This is the end of the long wave of expansion.

In June 2015, coinciding with the collapse in the Shanghai Stock Exchange I asked whether or not 2015 was an inflection point, the beginning of the end of the long wave of expansion that began in the early 1980s. It is thus apposite that this posting is occurring on January 4th, the day the Shanghai Stock Exchange was closed once again after shares fell by their permissible 7%. The speculators that run the financial markets try and prop them up at year end in order to maximise their returns and bonuses. In the New Year markets that need to fall do so spectacularly. Though January 2016 is likely to become a memorable month in economic history, the pressures leading to it, as this posting shows, have been building up for a considerable period of time.

The Federal Reserve’s interest rate increase this December was a strategic mistake but a tactical necessity. This means it is unlikely to be repeated and more likely to be reversed during 2016. The Fed’s stated imperatives driving this increase are to ensure high employment and low inflation. Their decision seems to be vindicated by the growth of employment and the rise in prices.

We will examine the rise in prices first. The Personal Consumption Deflator shows current inflation to be around 0.5%. The fall in durable goods prices (-1.0%) is however offset by rises in rents (3.9%), education (3.7%) and health (3.0%). (Source: FRED most recent twelve months.) While durable good production is integrated into the global economy, rents, education and health are localised, mainly within the national economy. It is this local inflation that swayed the Fed as they interpret it as the national economy approaching capacity.

They were also swayed by the increase in employment, which up to November amounted to 1.1 million new jobs for the year, complimented by a fall in involuntary part-time work of 765,000. However it should also be noted that November’s 319,000 increase in involuntary part time work was a sharp reversal of this trend and a harbinger of higher unemployment. (Sources: Bureau of Labor Statistics.) Within these figures the industries that saw the most increases were healthcare 470,000, food services and drinking places 374,000, professional and technical services 298,000, construction 259,000 and retail 156,000 totalling 1.56 million and all connected to the local economy. This excess number of new jobs over and above the total added of 1.1 million implies falls in employment elsewhere, particularly in goods producing industries. Truly a tale of two economies.

In terms of value added, these additional workers mainly work in industries with a low value added (excepting construction) content. Construction produces 4% of GDP, retail 5.8%, professional services 6.9%, education and health 8.8%, food services and accommodation 2.8% totalling 28.3% of GDP. In other words employment rose in under 30% of the economy only to fall or not rise in 70% of the economy measured by output.

This growth in employment and its location has everything to do with the growth of inequality. Construction is growing because of the production of high end properties (condominiums) and speculative commercial properties. The same applies to Professional services and Health where it is the rich who use these facilities most. Much of this growth is thus limited to the advisers, the merchants, the carers and the builders for the rich.

This is best reflected in the growth of Private Industry versus Domestic Industry as the former includes the household sector, charities and imputed rents, in short the servant class. In the graph below we have plotted the relative rise of Private Industry. It was always larger than Domestic Industry but the gap has doubled since 1977, though it is now below its peak in 2008 or 2% below trend. Much of that recent fall is due to the financial crash that year.
Had the relative size of Private Industry stayed the same as the late seventies, the US economy would be 10% smaller today and annual economic growth on average would have been a quarter per cent lower.

The growth of inequality, both a product and a cause of globalisation has not only led to a rise in the carers, servants and advisers to the rich, but to a low wage, low value added economy. These trends are detailed in the 25th March 2015 release by the Bureau of Labour Statistics entitled *OCCUPATIONAL EMPLOYMENT AND WAGES — MAY 2014*. It analyses the top ten largest occupations in the US. With the exception of nurses, they are all low paid with earnings below the national median wage of around $47,230 in 2014. Five of these occupations earn below $24,000, which at under 50% of the median wage, sits below the poverty level.

On the other hand high value, commodity producing jobs are in the minority. On page 4 the BLS graphs workers by occupation. Workers in production number 6.2%, construction 3.9%, maintenance and repair 3.8%, Computers 2.8% and architects/engineers 1.8%. This totals 18.5% or about the same number as the total of the 10 largest occupations (other than nurses) all of whom are low paid. In fact the BLS puts the number of skilled jobs called STEM (science, technology, engineering and mathematics) at only 6.2% (8.3 million) or roughly one third of the size of the top 9 occupations which are low paid.

The growth of employment has added to the trend of low skilled, low paid workers. There has not been a significant rise in the skilled, high value bracket despite claims of shortages in these fields. Instead of encouraging investment in production and therefore an increase in real jobs, the Federal Reserve is curtailing their growth by focusing strategically on the growth of low paid jobs. One wonders why the misnamed Chinese Communist Party would seek to emulate this unworthy model and redirect its economy towards services.

**PRODUCTION REMAINS THE POWERHOUSE.**

The obese US economy still requires bone and muscle to keep it upright. That is provided by the goods producing sector and the information sector. Due to the duplication of value in the service sector, it is actually bigger than the national accounts would imply. We have dealt with this in detail in the preceding posting. The goods producing sector at 21% appears small in relation to GDP, but only
because the service sector is overinflated. In any case the good producing sector is the fire around which the service moths fly and without which they would not gather.

A cursory inspection of the Fortune 500 shows how few service companies appear in the list of the top US corporations. The list is dominated by the oil companies, the car companies, the pharmaceutical companies, the food companies, the computer companies, companies that inhabit the goods producing sector. The only other sectors that feature are banks/insurance companies and retailers (who should in fact be located in the goods producing sector as they distribute mainly tangible commodities produced by US and Global industry.)

Employment in the goods producing industries is falling. This is only part of the story. So too is the rate of exploitation (surplus value). Fewer workers each producing less profits annually. This rate covers the first half of 2015, the most recent releases. However the rate is expected to continue falling based on preliminary data for the second half of the year. It has already fallen 5% from its high point in 2014 (386%) and it is well below the level of 415% achieved in the second half of 2008. By year end it may be no higher than the level achieved in the first quarter of 2010.

The rate has fallen not only because wages are rising relative to profits but also because turnover times are slowing down. Workers are producing less profit during a single cycle and because the number of cycles are fractionally down, the annual cumulative mass of profits is contracting. This is not due to wages rising as much as it is due to the growing problem of deflation compressing profits, exacerbated by changes in turnover times.

The rate of exploitation is the flywheel in the capitalist machine. The faster it spins the more energy it imparts to the rate of profit, and the slower it spins the less energy it imparts. The rate of exploitation and the rate of profit share an intimate relationship best seen through Marx’s symbolic presentation: \( s/v \) versus \( s/(c+v) \). Here the difference is noted to be the presence of \( c \) (means of production) in the latter formula.

The rate of exploitation \( s/v \) is not the ratio between profits and wages. This is too simplistic, a common mistake made through the ages including by many Marxists. It is the ratio between profits and variable capital or wage capital. Depending on the number of turnovers of capital within a calendar year, the
greater will be the difference between wage capital and annual wages, the greater the difference in the ratio of exploitation between the two measures.

Not only that, but faster turnover times gifts the rate of profit in an additional way. Not only does it amplify the mass of annual profits but it simultaneously reduces the amount of variable capital that is needed to produce these profits. As this reduced \( v \) or variable capital enters into the determination of the rate of profit together with \( c \) (constant capital, means of production) it helps offset the increase in \( c \) and therefore the total mass of capital. As it is the increase in the mass of capital that precipitates the fall in the rate of profit, a reduction in \( v \) helps moderate this increase. The increase in turnover times and consequently the rate of exploitation thus serves the rate of profit in a two-fold sense.

An increase in the rate of exploitation acts as the main countervailing factor to the tendency for the rate of profit to fall. And it does so in a contradictory manner. In the first place, to increase the rate of exploitation, productivity needs to be increased. But to increase productivity more investment in means of production \( (c) \) is required, the same increase in \( c \) that lies at the heart of the tendency for the rate of profit to fall. Provided that the rate of increase in exploitation increases relatively faster than does the rate of investment in means of production then the tendency for the rate of profit to fall, is arrested.

However that cannot be determined with any accuracy without considering turnover periods. If turnover times are reduced then the rate of exploitation can be rapidly increased, often when using the same amount of capital as in “just in time” production. If turnover times are reduced while capital increases, then surely the rate of profit will fall.

The rate of exploitation which is a composite of the division of the working day and the turnover of capital must therefore be considered to be a leading indicator for the future direction of the rate of profit. One that has been missing up to now. Indeed it is difficult to comprehend how any predictions could have been made for the movement of the rate of profit in the immediate future without having a fully developed rate of exploitation based on turnover times.

If this assumption is correct, and 2016 will test it, then it appears that the US economy is entering troubled waters and that the interest rate rise will turn out to be counter-productive. The future for the goods producing industries around the world is troubled. The Baltic Dry shipping Index hit an all-time low in November and again in December, global heavy truck sales were down 12% mid-year, orders by airlines for new planes fell from 2888 in 2014 to 1765 in 2015 and the outlook for smartphones by “MarketWatch” in 2015 was down to a paltry 1.2% increase.

There are therefore few drivers left in the world economy. This is best illustrated by the fall in world trade measured in dollars. World total trade in quarter 3 of 2015 was down 6.5%, for developed countries it was down 14.2% and for North America it was down 6.9%. Worse the fall in dollar terms is accelerating. (Source: UN Trade Statistics Table 35.) When globalisation was in full flight, the increase in world trade was at least double that of output, now that relationship is reversed, output is growing faster than trade, especially the trade in goods

**A PENDING FINANCIAL CRASH.**

The 2008 financial crisis did not emanate from a crisis of production but was due to structural changes between the banking system and industry which forced the banks into concentrating on the retail market. However pure financial crises are exceptional (though it can be disputed that 2008 was pure, given its roots lay in the globalisation of production). Most emanate from within production and
circulation and are precipitated by a collapse in the exchange of commodities and by commodities we refer to goods in the general sense, from rockets, to cars, to shirts to copper.

The growth of deflation, sparked by the amassing of unspent profits, therefore marks a breakdown in reproduction (here understood to mean the unity of production and circulation). What is really noteworthy is the current absence of a serious financial implosion despite this breakdown in reproduction. Nowhere is deflation more acute than in the prices of raw and processed materials including oil. In 2014 investment in oil and these commodities (copper, coal, iron ore etc) amounted to 39% of global investment. By 2015 that had halved, wiping 20% off global investment due to the ongoing collapse in commodity prices. To this must be added the deceleration of investment in China amounting to over a third (The Bureau of Statistics of China). From chronic the breakdown in reproduction is become more acute.

Global investment fell from 24.5% of GDP in 2008 to 21.5% at the depth of the financial crisis, a fall of 3%, after which only rose to 22.6% in 2011 before commencing its decline once again. Global figures for 2014 and early 2015 are not available, but the halving of investment in commodity extraction, refining and transport in 2015 is likely to take the 2015 figure below that of 2009. In parallel, the World Bank has analysed the decline in global Foreign Direct Investment flows. From its high point in 2007 reset at 100 it fell to 44 in 2009, climbed back to 74 in 2011 only to fall back to 52 in 2014. If the trend from 2011 to 2014 continues into 2015, which preliminary figures suggest, in common with overall investment, it fall below its 2009 nadir measured in dollars. Given the appreciation of the dollar, the fall in volume terms is more moderate but still highly significant over the last two years.

This fall in investment and the contraction of flows has everything to do with profit hissing out of the punctured tyres supporting investment and its shadow, speculation. On the 28th December 2015, Bloomberg reported in an article entitled “The Year That Nothing Worked” that 2015 was the worst year for investing in most asset classes since 1937! It was the first year since 2009 that the rich did not get richer as most of their bets, whether in shares, bonds or commodities, failed.

Given this dire background, we now have to account for the lack of a financial episode arising out of this intensifying investment rout. There are a number of factors. The first and most historically decisive factor, is that we are not dealing with the end of a business cycle, but the end of a long period of expansion in which a number of business cycles have taken place. We are at the end of the long wave of expansion that began in 1980s with the defeat of the organised working class in the west and the return of capitalism to the east.

The end of a business cycle is associated with overheating. The accelerated expansion of production under the whip of increased investment leads to excess demand therefore to a shortage of all commodities, including labour power. Prices and wages spike, eroding profit margins. But the momentum already built up drives production beyond its profitable limits culminating in a sharp crash as the imbalances are resolved violently.

But the end of a long wave is different. It is due, not to over investment, but under investment relative to profits. It is not due to sudden overheated reproduction, but to gradually failing reproduction. It is more chronic than acute. It is the accumulation of years of unspent profits that have constipated the system, which has slowed the metabolism of capitalism. It is the difference between the economy running over a cliff and it stumbling into deeper and deeper quicksand.

Many of the postings on this website have graphed the increase in corporate cash flow relative to corporate investment. This has not been a sudden phenomenon. It has matured for nearly two decades resulting in a hoard of idle capital that has depressed interest rates to almost zero over the
last 20 years. Despite the FED’s first rate rise, 10 year government bonds in the USA have barely moved in the three months to stand at 2.3% on December 22nd which is below their mid-year peak of 2.48%, while 10 year High Grade Corporate Bonds have not budged and remain below their April peak. (CNN Money News and S&P Dow Jones Indices published by McGraw Hill.)

This in stark contrast to the end of the business cycle when speculation on rising commodity prices overstretches the chain of credit, lifting interest rates. When this overstretching becomes unbearable and prices start falling, shattering the links, the scramble for money causes interest rates to spike as investors all desperately rush for the exit at the same time. This is not happening in general, and where it is occurring, in high yield junk bonds, it is happening at the margins. While contagion cannot be ruled out, one of the counter vailing factors remains the willingness on the part of central government to inject liquidity into the market promptly. While central banks have higher debt loads they have become more adept at intervening to ensure liquidity is present in the market.

However, it needs to be pointed out, that a financial crash at the end of the business cycle is not the cause but a symptom of it ending. It catalyses this crash, accelerates it, concentrates it and deepens it. Similarly at the end of the long wave, accommodative monetary policies will not reverse the direction of travel for the economy, merely slow it down. One of the purposes of monetary policy, primarily driving down interest rates in order to punish savers, was to shepherd money into real investment.

This policy has failed, and it has failed because central bankers have always misunderstood what happened in 2008. 2008 was not a policy failure. Instead it represented a seismic structural event that had been building up since the 1990s. The growing cash flows of their largest customer, the global corporations, had deprived banks of their largest most profitable customer, forcing them to lend to retail customers – mortgages, car loans, credit cards, consumer loans, student loans. These loans did increase spending on goods and services, but in the end proved unsustainable leading to the 2008 crash. It was not a crash caused by the crisis of profitability in production, but to its opposite an over-abundance of profits relative to investment. The collapse in lending to the retail market that followed simply added to the glut of unspent profits, to the mass of idle capital, and to insipid economic growth.

The second reason is China. China was the main driver of the global economy until 2013. Its investments since 2008 propped up global investment and precipitated a wave of price rises that lifted the economies of nations and even continents. One of the key debates in 2016, will be whether or not China can transit from an economy where investment amounted to almost half of output to a service led economy.

The contrast with the US in the 1970s is instructive. The shrinking of production in the USA, as in China today, was brought about by falling profits. It was a decision forced on US capital and it was a sign of weakness. The dramatic outsourcing of production by US capital to Asia which constituted one of the drivers of globalisation was vital to restoring the rate of profit in the USA. However, the US could pivot in this manner because it dominated the world economy technologically and financially.

The same cannot be said for China. China is unique in world history. Though it is by far the world’s largest industrial economy, it has few world dominating and competing global corporations. Again a cursory examination of Forbes most recent Global 2000 shows this to be the case. Of the top 100 global corporations other than banks and insurance companies, the US has 29 and China only 4, of the top 250 companies the US has 67 and China only 9. The US and to a lesser extent European multinationals were able to outsource, because they continued to dominate the commanding heights of
production, because they were able to monopolise the value chain. They were able to therefore extract the lion’s share of value produced worldwide through unequal exchange.

The same cannot be said for China. China remains the world’s pre-eminent outsourcing hub. While it is true that at the lower end, Chinese entrepreneurs are relocating to lower wage countries like Ethiopia and Bangladesh, this is small scale and insignificant. A large part of the Chinese coastal economy remains locked into a supply chain dominated by G7 multi-nationals like Apple. In fact, though value added in China as a share of exports increased significantly between 1995 and 2009, the share of imported intermediate products in final exports, increased from 25% in 1995 to 50% in 2009 (OECD/WTO TRADE IN VALUE ADDED (TIVA) INDICATORS). In other words more imports were being used to provide goods to the international market than were being used to provide goods for the local market. It demonstrated China’s deeper integration into the local and international value chain.

It is unlikely therefore, that in the immediate future, China’s crawl up the value chain, will result in a sprint to the top. Hence the wage increases enjoyed by Chinese workers in industry, at a time of falling profits, suggests this slow crawl up the value chain is not compensating for the rise in wages. This is only one side of the problem. If this is the end of the long wave of expansion, and if the world now faces long term stagnation, then the intensified competition resulting from this will make it harder for new entrants gaining access to any industry. The capital threshold will rise as the market price is set by the most efficient producers. The possibilities, and there were many, generated by thirty years of expansion, which saw new countries and new producers gain access to the world economy, will be cut off. The reversal in the growth rates between output and trade since 2008 is a sign of this heightened competition. It is unlikely that China will embark on economic autarky to nurture economic champions because of its dependency on exports. This will however not stop it whipping up economic nationalism in order to encourage Chinese consumers to favour inferior local products.

Furthermore, the move to services does not enrich any nation. The substitution of unskilled low paid work in services for higher skilled better paid industrial jobs, has impoverished the US working class. It has led to a fall in consumption not its increase except for the top 20% of the population. This is exemplified by car sales. In 1978 (the peak year in the 1970s) the ratio of cars sold for every 1000 people was 7 and in 2015 only 5.3 (a fall of a quarter), while the average age of cars in 2014 doubled to 11.4 years from 5.5 in 1978. (Bureau of Transportation Statistics) More tellingly is the fall in new housing construction. In 1978, 1,867,500 new housing units were built and in 2014 only 883,800, less than half. (New Residential Construction, United States Census Bureau). Not exactly a success story.

But this is exactly what was proposed by the twelfth Chinese Five Year Plan. Its priorities were and are to weaken the economy off investment by increasing personal consumption in the economy, by means of growing the service sector, by encouraging outsourcing (even lower wages), health, education, finance, management, as though these moves were an elixir for the US economy in the 1970s. The move towards services implies the same economic weakness not strength that befell the US. And of course it will hurt the world economy as it will encourage local services.

However it is to Japan in the 1990s, rather than the US in the 1970s that China should look to especially with regard to exchange rates. Like China, Japan’s industrial might had grown rapidly. Like China the banks and industry were inter-connected. Like China, but even more so, Japan had experienced a huge property boom and with concomitant price rises. Like Japan, China will find the US resisting any resolution of Chinese over capacity at its expense. But unlike Japan, China’s restructuring will have to take place, not during the long wave of expansion, but that of contraction.

There is one final factor that confronts the Chinese Capitalist Party, and that is the flight of capital which has been estimated at between $500 billion and $1 trillion. The US treasury puts the figure at
$500 million in the first 8 months of 2015. This is a clear indication that large sections of the Chinese Capitalist class does not have confidence in the future of the Chinese economy nor in its political stability. This flight of capital will drain liquidity from the Chinese market and divert spending away from China.

On the positive side the Chinese state is still solvent. Its debt to GDP ratio sits where most G7 countries sat before the financial crash. And its banking system is state owned for all intents and purposes. This association between the state and the banks will make possible the extension of credit for some time. But this credit will be for restructuring, not expansion, and thus while it may prepare the economy for future growth, in the short term it will result in a shake out of industry. The legitimacy of the Chinese Capitalist Party is to be tested in 2016 in a manner not seen for decades by a working class now immeasurably larger.

It can also be argued that a large pool of savings exists in China, which can be diverted into consumption. To do this the Chinese Capitalist Party could introduce a Tupperware rice bowl, a social safety net. The reason many Chinese save is for a rainy day – the loss of a job, for old age, for sickness and for education. If the state offered social security it is argued much of these savings will be spent. However this argument is overstated. The top 5% of income earners in China, who save on average 70% of their income, account for 50% of total saving, ensuring any social net will have minimal impact on their daily lives or on their savings. And it is this 5% that is putting legs on their money to get it out of China.

On balance the negatives outweigh the positives. China’s move to a service based economy is not a conscious choice but a choice forced on it by the crisis in production. It occurs without China occupying the commanding heights of the value chain and it is happening as the long wave of expansion has petered out. The balance is weighted towards a hard landing rather than a soft landing.

In conclusion, the slow motion crash of the world economy, buffered by low interest rates and central bank support is consistent with the end of the long wave of expansion that began in the 1980s. The contradiction at the heart of the world economy, is that while the acquisition of profits has been globalised, investment remains fragmented. As the gap between realised profits and investment has grown, so progressively reproduction has broken down. And as quantity moves into quality, what was slow will now become faster.

There is only one lesson to be learnt from this new period - only a socialist revolution can bring about a globally integrated and prosperous economy.

Brian Green. January 2016