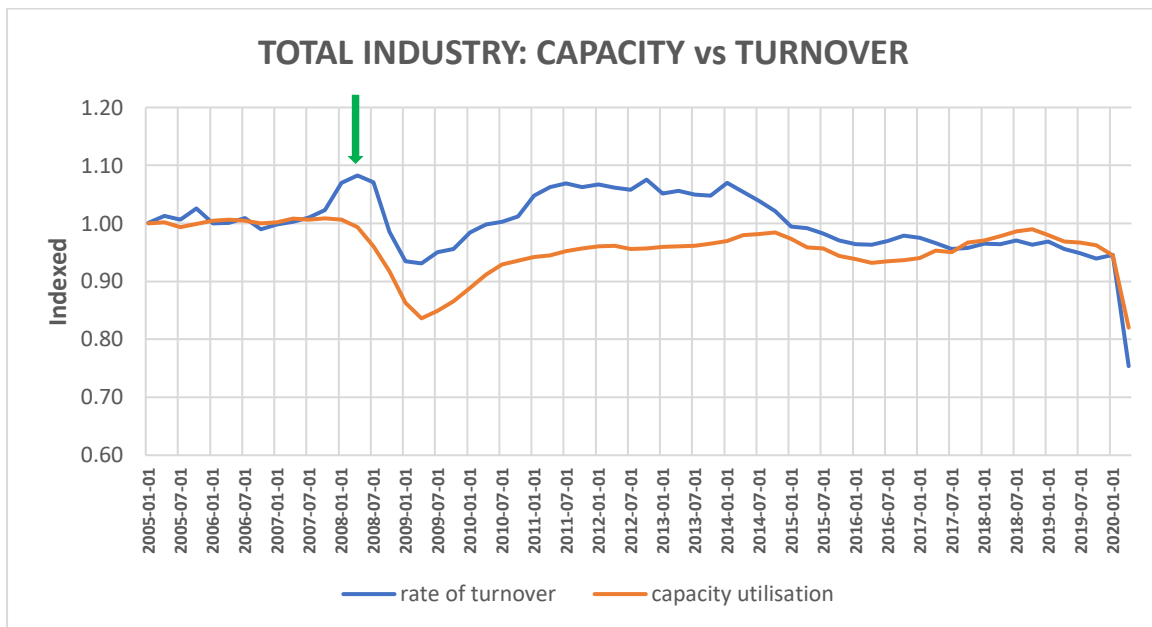


The fall in capacity utilisation precedes the fall in the rate of turnover because the end of the cycle is characterised by over-accumulation, or what is the same thing, not all of the capital can be employed

profitably. It initiates the transition from a relative fall in the rate of profit to that of an absolute fall. This process concludes with collapse in turnover, or what is the same thing, a crisis in the realisation of profit. Thus, these two successive peaks are always found before major recessions.

When quarterly data is used this is seen more clearly in real time. In the first quarter of 2008 capacity begins to fall, but turnover falls only in the third quarter, or 6 months later. However, in the recovery stage their rise is synchronised.

Graph 5.



But there is more to circulating capital. Circulating capital turnover stalls on the eve of the crisis as sales fall and unsold stock piles up. The need for more credit at this time raises the amount of circulating capital needed, which by increasing total capital, weighs on the rate of profit. However, in the crisis itself together with the period of stagnation which succeeds it, circulating capital is culled much more rapidly and relatively more deeply, than is fixed capital. It thus represents a major, hidden up to now, counter-vailing factor helping restore the rate of profit.

Estimating the current rate of profit on new investment. This exercise is as worthwhile as it is complicated. It is self-evident that a rising rate of profit implies that new investment is more profitable otherwise the rate would not be rising. But the reason for the rise may not be due solely to the new investment. For example, at this time the rate of turnover of circulating capital is also accelerating. It means that every pulse of profit, which cumulatively makes up the annual total, is firing faster. Or there is the issue of rising real market prices propelled by improving market conditions. We recall that only over the course of the entire business cycles do total prices and total value coincide because the losses in realised value on the downside of the cycle are compensated for by the gains on the upside of the cycle. Generally on the downside, market prices are driven by the most efficient producers in an industry meaning a lower mass of profits for that industry, while on the up side, market prices are driven by the less efficient producers meaning a higher mass of profits for that industry. (Despite prices of production displacing market prices, Chapter 10 in Volume 3 is still relevant today when assessing pricing within an industry.)

Also, at this time it is difficult to measure productivity without first examining the rate of turnover of circulating capital. If the rate of turnover is accelerating, the value realised in a given time increases

which on its own raises productivity because productivity is the measure of value over time (labour hours). Only when this element is deducted, can the productivity due solely to the new investment, that is the shortening of the production period alone, be estimated. As an aside, readers will recall that since 2014 there has been a persistent deceleration in the rate of turnover of circulating capital which has tended to put a lid on productivity growth since then.

Thus, returning to the question in hand, estimating the current rate of profit by measuring the increment in profit this year against this year's increment in fixed investment is a good way to get a false positive, unless turnover and cyclical prices are factored out. Finally, if measuring the incremental improvement in profitability on the up is complex, measuring it on the down is even more so because of the issue of realisation discussed above.

If it was possible to remove the influence of turnover and cyclical pricing, the former much easier than the latter, then it would be possible to estimate the incremental increase in profit as against the incremental increase in investment. If this could be done it would reveal that the relative deceleration in the rate of profit is due to the rising composition of capital, whose gravity ensures that the movement of the rate of profit is always parabolic. (An alternative method, which is highly accurate and has been mentioned above, is to use changes in the current rate of surplus value.)

Gross versus net capital stock. There is no benefit in assembling the gross stock of fixed capital as opposed to the net. The "gross stock" of capital is not the same as the "replacement cost" of capital. Over time fixed capital is cheapened by improvements to labour times, so replacement cost has little association with the cost of the older fixed capital it replaces. Indeed, for this reason, depreciation based on older and more expensive equipment, machinery and structures, should be able to pay, not only for replacements, but for additional means of production without recourse to current profits. This intensifies with the rise in the composition of capital creating the possibilities of freeing profits for purposes other than investment such as share buy backs. We will discuss this further on.

There is only one way to measure profitability and its general movement, and that is by using the "current cost of net stock of fixed assets". Historic cost is meaningless because of the nature of modern money. State backed money has one main purpose, to act as the standard of price. Ideally a standard should be a fixed measure. State backed currency is not, if it were, then the gap between historic and current prices would reverse. Instead of historic prices being lower than current prices, they would be higher than current prices. Instead of rates of profit based on historic prices being higher than current prices, they would be lower. Instead of using current prices to measure profitability it would be advisable to use historic prices, but we do not live in this ideal place.

Only with the backing of the state does the Dollar act as the standard of price, allowing a \$10 bill costing less than 10 cents to print to circulate \$10 of commodities. But of course, this standard of price is malleable rather than fixed, it is closer to rubber than to metal. And when a standard is malleable its ability to measure anything is compromised. If we take a metre which measures distance this is easier to see. If a metre rule is reduced ten percent, to what was formerly 90 centimetres, it now takes around 110 metres to measure the same distance 100 metres measured before. We can say that the distance is now inflated because the standard used to measure it, has shrunk.

Similarly, with money. Over time state backed money is debased. More money is needed to circulate the same value and so prices rise because the dollar as a measure of value has shrunk. Of course, the statistical bureaus try and compensate for this nominal increase in prices with their deflators. But their methodology is wrong. They seek to zero price increases. But why zero? If labour times are falling then the deflators should be bigger, they should end up with a minus not a zero. But capitalism is far too

crude an economic system for this to take place because labour time cannot be measured directly here. (Incidentally, that is why capitalism always underestimates the increase in labour productivity.)

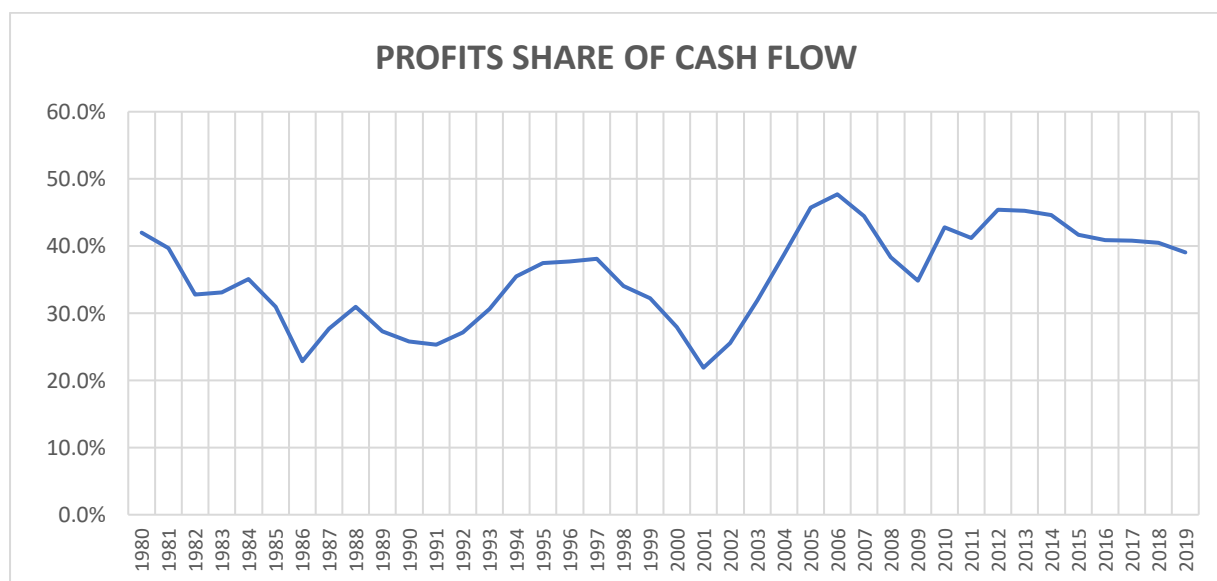
Thus, the current cost of the net stock of capital is the best denominator to use when calculating the rate of profit. It is a real time measure even if the measure is annual. It is the blend of the new and the old, the cumulative weight of new investment reduced by the cumulative weight of depreciation. As a weighted average it yields the market value of fixed capital, and because it includes the old with the new, it is always below the replacement value of the stock of capital. So current cost does not mean replacement cost, it means residual cost, because on average these assets are less than new having experienced a degree of wear and tear. The other advantage is that current cost coincides with the aggregation of the fixed assets found on the balance sheet of all the corporations in an industry or sector. Thus, the overall rate of profit should coincide with aggregated individual rates of profits based on balance sheets, making the movement in the overall rate of profit a real movement.

It also means that this rate of profit is associated more closely with the rise in the composition of capital, whereas the rate based on historical cost which over-inflates the rate of profit, is not.

Turning to depreciation, it is better to use it above the line where profit is found, rather than below the line, where capital is found. Employed this way we arrive at the rate of cash flow which differs from the rate of profit. The rate of cash flow is assembled from profit and depreciation. The sum of money available to a corporation is the sum of profit and depreciation. It is the same amount of money as if found when deducting inputs and expenses from output, plus, when deducting credit given from credit taken, plus, when deducting new debt taken on less old debt paid off, and finally, when deducting stocks carried forward from stock brought forward.

This is the cash on hand a corporation has left over at the end of the year. It is an important metric, all the more so as the composition of capital rises, yielding relatively more depreciation and relatively less profit. This can be seen in the graph below. We note that at no time do profits reach half of cash flow, even when profits peak in 2006 and 2014.

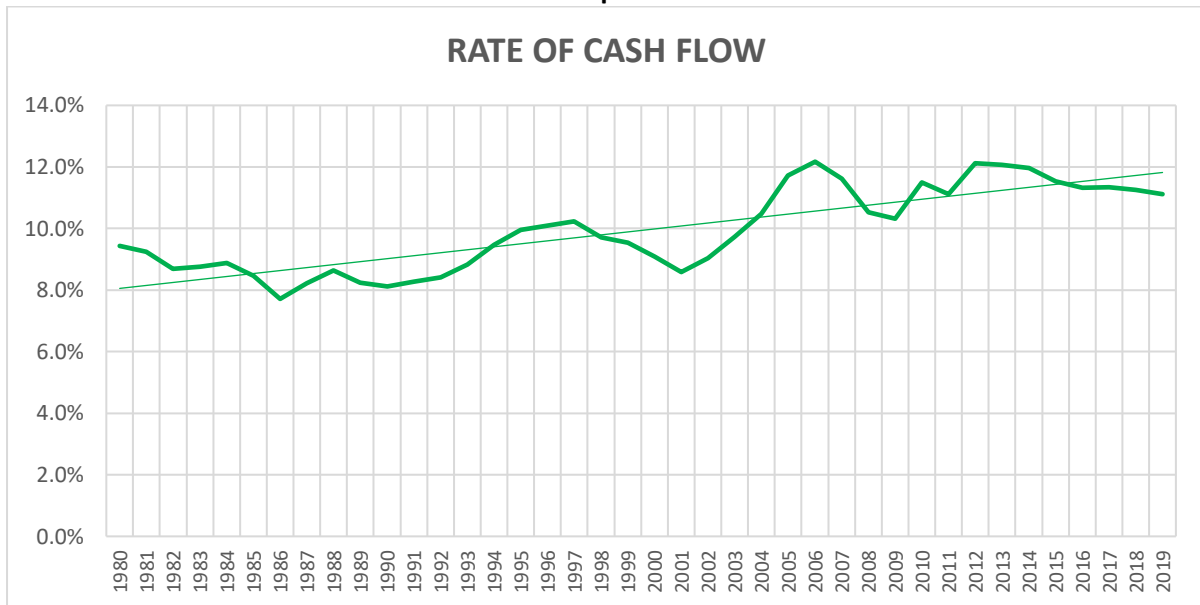
Graph 6.



For all of this series, depreciation exceeds profits in terms of cash flow. Before proceeding further, it is worthwhile graphing the rate of cash flow which is post-tax profits plus depreciation divided by total

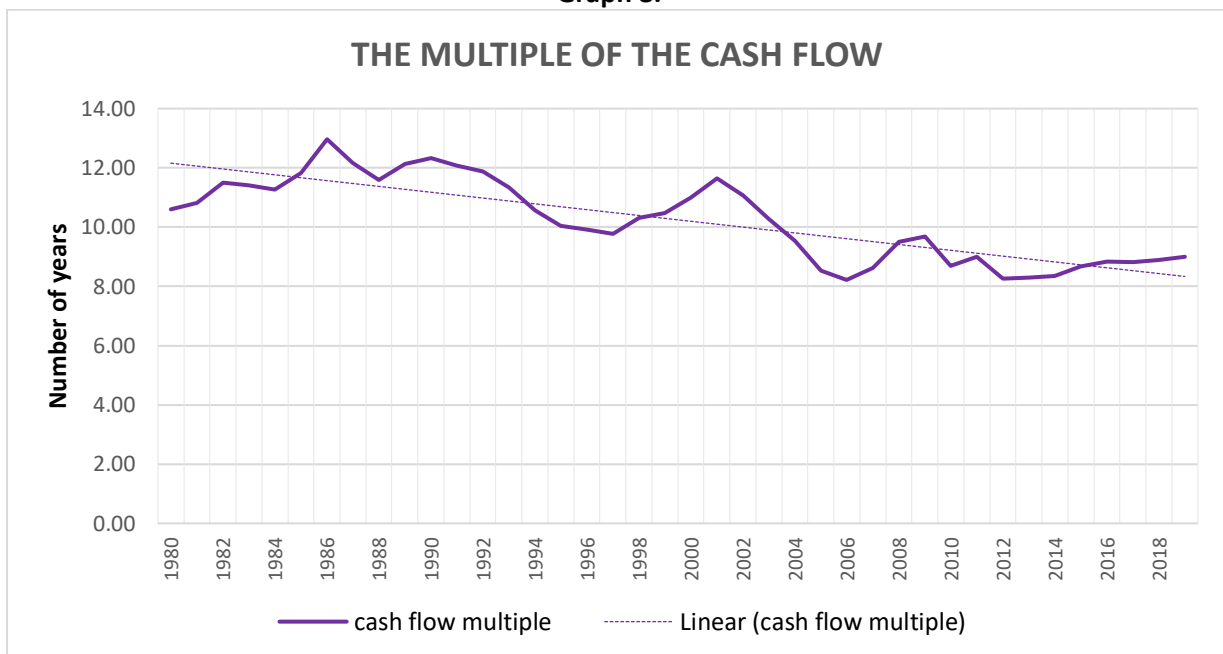
capital. We note that the presence of depreciation, which is less volatile than profits, tends to smoothen out the rate yielding lower peaks and shallower troughs.

Graph 7.



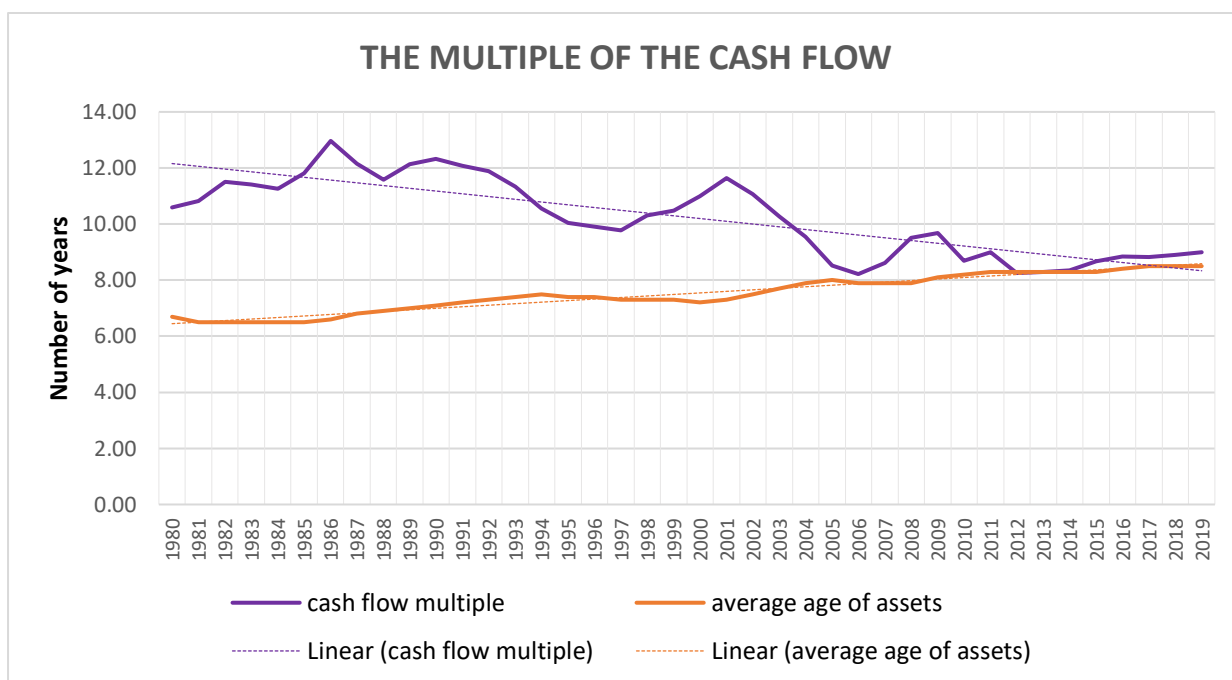
The rate of cash flow becomes even more useful when we turn it around. Now the measure is total capital divided by cash flow. This yields a multiple. This multiple is the number of years this cash flow will take to replenish the stock of capital. A higher rate of cash flow means fewer years and a lower rate means more years. This is seen in Graphs 8. The lower rate of cash flow between 1980 and 1993, meant it would take over ten years to replenish the capital invested in non-financial corporations if every Dollar of cash flow were to be reinvested. This reduces to around 8 years this century.

Graph 8.



This cash flow multiple, in turn, allows a comparison with the actual average age of fixed assets found in the economy as estimated by the BEA (Fixed Assets Table 4.10). This comparison is found in the graph below. (Here historical cost is used because depreciation is based on this cost.)

Graph 9.



In the 1980s the culling of capital reduced the average age of assets to 6.7 years. Following a drop in the late 1990s, the average age has continued to increase in line with the long-term trend to 8.5 years, an increase of almost 2 years since the 1980s. This century the graphs have converged.

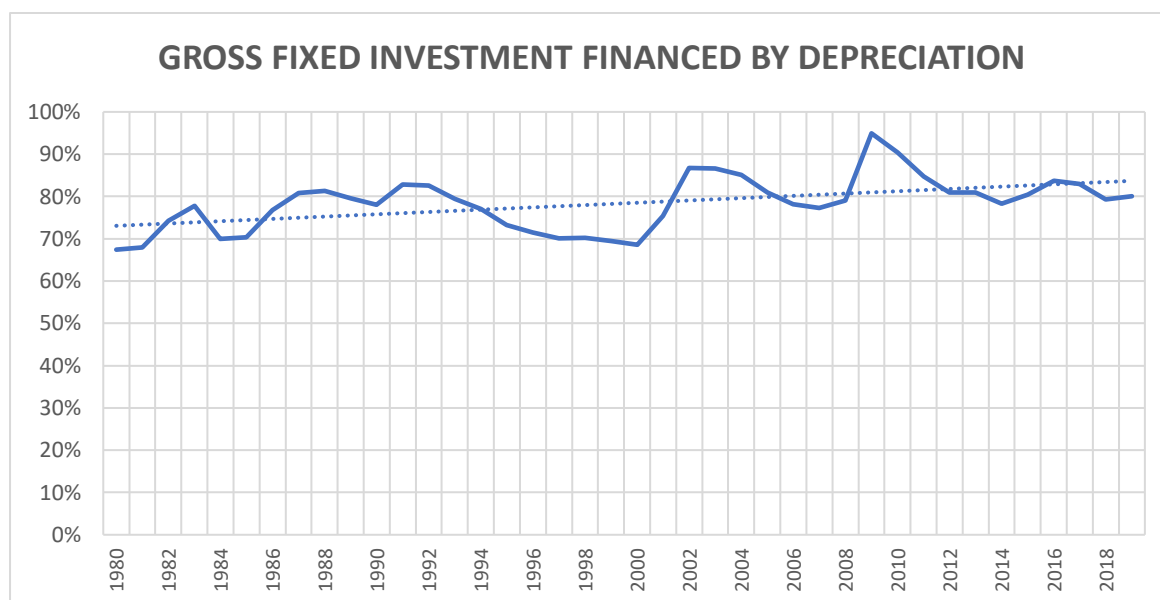
This is due to the reduced tempo of investment, particularly following the financial crash of 2008. It is likely that in the 2020s, the fall in corporate cash flow will make it difficult to reduce the average age of assets as its multiple rises to over 10 years. There is thus a real crisis of reproduction. This cannot be overstated. High cash flow multiples measured in years makes it very difficult to reduce the average age of assets because the investment potential is so reduced.

The only alternative is the culling of capital which the FED has sought to delay with its easy money policies. The result is the continued march of the Zombies, corporations whose restricted cash flows do not justify their continued operations on the same scale. In a F.T. article titled: *US Groups Stretch Out Debts to Lock in Low Rates for Longer* the “binge” in the issuance of long dated corporate bonds is investigated. Already issuance is double that of last year, and with 4 more months to go, issuance has already smashed annual records. (F.T. 09/09/2020)

The type of maturity being discussed is 20 year and 30 year bonds. Refinitiv reports that of the \$870 billion in new issuance this year, \$250 billion has been raised purely to prop up cash flow or repay shorter dated bonds. The result is that over \$2 trillion of corporate debt now have maturities beyond 15 years (Ice Data) Normally, investors would take advantage of corporate distress by raising their risk premium, i.e. raising interest rates. However, in a world turned upside down by the FED, yield hungry investors are only too happy to snap up these bonds despite yields below 3%, especially since the FED is now acting as the guarantor of these corporate bonds through its buying programme which illegally turns a blind eye to the quality of debt. Not so much a crutch for corporations as the desperate disarming of landmines on the road ahead.

The final interesting graph shows how much of investment is financed by depreciation.

Graph 10.



We note that the trend line shows that a greater percentage is being financed by depreciation over time. This is a combination of rising depreciation (driven by rising composition) and falling investment.

Conclusion.

A feature of neo-liberalism, besides financialization, is to sweat assets. Neo-liberals would undoubtedly have another view on the increase in the average age of assets, saying it is more efficient to milk them to their last nut and bolt. But while ageing assets lend themselves to financial engineering, this is fool's gold, because in the real world the failure to invest becomes a drag on productivity and is only sustainable by driving down wages. There is no long-term benefit to this.

It must be made clear, that this phenomenon of ageing is not limited to the US. Even in China with its rapidly decelerating rates of investment, the ageing of assets is making itself felt for the first time.

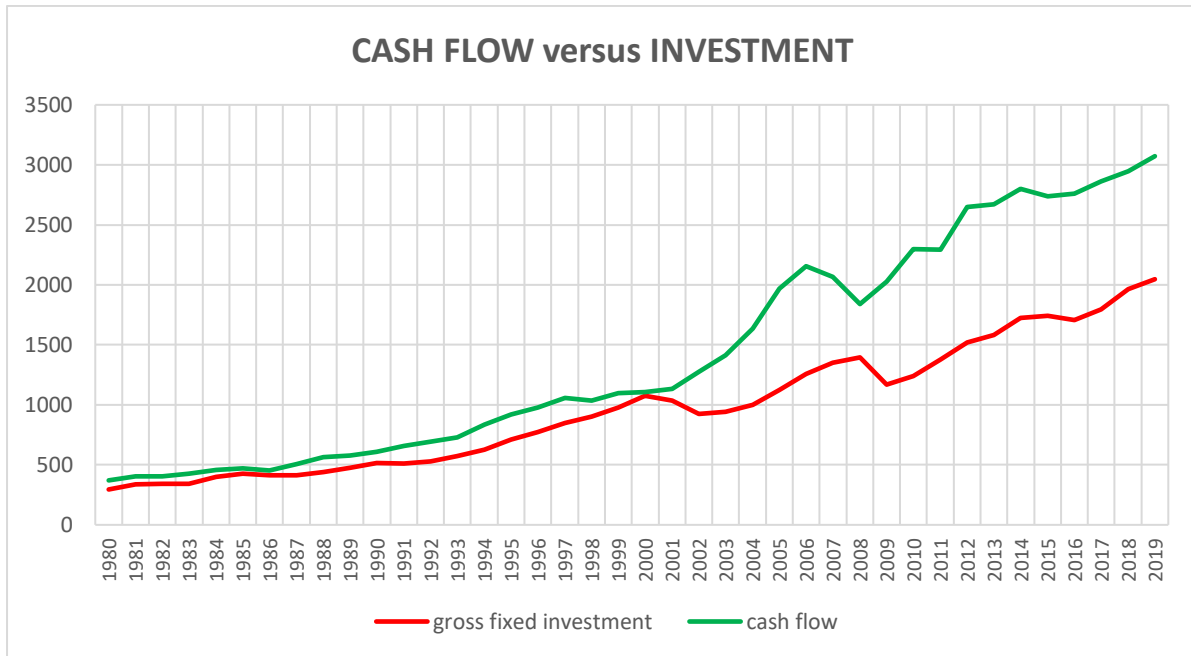
I have provided a number of articles to show that at its heart, the US economy has little resilience. It is in this context that the tensions with China has to be understood. Trump is seeking to preserve the one area where the US leads and dominates the global value chain, chip hardware. This includes developing new chips, producing the machinery to make them, making them, and providing the software to run them. It means preserving the whole intellectual infrastructure making this possible.

A number of think tanks have pointed out what is at stake. Unless China is blocked, within 20 years it will break the US monopolisation of the commanding heights of the most important value chain of all, information technology. At that point the US will become just another economy, no longer hegemonic. The stakes could not be higher. I will return to this theme, but you can access these reports by following the three links at the end of the article.

Of course, the weakness on Main Street has been masked by the upward march of Wall Street, latterly fuelled by sheer manipulation by the likes of SoftBank. The recent rupture in this upward march shows how flimsy even this masquerade is. It could be said that the 2nd quarter and Covid was the most significant event since the war. However, it is likely to be eclipsed by events over the next quarter. As meteorologists note; during a storm, the following winds do more damage than the leading winds, because of the damage already done by the leading edge of the storm.

Postscript.

Space allows me to include what I would consider an iconic graph. It is another way of showing why assets have been ageing as the gap between cash flow and investment has increased. It has two arms, the top one is cash flow which represents the productive potential of society and the bottom arm the squandering of this potential through reduced investment. These two arms reach out for a new society, representing both the possibility of socialism and the necessity for it. Capitalist reproduction is beginning to break down.



Links to the articles on the dangers facing the US's drive to maintain its monopoly of Hi Tech.

<https://www.cnbc.com/2020/09/09/op-ed-trumps-campaign-against-huawei-chinese-tech-will-backfire.html?&qsearchterm=Op-ed%20china>

<https://www.csis.org/analysis/washingtons-china-policy-has-lost-its-wei>

<https://media-publications.bcg.com/flash/2020-03-07-How-Restrictions-to-Trade-with-China-Could-End-US-Semiconductor-Leadership.pdf>

Brian Green, 9th September 2020.