

The Great Recession: a Marx not a Minsky moment

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Michael Roberts

“We are all Minskyites now.” Paul Krugman

Marx’s law is “the only credible competitor left in the contest to explain what is going wrong with capitalism”. Alan Freeman

There is an unending debate among Marxist economists about the causes of recessions under capitalism and, in particular, the cause of the Great Recession of 2008-9, the deepest and most globalised of all slumps in capitalist production since the 1930s.

Causes: the underlying and the proximate

Looking for a cause is scientific.¹ But dialectically there can be causes at different levels, the ultimate (essence) and the proximate (appearance). The ultimate is found from the real events and then provides an explanation for the proximate. The crisis of 2008-9 like other crises has an underlying cause based on the contradictions between accumulation of capital and the tendency of the rate of profit to fall under capitalism. That contradiction arises because the capitalist mode of production is production for value not for use. Profit is the aim, not production or consumption. Value is created only by the exertion of labour (by brain and brawn).

Profit comes from the unpaid value created by labour and appropriated by private owners of the means of production. The underlying contradiction between the accumulation of capital and falling rate of profit (and then a falling mass of profit) is resolved by crisis, which takes the form of collapse in value, both real value and fictitious. Indeed, wherever the fictitious expansion of capital has developed most is where the crisis begins e.g. tulips, stock markets, housing debt, corporate debt, banking debt, public debt etc. The financial sector is often where the crisis starts; but a problem in the production sector is the cause.

This paper aims to defend the view that Marx’s law of the tendency of the rate of profit to fall provides the best underlying explanation of recurring and regular crises, both theoretically and empirically, and is superior to alternative explanations such as underconsumption or lack of ‘effective demand’ (Keynes); excessive inequality (post-Keynesians); disproportionality or overproduction (Sweezy and secular stagnationists); or financial instability (Minsky).

In particular, the paper attempt to show that the Great Recession was not caused by excessive ‘financialisation’ or too much surplus or corporate savings that could not be absorbed. Instead it was the result of falling profitability in the productive sector of the capitalist economy (herein the US) leading to a switch of investment into financial assets and fictitious capital. The fictitious nature of the profits in real estate and finance was eventually exposed in the global financial crash. But this was not a Minsky moment of financial instability leading to a collapse in the productive sector; but in contrast, a weak productive sector eventually bringing the financial sector back into line with the law of value and profitability in the productive sector, in other words, a Marxist moment.

Marx's law

Let us start with a short outline of Marx's law of the tendency of the rate of profit to fall. Individual capitalist businesses compete with each other to sustain and increase not only the mass of profits. To do so, they increasingly use new technology to boost the productivity of labour. But this is capitalism's Achilles heel. The accumulated cost of investing in new plant, equipment etc. inexorably rises compared to the size and cost of the labour force. As only labour can create value, the value and surplus value generated by the capitals investing in new methods of production begins to fall. On the other hand, these capitals are more efficient and produce a greater output. By selling it to other branches at the same price as the lower output of the technologically backwards capitalists, they appropriate a share of the surplus value produced by the latter. Their rate of profit rises but that of the technologically less efficient capitals and of the economy as a whole falls. If other capitalists modernize as well, profitability falls even more. The less profitable capitals go bankrupt. Eventually the mass of profit falls as well. A crisis ensues.²

Marx's law is a law of a tendency, meaning that it generates counter-tendencies that can overcome the effect of the law for periods, sometimes long. The tendency is such because it is kept back and delayed by the countertendencies. But it eventually emerges when the countertendencies exhaust their counteracting power. Then the crisis emerges.

Capitalists try to avoid the crisis in various ways: by trying to exploit workers more; by looking for yet more efficient technologies; and by speculating in unproductive areas of the economy e.g. the stock market and banking and finance, where they gamble for gain. National capitalist economies look for new sources of labour supply to exploit abroad and new foreign markets from which to appropriate (surplus) value. These are some of the counteracting factors to the main law of profitability, the 'law as such'. But these counteracting factors can only work for a while. Eventually, the law of falling profitability will operate.

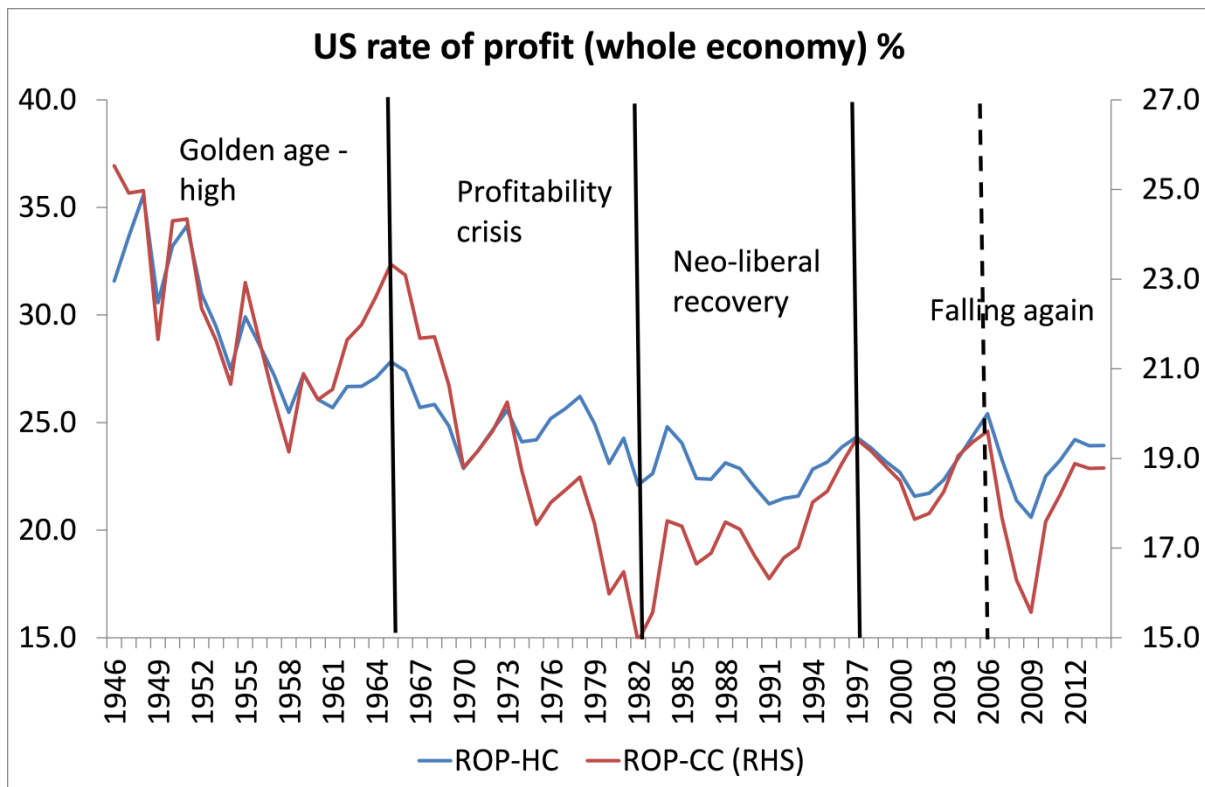
The crisis creates the conditions for the recovery. The recovery emerges when these conditions have become sufficiently strong. Periods of growth alternate with periods of crises. Thus the rate of profit of capital in an economy does not go straight down but exhibits a cyclical movement within a secular decline. So capitalism does not develop production in a straight line upwards. Its movement is subject to recurrent cycles of 'booms and slumps' that destroy and waste much of the value previously created. For example, the 1880s and 1890s saw a massive destruction of US value and wealth; and the Great Depression of the 1930s also. Now we have suffered the first Great Recession and are in the Long Depression of the 21st century.³

There is an increasing body of evidence that Marx's law operates as both a secular and cyclical process. The US rate of profit has not moved in a straight line. After the war, it was high but decreasing in the so-called Golden Age from 1948-65. This was also the fastest period of economic growth in American history. Profitability kept falling also from 1965 to 1982. GDP growth was much slower and American capitalism (like elsewhere) suffered severe slumps in 1974-5 and 1980-2. Then, in the era of what is called 'neoliberalism' from 1982 to 1997, profitability rose. Capitalism managed to get the counteracting factors to falling profitability into play i.e. greater exploitation of the American workforce (falling wage share); wider exploitation of the labour force elsewhere (globalisation), and speculation in unproductive sectors (particularly, real estate and finance capital).

This 'neoliberal period' had less severe slumps, although economic growth was still slower than in the Golden Age, because profitability was still below the period of the Golden Age, particularly in the productive sectors of the US economy.⁴ Much of the profit was diverted away from real investment and into the financial sector. Profitability peaked in 1997 and began to decline. This laid the basis for the Great Recession of 2008-9. There was a mild contraction in the US economy in 2001, followed by a mild boom up to 2008. Profitability started to fall in late 2005. Then we had the Great Recession of 2008-9.

The slump and the ensuing Long Depression were more severe than anything seen since the 1930s because of the huge build-up of debt and financial assets in the previous two decades (and particularly after 2002). This capital accumulation was what Marx called 'fictitious' in that it did not create or represent real value. Instead, there were credit-fuelled bubbles first in hi-tech stocks (crash in 2000) and then in housing (crash 2007). By 2007, the unproductive financial sector accounted for 40% of all US corporate profits. Finally, this credit bubble burst, bringing down the banking sector and the economy. The high level of private sector debt was compounded by the state having to bail out the banks.

The graph below shows the results for the US rate of profit from 1948 to 2015, using either historic or current costs to value fixed assets⁵. This shows that the overall US rate of profit has four phases: the post-war golden age of high profitability peaking in 1965; then the profitability crisis of the 1970s, troughing in the slump of 1980-2; then the neoliberal period of recovery or at least stabilisation in profitability, peaking more or less in 1997; then the current period of volatility and slight decline.



We can sum up the movements in the rate of profit as follows: (1 = base point) 1948-65 1965-82 1982-97 1997-15 1948-15 2006-15 HC 0.78 0.79 1.10 0.97 0.67 0.93 CC 0.93 0.64 1.30 0.97 0.75 0.96 FIGURE

So between 1948 and 2015, the US rate of profit declined 25-33% depending on whether you measure fixed assets in historic (HC) and current costs (CC). Between 1965 and 1982, the rate fell 21-36%; but from 1982 to 1997 it rose 10-30%; but since 1997 it is down 3% and 4-7% from 2006.

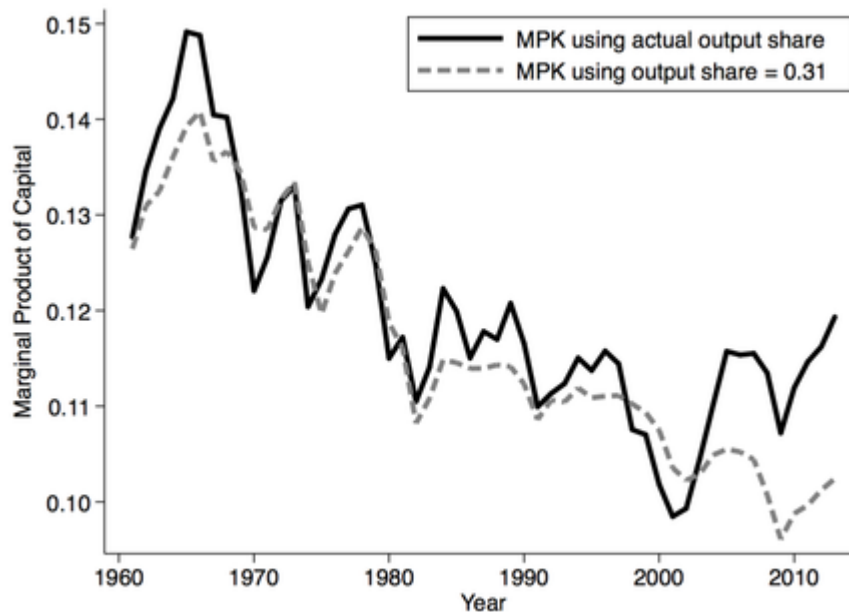
That the fall in the US rate of profit follows from Marx's law is supported by a decomposition of the changes in profitability ($s/c+v$), according to changes in the organic composition of capital (c/v) and the rate of surplus value (s/v) - namely when the organic composition of capital rises faster than the rate of surplus value, the rate of profit will fall and vice versa. Over the whole period, 1946-15, the rate of profit fell 30% (historic cost measure), while the organic composition of capital rose 46% and the rate of exploitation rose 2%.

FIGURE DECOMP

If we compare the changes in the rate of profit (ROP) with the changes in the organic composition of capital (OCC) and the rate of surplus value (ROSV), the Marxist story is again confirmed. Between 1945 and 2014, the US rate of profit (whole economy measure) falls 24% while the organic composition of capital rises 69% and the rate of surplus value just 2%. Between 1965 and 1982, when the ROP falls 21%, the OCC falls too by 1.5% and the ROSV falls sharply by 22% (in effect, there is a relative increase in OCC versus ROSV). Between 1982 and 1997 when the ROP rises 10%, the OCC rises nearly 7% and ROSV rises even more by 14%. After 1997, the ROP falls slightly by 1.6%, as the OCC rises faster (11.7%) than the ROS (7.4%).

This must be the context of explaining the post-war crises in American capitalism. Profit rates in most major capitalist economies rose from the early 1980s up to the end of the 20th century while investment growth and real GDP growth slowed. But most of that profitability gain was in unproductive sectors like real estate and finance. Manufacturing and industrial profitability stayed low, as several Marxist analyses have shown.

Even mainstream economics, using marginal productivity categories, reveal something similar. Using marginalist mainstream categories, Dietz Vollrath found that the 'marginal productivity of capital' fell consistently from the late 1960s.⁶ Capitalism has become less productive 'at the margin'. Marxist economics can explain this as due to a rising organic composition of capital (more technology replacing labour) leading to a fall in the rate of profit (return on capital). Post the Great Recession, the marginal productivity of capital rose because the share going to profit rose. In Marxist terms, the rate of surplus value rose to compensate for the rise in the organic composition of capital. Here's Vollrath's chart showing the time path in capital productivity from 1960 to 2013. If you remove the effect of rising profit share, the falling 'productivity of capital' continued (dotted line).



The profit cycle

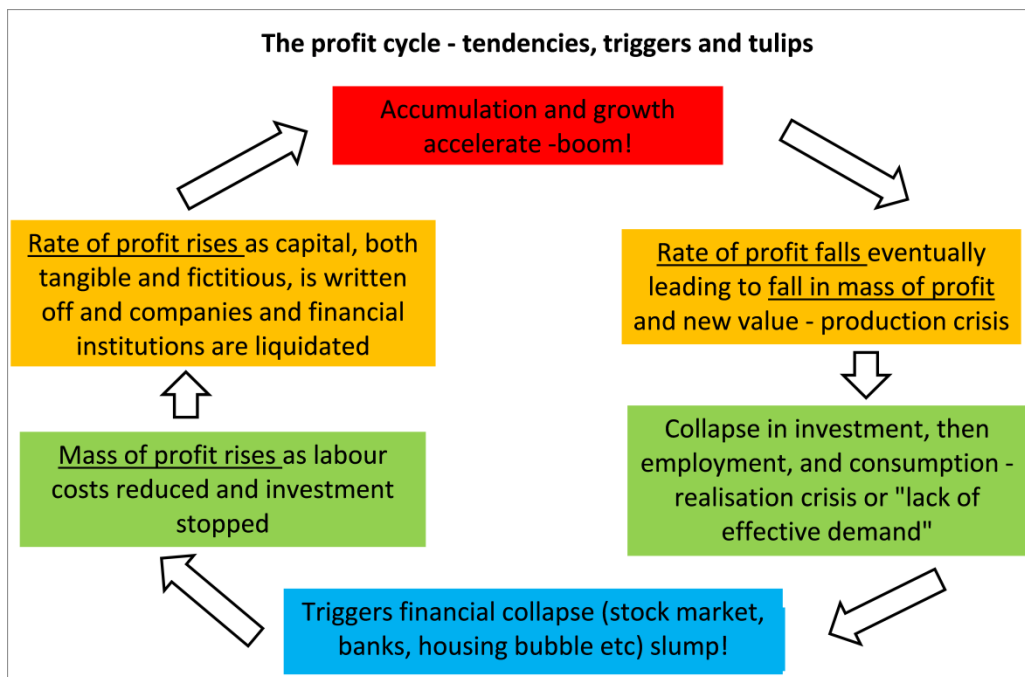
What is the process of the profit cycle under capitalism? The rate of profit tends to move downwards, impelled by the rising organic composition of capital as the forces of production develop, but this downward trend is reversed periodically due to crises.

As more and more capitalists introduce new technologies, increasingly less labour is employed and less surplus value is generated. Many capitals go bankrupt while a few prosper. The *capitalist production relation is stopped*. This is *destruction of capital*. Generalized *bankruptcies* and *unemployment*, and thus the crisis, follow. Marx is clear on this:

“In so far as the reproduction process is checked and the labour-process is restricted or in some instances is completely stopped, *real* capital is destroyed. Machinery which is not used is not capital. Labour which is not exploited is equivalent to lost production. Raw material which lies unused is no capital. Buildings (also newly built machinery) which are either unused or remain unfinished, commodities which rot in warehouses – all this is destruction of capital.” Marx, 1968, p. 495-6).

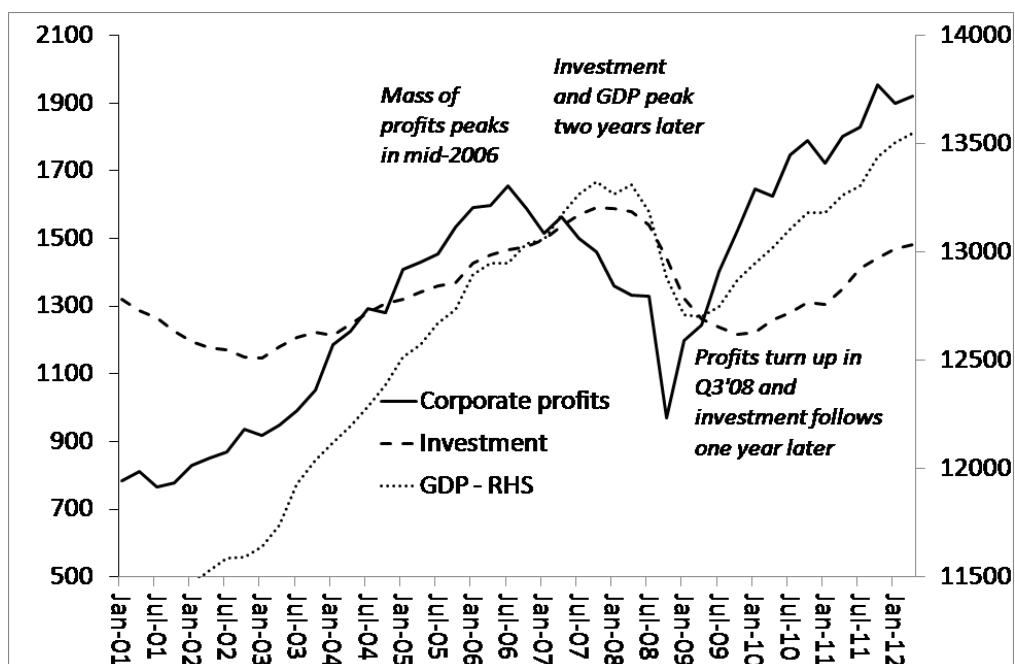
At a certain point, after sufficient capital has been destroyed, the conditions for rising profitability emerge again. The devaluation of the elements of constant capital, moreover, itself involves a rise in the profit rate. The mass of constant capital applied grows as against the variable, but the value of this mass may have fallen. The stagnation in production that has intervened prepares the ground for a later expansion of production – within the capitalist limits. And so we go round the whole circle once again.

When the profitability of capital falls, eventually, the mass of new value and profits will fall. This engenders a collapse in investment and it is this which triggers a slump. The slump creates conditions for a subsequent rise in the mass and rate of profit that breeds a rise in investment and a new period of growth. This is the cycle of profit and investment under capitalism. Profit leads investment and investment leads output and employment leads output and employment, contrary to the Keynesian/Minsky view that consumption and investment lead income and employment.



And if we look at the US economy, there were five recessions or slumps after 1963: 1974-5, 1980-2, 1990-2, 2001 and 2008-9.8 In each case, the rate of profit peaked at least one year before, but on most occasions up to three years before. And on each occasion (with the exception of the very mild 2001 recession), a fall in the mass of profit led, or coincided with, a slump.

US corporate profits were falling some two years before the Great Recession began and investment dropped before GDP contracted. And in the recovery, again it was profits that led investment and GDP up.



These conclusions are confirmed by other authors. Tapia Granados²² found that “data from 251 quarters of the US economy show that recessions are preceded by declines in profits. So

the mass of profits stop growing and start falling four or five quarters before a recession. They strongly recover immediately after the recession. Since investment is (to a large extent) determined by profitability and investment is a major component of demand, the fall in profits leading to a fall in investment, in turn leading to a fall in demand, seems to be a basic mechanism in the causation of recessions.”⁷

Sergio Camara Izquierdo²³ also finds that “a significant cyclical decline of the profit rate has substantially preceded the last two recessions... the cyclical slump in the rate of profit must be seen as an important precipitating factor in the deepest economic downturn since the 1930s”.

Yes, there was rise in the rate of profit and the mass of profits from 2002 to 2006. But profitability was still in a downward cycle from 1997 and the rate and the mass of profits did start to fall from 2006 onwards.

Carchedi reaches a similar result⁸. “If crisis years are years of falling profitability, crises are determined by falling profitability in the crisis year whether the pre-crisis year belongs to an upward or to downward cycle.... in all cases the CE-ARP (constant rate of exploitation) falls from the pre-crisis year to the crisis year (the same holds for the overall ARP)”

Carchedi argues that “To cause the crisis, falling profitability must cause a negative percentage increase in the new value produced, a slowing down of the rate of growth of employment and a slowing down of capital accumulation, i.e. capital destruction in the crisis year. This is how profitability determines investment in the crisis year... But not all falling profitability years are crisis years. The crisis is not simply a fall in the rate of profit. The crisis emerges if the fall in the CE-ARP determines a fall in capital accumulation, in employment and in new value. It is only at this point that falling profitability determines the crisis. The crisis is thus determined by falling profitability in the crisis year, whether it is preceded by an upward or a downward profitability cycle. The years preceding the crisis only prepare the conditions for the OCC to rise, for the CE-ARP to fall and thus for the crisis to emerge.”

Now my use of Tapia’s data has been criticised as ‘mechanistic’ because Tapia shows the only 44% of the variation in investment is explained by profits. What about the other 56%?⁹ But Tapia’s data show that profits lead investment, and this is the point. The purpose is not to argue that variations in profits determine all the variations in investments. That would be a mechanistic approach.¹⁰

In an unpublished paper, Tapia looks at US profits and investment again using annual data.¹¹ In this he confirms his previous results. “*Using the change in profits of US corporations as measured by NIPA, it appears very clearly that changes in profits have a major influence in determining the change in investment in the following quarters, with changes in profits predicting a change in investment in the same direction, that is, rising profits predicts a subsequent increase in investment, falling profits predict a decrease in investment.*”. He concludes that “*All this is extremely at odds with the views of Keynes, Kalecki and Minsky, who believed that investment is the basic macroeconomic variable, just determined by the whims of rich people ("animal spirits"). In the Keynesian view it is that condition of "entrepreneurial confidence" or optimism that together with government spending determines the evolution of the economy. Evidence shows however that investment is to a large extent determined by*

previous profitability. This relation was emphasized by Marx who said that the rate of accumulation depends on the rate of profit, a view that he arrived at from abstracting the main elements of the empirical reality of 19th century capitalism. That the rate of investment (or accumulation) depends on profitability was shown with statistical data more than half a century ago by Wesley Mitchel and Jan Tinbergen who were not following Marxian theory in any way.”

I also did some analysis of the changes in profits and investment and changes in profits to GDP in the US economy in the post-war period and applied Granger causation techniques¹². My results confirm Tapia’s. After one year, a change in profits ‘causes’ a change in investment and after two years a change in GDP. A change in investment causes a change in GDP for two years out.

Even mainstream economists have reached a similar conclusion that it is change in profit that is the main driver of changes in investment.

Recent research by JP Morgan concluded: “both business confidence and profit growth are highly statistically significant in explaining capital spending.” JP Morgan reckons that business spending “is less a function of borrowing costs than of an assessment of the outlook and profitability. On balance, this model explains 70-85% of the variation in business equipment spending growth”.¹³

Similarly, Deutsche Bank’s economists have noticed that “Profit margins always peak in advance of recession. Indeed, there has not been one business cycle in the post-WWII era where this has not been the case. The reason margins are a leading indicator is simple: when corporate profitability declines, a pullback in spending and hiring eventually ensues.”¹⁴ Deutsche goes on: “With that in mind, the historical data reveals that the average and median lead times between the peak in margins and the onset of recession are nine and eight quarters, respectively”.

Profit margins peak on average about two years before the onset of recession, but the lead times vary substantially across business cycles

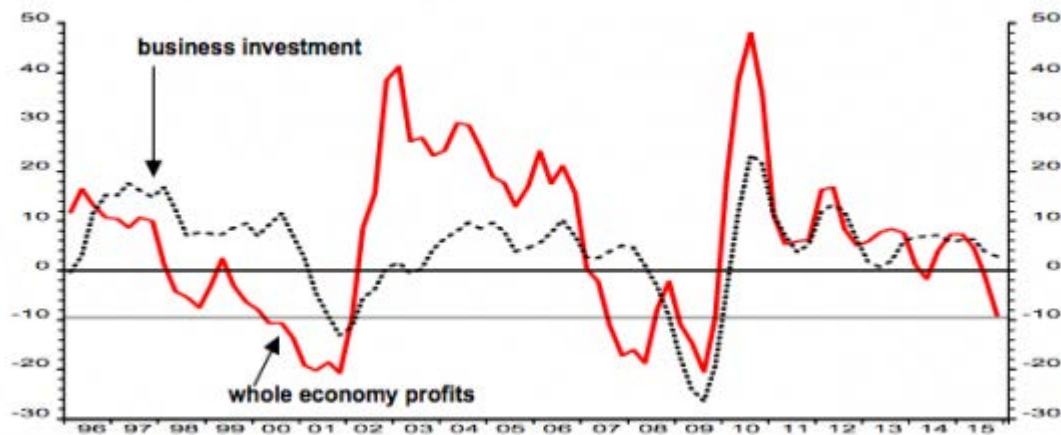
Business cycle	Peak in margins	Distance to recession (quarters)
1949 to 1953	Q4 1950	11
1954 to 1957	Q4 1955	8
1958 to 1960	Q2 1959	5
1961 to 1969	Q1 1966	16
1970 to 1973	Q1 1973	4
1975 to 1980	Q4 1978	6
1983 to 1990	Q4 1988	8
1991 to 2001	Q3 1997	15
2002 to 2007	Q3 2006	6
2009 to present	Q3 2014	?
Average>		9
Median>		8

Source: BEA, NBER, Haver Analytics & Deutsche Bank

The Cleveland Fed’s analysis remains the most pertinent. ¹⁵ Emre Ergungor, the Cleveland’s senior economic advisor, has found that there is a very high correlation between the movement of business profits, investment and industrial production. He found that “the

correlation between the change in corporate profits and the contemporaneous change in gross domestic private investment is 57 percent, but the correlation goes up to 68 percent if I use the one-quarter-ahead change in investment.” And concluded that “firms seem to adjust their production and investment after seeing a drop in their profits.” His time gap between profits and investment is about three quarters of a year. My own estimate is slightly longer.

US whole economy profits (pre-tax, domestic non-financial) are leading the business investment cycle and ultimately the overall economy into recession (both 2q mav, yoy%)



Source: Datastream

Moreover, changes in expected profits depend on past profitability, so a BIS study concludes.¹⁶ *“Corporate investment plans as well as actual investment are well explained by CFOs’ expectations of earnings growth. We also show that errors in CFO expectations of earnings growth are predictable from past earnings and other data.... return expectations appear to be extrapolative: they are high after a period of high market returns, and low after a period of low market returns ... Consistent with previous evidence at the aggregate level, expectational errors of individual CFOs are also strongly correlated with firm profitability and general economic conditions, in a way that appears to be extrapolative. “*

The underlying cause of the Great Recession

But maybe the lead-up to the Great Recession has a different explanation from Marx’s law of profitability and the profits to investment cycle presented above? In particular, how can we explain the divergence between corporate profits and the level of net investment in the US that began from as early as 2002, if profits lead investment?

After 2000, the US rate of profit does not return to levels seen before 2000, but there is a recovery in profitability up to 2006. It has been argued that this shows Marx’s law cannot provide an explanation of the Great Recession of 2008-9. In particular, there was a growing divergence between the rise in profits in the business sector and investment. Corporations were and are ‘awash with cash’ that they do not invest in means of production. So the underlying cause of the Great Recession cannot be Marx’s law. The explanation must be elsewhere – perhaps in the huge rise in the financial sector and private sector debt causing ‘financial instability’ as described by Minsky. So, even if the causes of other post-war US recessions can be found to do with profits, the Great Recession was different. It was a Minsky moment not a Marx one.¹⁷

GRAPH versus net investment

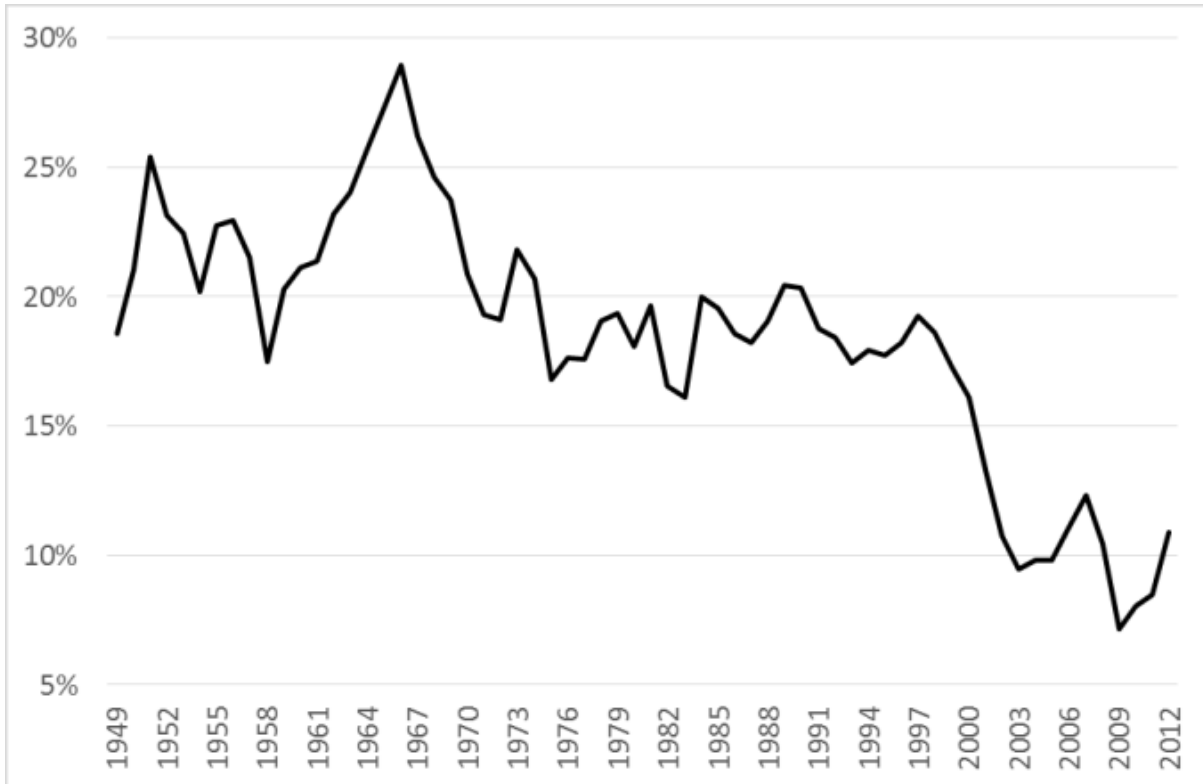
The first issue here is the relation between the productive and unproductive sectors of the capitalist economy. The validity of the argument that the Great Recession was caused by a crisis in the financial sector and not by falling profitability, profits and investment in the productive sectors depends on considering the Great Recession as unique. The first 30 years of post-war US capitalist development were free from financial crises, except for the relatively minor crises of 1961 and 1963. In the 29 years from 1945 to 1974, there were only these two financial crises. But from 1974 to 2007, there were seven major financial crises.

If profitability rises in the productive sectors, less capital migrates to finance and speculation, and the ratio of financial to total profits will fall. This spells troubles for the financial sector. It is vice versa if profitability falls in the productive sectors. Then more capital seeks higher opportunities in finance and speculation and the ratio of financial profits will rise. This is an indication that the speculative and financial bubble is growing. But this does not contradict the thesis that the root cause of financial crises is to be found in the productive sphere, i.e. in the insufficient production of surplus value. *“Higher profits and profitability in the unproductive sectors are the other side of the coin of falling profitability in the productive sectors”*.¹⁸

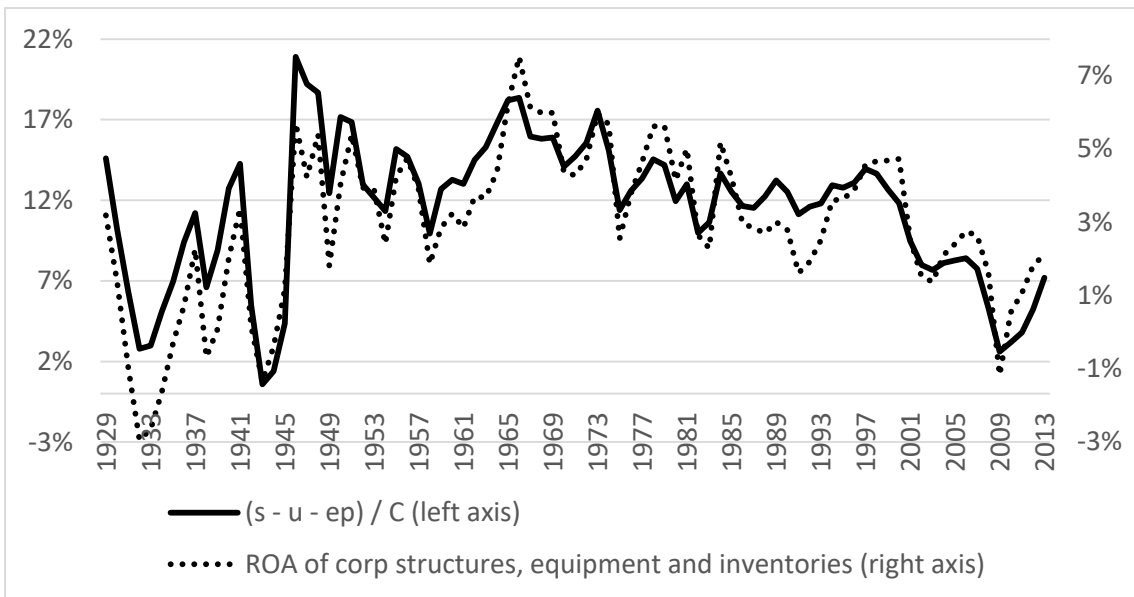
The post-2000 divergence between corporate profits and capex can be explained by a rise in investment in financial assets or what Marx called ‘fictitious capital’. This was another counteracting factor to the law described by Marx and was significant after 2000. But like other counteracting factors, it cannot last. Indeed, excessive credit will generate an even larger collapse in capital values in the crash as the Great Recession shows. Much of the rise in corporate profits was fictitious and proved to be so when financial crash began in 2007.

Peter Jones¹⁹ has argued that *“the main influence on the rate of accumulation, and hence on the rate of growth, is movements in the rate of profit over the long term. But over the short-term, movements in financial markets have their own effect on the rate of accumulation, and do not merely reflect movements in the underlying rate of profit. This happens most dramatically during a financial market crash, when the supply of credit is drastically curtailed. Not only does this mean investment declines drastically but many firms stop production, lay off their workers or go bankrupt because they cannot sell their output and cannot borrow. On the other hand, fictitious profits can also hide the consequences of a falling rate of profit for a time. government borrowing can ‘artificially’ inflate the after-tax rate of profit on production (and the same effect applies to after-tax rates of profit from secondary exploitation); and fictitious profits can ‘artificially’ inflate investors’ wealth and rates of return.”*

In a recent paper, Peter Jones²⁰ adjusted the official US figures for profit for fictitious profits, namely those made by banks from lending to government (bond purchases) and from utilising the savings of workers (mortgages etc). Jones goes through the NIPA accounts to deduct what he reckons are the components of this fictitious profit to come up with a measure of profit that best represents surplus value created in production and realised by the corporate sector. When he puts this against net fixed assets, the result looks like this.



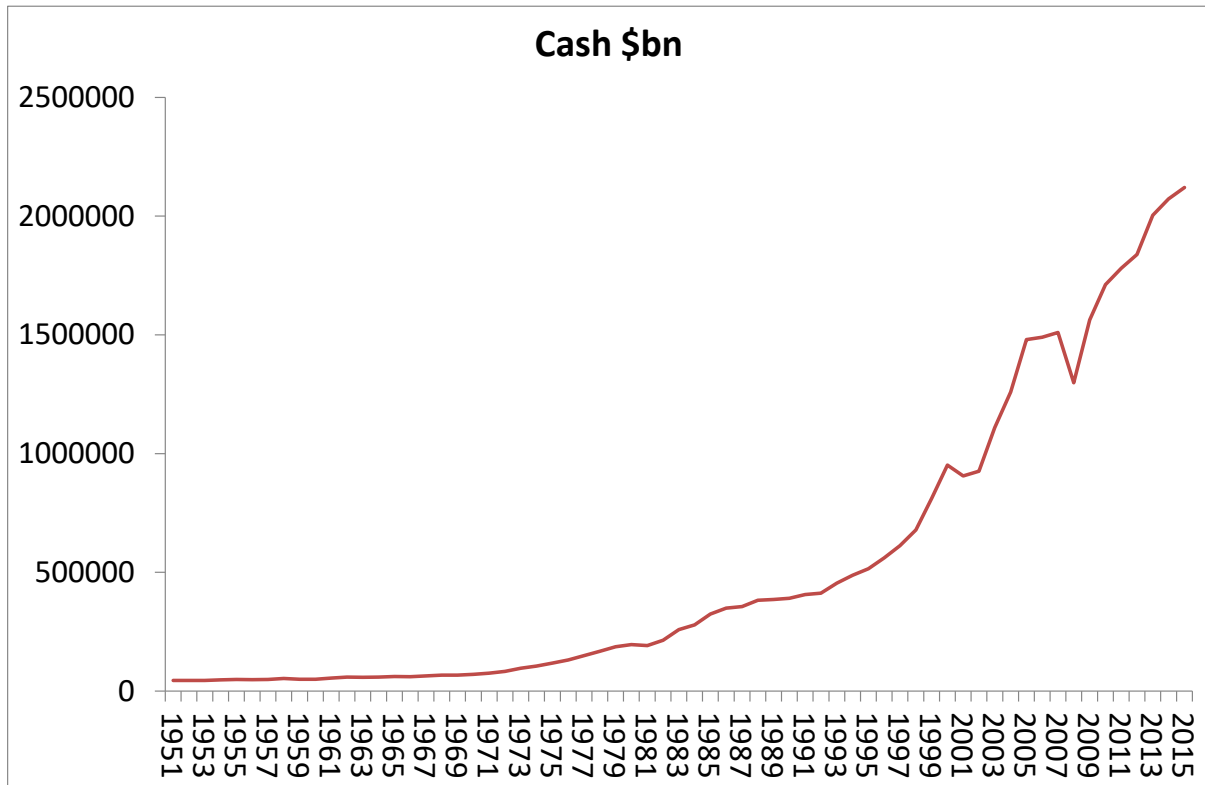
So Jones argues that “*The most relevant measure of the rate of profit to compare with the rate of accumulation is the underlying rate of profit, since this determines how much surplus value is ‘available’ to corporations to reinvest.*” Jones removes the fictitious profits created by financial speculation in bonds and stocks and finds that the underlying productive sector rate of profit continued from 1997 through the 2000s and was thus closely correlated with net business investment.



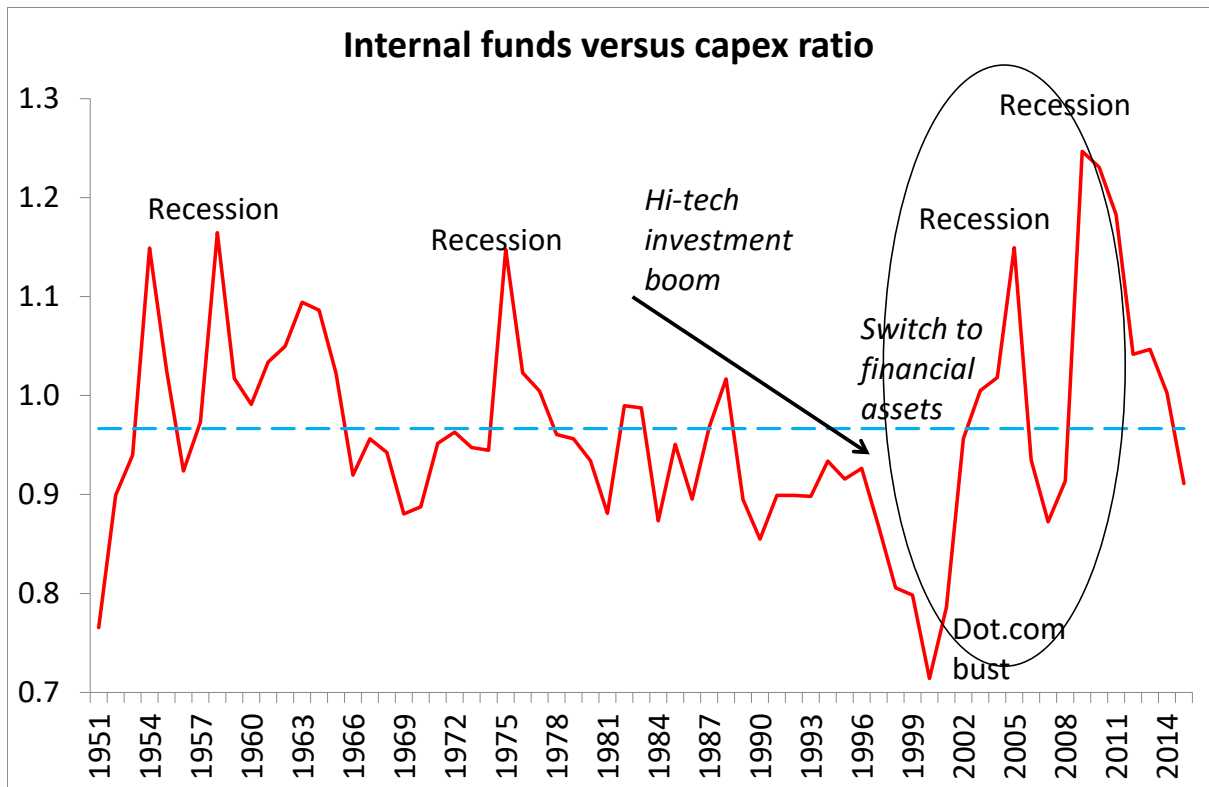
He found that the R squared coefficient of correlation between them is 0.77. “There is no evidence that ‘*financialisation*’ or any other phenomenon disrupted the link between the underlying rate of profit and the rate of accumulation.”

The second issue is whether the supposed sharp increase in cash reserves of major US corporations suggests that the Great Recession could not have been caused by a lack of profit, but on the contrary, by a lack of opportunities to invest or ‘absorb’ excessive corporate savings.

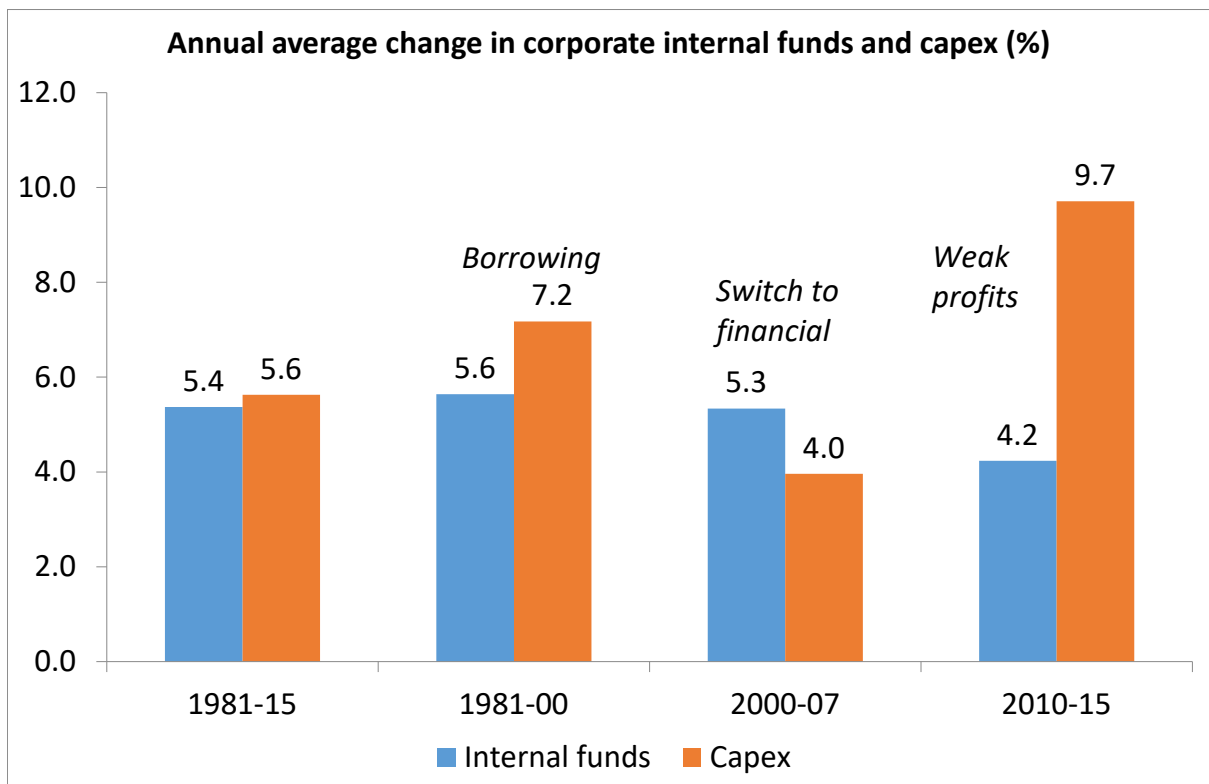
The graph below shows the surge in cash reserves held by US corporations, something that took off at the beginning of the millennium.



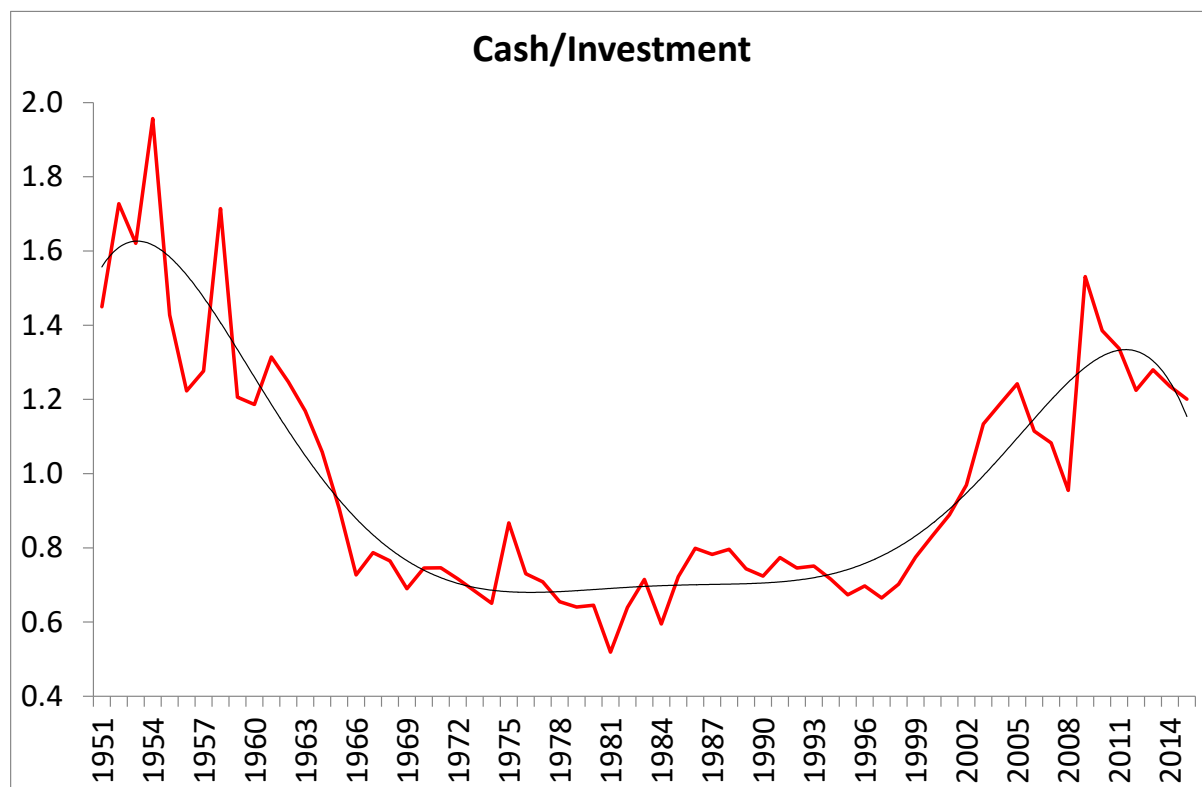
In parallel, corporate internal funds (after tax and dividends) rose compared to corporate investment from the early 2000s. The graph below shows that the ratio of corporate funds available to invest rose above the average from 2002. However, it becomes clear that this ratio is usually in positive territory only in recessions. The explanation: companies hoard cash in a recession because they are unwilling to invest until profitability returns.



Usually, US corporations have invested more than they had available in corporate savings. The only period that this was not the case is 2000-07. But note, corporate savings between 2000-7 did not grow faster (5.3% pa) than in other periods. What happened was that capex grew much more slowly (4.0%). That suggests that corporate savings were switched into financial rather than productive investment.

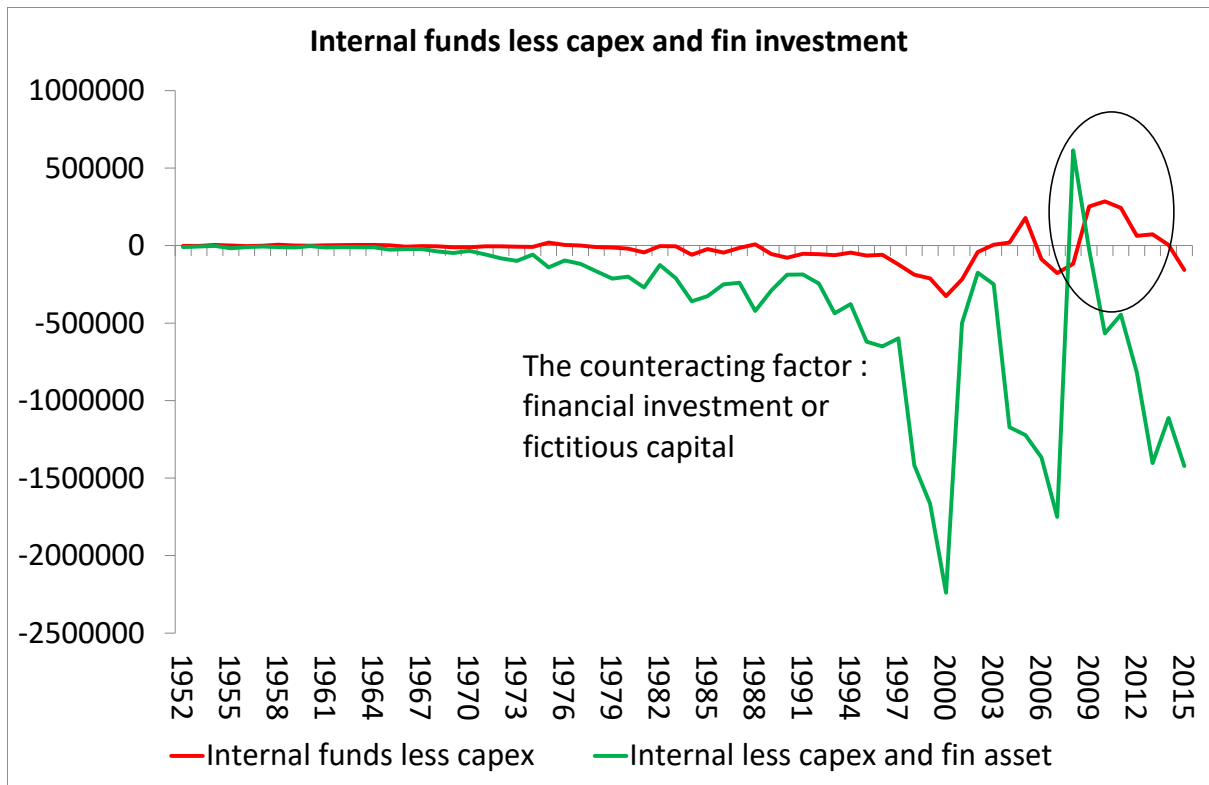


A recent study of the corporate ‘saving glut’²¹ found that the fall in corporate investment since the global financial crash was “in line with historical norms”. The ‘cash boom’ started before that in the early 2000s. This was an exception because over the whole previous period 1960-2000, it was “*statistically significant that higher profits raises investment*”.

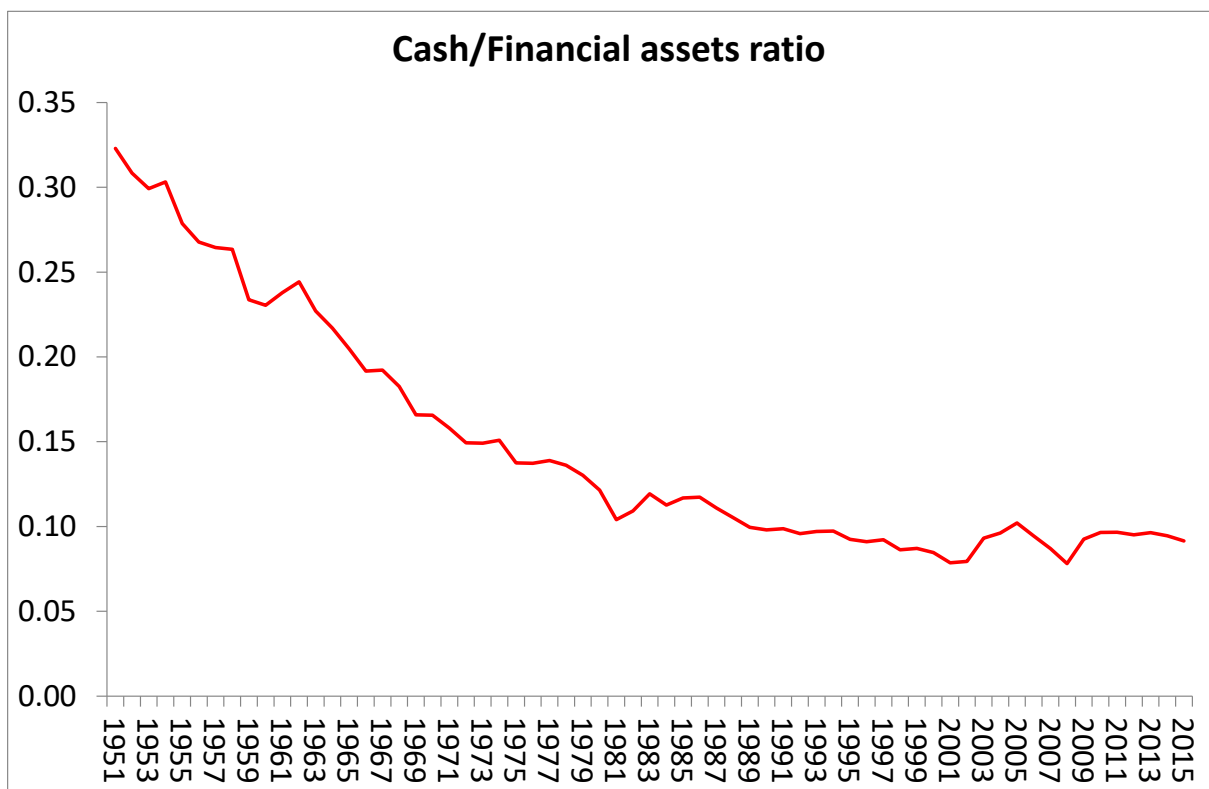
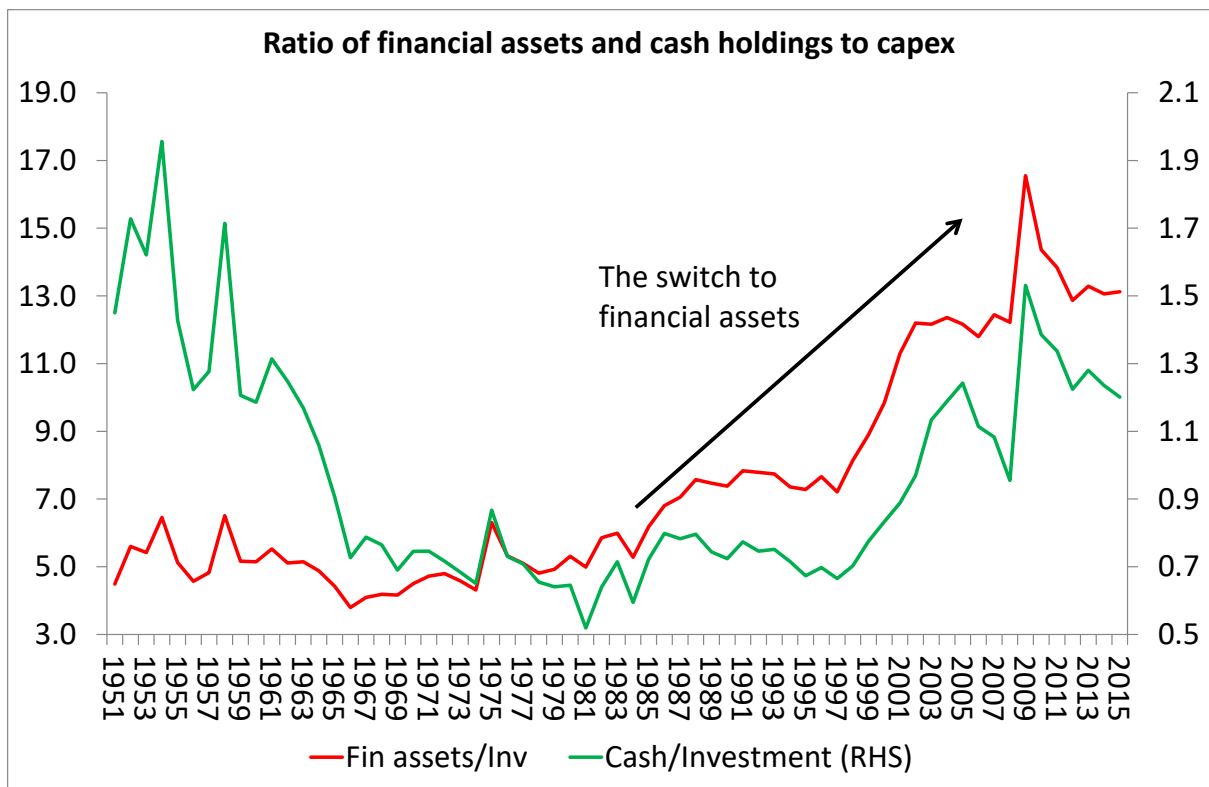


The IMF makes a similar point in their study of the rise in cash earnings.²² The IMF notes that the increase in profits after 2002 was mainly due to lower taxes and interest payments rather than to a rise in gross operating profits. The change in the latter “does not appear to be out of line with previous cyclical episodes”. Moreover, the IMF found that the main reason for the divergence between corporate savings and investment was a fall in investment not excessive profits.²³

This is confirmed when we add in the change in non-financial corporate financial assets to the ratio of internal funds to capex. After 2000, there appears to be excessive corporate savings not invested in capex (red line). However, adding in financial asset investment (green line) reveals a huge deficit, taking off after the end of the 1990s. Non-financials borrowed to speculate and not invest – in a period where the profitability of capital has peaked and the profitability of productive capital was still falling.

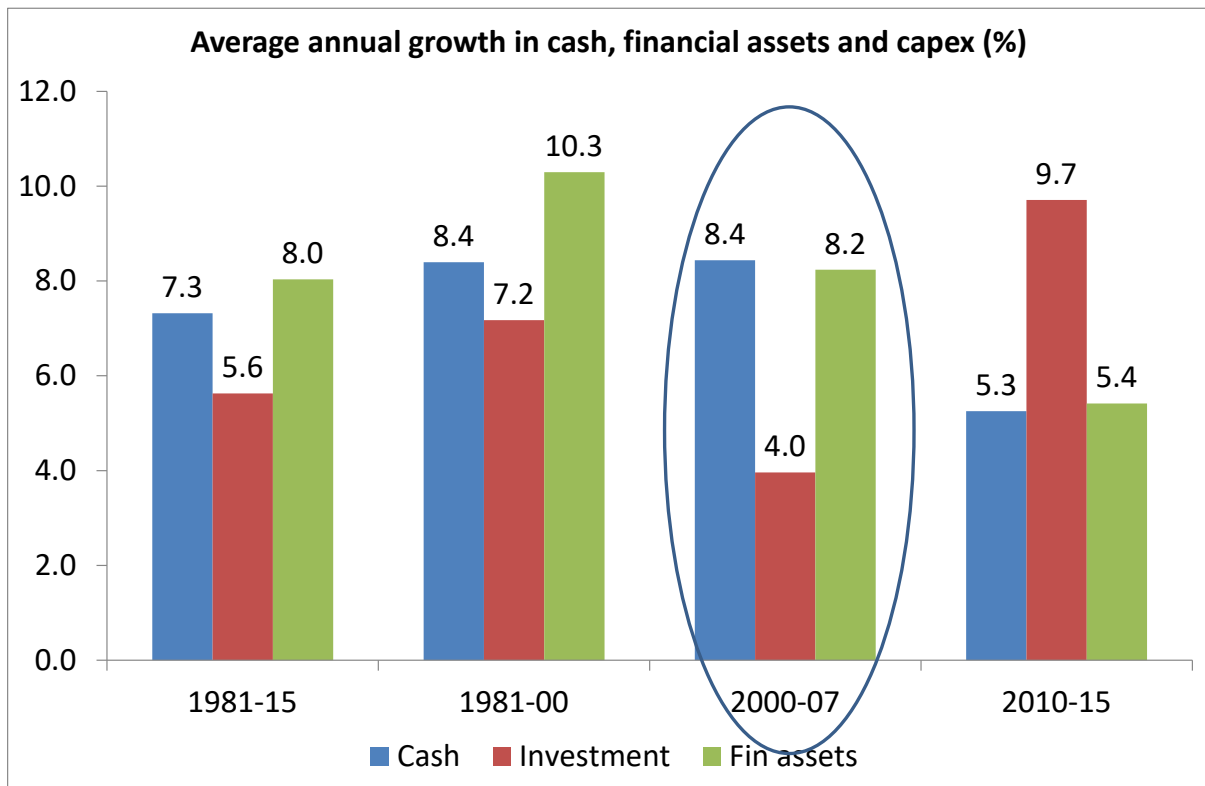


That the reduction in capex is related to rise in the net purchase of financial assets is also supported by the rise in corporate debt alongside the rise in cash reserves. S&P Capital IQ noted that a record stash of \$1.84tn in cash held by US non-financial companies masked a \$6.6tn debt burden. They made the point that the concentration of cash of the top 25 holders, representing 1 per cent of companies, now accounts for over half the overall cash pile. That is up from 38 per cent five years ago.



Moreover, corporate cash is not evenly spread, and is in fact being held by an increasingly concentrated group of companies, according to a study by business advisory and accountancy firm Deloitte of Bloomberg data. At the start of the credit crisis in 2007, companies with more than \$2.5bn each in cash and near cash items, such as short-term investments, held 76 per of the \$1.98tn of cash reserves of the non-financial members of the S&P1200. By the

third quarter of 2013, this had risen to 82 per cent (of a total \$2.8tn), the highest percentage since before 2000. Of non-financial companies in the S&P Global 1200 index, just 8.4 per cent hold 50 per cent of the cash. Indeed, 40% of companies actually reduced their cash balances.²⁴.



The Great Recession led to the hoarding of cash – a phenomenon that Marx identified with slumps. In addition, a recent IMF study reckoned that those companies with more cash tended to be hi-tech because borrowing was more expensive for investment in ‘non-tangible’ assets like software and IP.²⁵

The different causes

“For historians each event is unique. Economics, however, maintains that forces in society and nature behave in repetitive ways. History is particular; economics is general.” Charles Kindleberger¹⁶,

Every slump will have different characteristics and triggers: 1974-5 (oil prices); 1980-2 (high energy prices); 1990-1 (commercial property bust); 2001 (dot com bust); 2008-9 (housing bust and finance). But if crises are recurrent and if they have all different causes, these different causes can explain the different crises, but not their recurrence. If they are recurrent, they must have a common cause that manifests itself recurrently as different causes of different crises.

A Minsky moment might explain the Great Recession but no other recessions. Only the Marxist explanation can explain the recurrence of crises. Marx’s law is the underlying driver of booms and slumps under capitalism. The Great Recession was a Marx not Minsky moment.

Some conjunctural phenomena like ‘financialisation’ in the last 30 years or neoliberal policy regimes may seem to be the cause of crises but they are not alternative causes but are “themselves explained by the LTRPF”²⁶.

Summary of conclusions:

Marx’s law is empirically valid.

Marx’s law is the underlying explanation of crises and cycles.

The rate of profit, the mass of profit and new value are related and causal for changes in investment, and thus employment and growth – in other words in the post-war slumps in production in the US.

The divergence between profits and investment after 2000 is explained by a switch to financial assets with available profits. Profitability in productive assets remained low and declining and that was the motivation.

Cash reserves rose no faster than in previous periods and less relative to financial assets of NFCs. The hoarding of cash is to be expected in recessions and the evidence of the Great Recession is no different in degree.

¹ AMSTERDAM

² CARCHEDI BEHIND THE CRISIS

³ LONG DEPRESSION

⁴ See Carchedi (2011b,) and *Crises and the Law* in this volume for the causes of the rise and fall of the Golden Age.

⁵ <http://pinguet.free.fr/usrop2015.pdf>

⁶ VOLLRATH <https://growthecon.wordpress.com/2015/11/24/describing-the-decline-of-capital-per-worker/>

⁷ TAPIA

⁸ Carchedi

⁹ KINCAID

¹⁰ Kincaid seems to interpret my statistical analysis in a quite particular way, as assuming the variation in profits determining 44% of the variation in investment necessarily means that other factors are determining the 56% remaining variation in investment. There is however a different and possible explanation, e.g., that both profits and investment are measured with error, and this error may distort the statistical relation. May be variation in profits actually determine 99% of the variation in investment but because of error the measured variation of profits only determines 44% of the measured variation in investment. Errors in variable measurement do not tend to raise patterns, they tend to blur them. Oscar Morgenstern emphasized decades ago that measurement of economic variables have errors that may be quite substantial and, on the other hand, NIPA tables are often updated and recent data are revised, so that profit data for recent years or quarters are often updated (usually down) a few quarters or a few years later.

¹¹ Profits encourage investment, investment dampens profits, and government spending has little effect — Business-cycle dynamics in the US, 1929-2013

José A. tapia

¹² ROBERTS CAUSATION Granger causation:

	P-values		Result		Conclusion
	Profits	GDP			In first year GDP 'cause' profit
T-1	0.2438	0.017	NULL	GS	In second year onwards profits lead
T-2	0.014	0.0578	GS	NULL	
T-3	0.0034	0.1427	GS	NULL	Profits lead GDP after the first year
T-4	0.00159	0.0576	GS	NULL	
	Profits	Investment			Profits lead investment in first year
T-1	0.0014	0.634	GS	NULL	
T-2	0.0096	0.001	GS	GS	In the first year profits drive investment
T-3	0.021	0.021	GS	GS	
T-4	0.01235	0.01282	GS	GS	
	Investment	GDP			Investment leads GDP for two years out
T-1	0.0012526	0.07533	GS	NULL	Investment drives GDP for two years out
T-2	0.0151	0.0053	GS	GS	
T-3	0.0609	0.014054	NULL	GS	
T-4	0.164	0.0372	NULL	GS	
T-5	0.3027	0.1389	NULL	NULL	

¹³ JP MORGAN

¹⁴ <http://www.zerohedge.com/news/2016-06-04/when-will-recession-start-deutsche-banks-disturbing-answer>

¹⁵ <https://www.clevelandfed.org/newsroom-and-events/publications/economic-commentary/2016-economic-commentaries/ec-201609-recession-probabilities.aspx#U6>

Cleveland

The measure I propose is the inflation-adjusted quarterly change in pre-tax corporate profits.⁵ Intuitively, a change in corporate profits should be highly correlated with industrial production and investment. One would expect firms to produce

and invest more if their profits are rising. The empirical question in this analysis is which comes first: the change in profits or production and investment?

Using quarterly data since 1970, figures 2a and 2b show the three data series, but to improve the exposition of the relationship, I plot year-over-year changes rather than quarterly changes. A simple correlation analysis shows that the correlation between the change in corporate profits and the contemporaneous change in industrial production is 54 percent, but the correlation goes up to 66 percent if I use the one-quarter-ahead change in industrial production. Similarly, the correlation between the change in corporate profits and the contemporaneous change in gross domestic private investment is 57 percent, but the correlation goes up to 68 percent if I use the one-quarter-ahead change in investment. More formally, a Granger causality test indicates that the quarterly change in profits leads the quarterly change in production by one quarter, but the change in profits is independent of the change in production. A similar relationship applies to the quarterly change in profits and investment.⁶ Thus, firms seem to adjust their production and investment after seeing a drop in their profits.

¹⁶ BIS Working Papers No 562 Expectations and investment
by Nicola Gennaioli, Yueran Ma and Andrei Shleifer

Monetary and Economic Department

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¹⁷ It is enough to observe that debt and financial instability, his main preoccupations, have become some of the principal topics of inquiry for economists today. A new version of the “Handbook of Macroeconomics”, an influential survey that was first published in 1999, is in the works. This time, it will make linkages between finance and economic activity a major component, with at least two articles citing Minsky. As Mr Krugman has quipped: “We are all Minskyites now.” Central bankers seem to agree. In a speech in 2009, before she became head of the Federal Reserve, Janet Yellen said Minsky’s work had “become required reading”. In a 2013 speech, made while he was governor of the Bank of England, Mervyn King agreed with Minsky’s view that stability in credit markets leads to exuberance and eventually to instability. Mark Carney, Lord King’s successor, has referred to Minsky moments on at least two occasions

¹⁸ Carchedi The Law

¹⁹ Jones thesis p219

²⁰ JONES

²¹ Gruber, Joseph W., and Steven B. Kamin (2015). The

Corporate Saving Glut in the Aftermath of the Global Financial

Crisis International Finance Discussion Papers 1150.

<http://dx.doi.org/10.17016/IFDP.2015.1150>

²² IMF

³The decline of corporate tax payments since 2000 may be partly the consequence of the economic cycle (tax receipts may have also been reduced by corporates carrying forward the losses from the economic downturn in 2001) but it is also the effect of the general decline in statutory corporate income tax rates in the G-7 economies over the last decade (KPMG, various issues; and European Commission, 2005).

While higher profits explain part of the rise in NFCS excess saving in recent years, the decline in nominal capital spending explains around three-quarters of the increase in NFCS net lending since 2000 in the G-7 countries. Simply put,

²³ firms have been investing a smaller share of

and cyclical goods. This suggests that while there were common factors behind the increase in corporate cash holdings in the early 2000s, recent behavior has been driven by industry-specific factors, particularly stronger profits in resource companies following the upsurge in commodity prices (which likely continued in 2005).

As well as differences across industries, the distribution of cash accumulation across firms is very unequal in dollar terms, with the median increase in cash among the largest firms being eight times larger than among the mid-size firms in the sample (Table 4.2). Further, the accumulation of cash is far from universal—about 40 percent of the firms in the sample actually reduced their cash balances during 2001–04. Nevertheless, while the biggest 100 firms in the sample accounted for about 40 percent of total cash accumulation on average between 2001 and 2004, they also accounted for 40 percent of total sales, indicating that cash accumulation has been relatively evenly distributed once firm size is accounted for. This stands in contrast to the 1996–2000 period when cash accumulation was driven primarily by the smallest firms, suggesting that some of the factors underlying cash accumulation may have changed over these two periods.

a level that equates the marginal cost and benefit. While the cost of holding liquidity is the lower expected return, the benefits derive from the reduced probability of being short of financing if profits fail to meet expectations, and, therefore, being forced to cut investment plans and/or dividend payments or having to raise costly external finance.

The accumulation of cash in recent years may therefore be related to strong profit growth, but also reflects factors that have changed the expected benefits or costs of cash holdings, including lower interest rates; higher sales (and profit) volatility as firms are now operating in a more uncertain environment (Figure 4.7);¹³ and the larger share of intangible assets in corporate balance sheets (firms with more intangible assets are likely to hold more cash given the higher cost of external finance for these type of uncolla-

terized and more volatile assets; see Passov, 2003).

Indeed, firms that have accumulated more cash relative to their total assets (those in the top quartile of the increase in cash over total assets distribution) tend to have more volatile sales, a higher share of intangible assets, and higher Tobin's q (which proxies for higher expected profitable investment opportunities; see Appendix 4.1). At the same time, however, cash-rich firms are also the ones with larger excess cash flow (the difference between gross savings and capital spending), suggesting that strong profitability has also played a role.¹⁴ If cash accumulation has been driven by changes in the marginal cost and benefits of holding liquid assets rather than simply excess cash flows, the variables described earlier should be able to explain a significant share of the increase in

¹³Firms with the highest increase in cash relative to their total assets also had relatively higher access to external financing, lending some support to the view that at least some firms may have been taking advantage of temporarily advantageous conditions for external financing to accumulate cash holdings that will be used as a buffer when external capital is more expensive (Greenwood, 2005). Also, on average over 2001–04, cash-rich firms tend to have smaller net assets from acquisitions, contrary to the view that associates the recent increase in cash accumulation with the resurgence of mergers

²⁶ FREEMAN