

CREDIT CYCLES: FREEWHEELING, DRIVEN OR DRIVING?

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Abstract

The discourse on credit cycles has been reinvigorated in the wake of the global financial crisis. This paper aims to compare and contrast the positions of the mainstream, Marxist, Austrian and post-Keynesian schools of thought on these matters. It is posited that most notions ‘underplay’ the significance of *real* economy factors in shaping the fluctuations of credit levels and relations. These ideas are, arguably, best illustrated by Marx (as interpreted by the Temporal Single System) and tendency for the profit rate to fall.

Key Words Credit Cycle, Business Cycle, Austrian School, Marxism, Temporal Single System, Post-Keynesian Monetary Theory

Introduction

Times of relatively cheap and easy money, that facilitate credit expansion in response to demand, tend to precede and follow times of credit contraction in a cyclical fashion that we term the credit cycle. These cycles are, both theoretically and empirically, correlated to the fluctuations of the (real) business cycle. The question this paper seeks to address is whether these credit cycles: *freewheel* i.e. simply coincide neutrally with output fluctuation; are *driven* i.e. are determined by certain *real* factors that act as motivating signals for financial agents or, indeed, themselves *drive* i.e. determine the key outcomes of the real economy.¹ In the first scenario, for instance, an entrepreneurial decision to invest could lead to an expansion of bank credit that is motivated by a cognitively-derived (and/or subliminal) expectation of demand that is independent (at least directly) of financial market considerations other than the interest rate. This approach is consistent with many of the mainstream economists that tend to model money as neutral, in a *Ricardian* sense, and then focus on business cycle theory in order to explain any fluctuations in monetary conditions.² Conversely, heterodox economists generally consider that monetary factors *matter* in terms of triggering the behaviour of economic agents and hence the real economy. This view, of course, has been galvanized by the recent financial crisis, with its associated literature that details the failings of specific elements of credit mechanics.

¹ There are, of course, other contributory variables. Financial agents and (real) economy agents are both, for instance, affected by state monetary and fiscal (and other) policies or exogenous shocks. In addition these financial/economic agents could also be co-determinate.

² The exception to this rule includes monetarists. Friedman, whilst accepting the neutrality of money, identified the Federal Reserve induced credit squeeze as the principal cause of the Great Depression Kindleberger, C. (2000). *Manias, Panics and Crashes: A History of Financial Crises*. Eastbourne, Macmillan..

Yet, the resolution of the conundrum of whether the *dog* or the *tail* constitutes the independent variable, leads us to significant policy conclusions. If the dominant view states that finance is the driver, as appears to be the case, then the approach adopted to avert economic crisis will target the financial sector. The instigation of the UK Independent Commission on Banking, set up by the incoming coalition government, is an example of this type of thinking.³ However, as Ivanova (p.240) has illustrated with the following passage, Marx was very dismissive (in his critique of Proudhon) of those that presumed the contradictory (and exploitative) elements of capitalism could be redeemed by reforming the financial system. Monetary sector transition, whilst beneficial, was illusory and would simply leave surplus value, falling profit rates and *rentier* incomes (with their extraction of usury and destabilising effects on the business cycle) intact (Ivanova 2011).

The illusion that metallic money allegedly falsifies exchange arises out of total ignorance of its nature. It is equally clear, on the other side, that to the degree to which opposition against the ruling relations of production grows, and these latter themselves push even more forcibly to cast off their old skin – to that degree polemics are directed against metallic money or money in general, as the most striking, most contradictory and hardest phenomenon which is presented by the system in palpable form. One or another kind of artful tinkering with money is then supposed to overcome the contradictions of which money is merely the perceptible appearance. [Grundrisse, 1993, London, Penguin, p.240]

This all emanates from the view that finance is the driver. This paper argues, therefore, in line with Marx, that the causal effect is (in the main) reversed whilst recognizing that financial and (real) economic factors generally *co-determine* the motivation of agent activity across the cycle.⁴ The paper first discusses mainstream approaches and then considers the post-Keynesian, and Austrian schools on the matter. It is contended that they all offer valuable insights in to the workings of the business/credit cycle but ignore (or are weaker on) the significance of productive economy factors as drivers. This paper then concludes, in response, that this omission derives from a rejection of the (objective) ‘law of value’ (and, by implication, the tendency for the profit rate to fall), as a mode of analysis and calibration. Thus, depriving the researcher of a useful measurement of commodities – a unit of abstract social labour, that can be related to the vagaries of the (more mystical) *fictitious* monetary sector. Finally, the paper contends that the adoption of the Temporal Single System Interpretation helps to resolve the issue.

Mainstream View (including the Neo-Classical/Keynesian Synthesis)

The mainstream tends to view money as neutral and, therefore, credit cycles *freewheel* alongside output fluctuations. Marginal analysis, for instance, makes use of static models to convey market conditions, which are assumed to be reflective of completed adjustments. Money is then *added* to the simultaneous model(s) and is presumed to have no impact on the equilibrium and price ratios established – a Walrasian price theory (Walras 1926; Harris 1981). Exogenous change (if this is possible) to the volume of money is then expected to increase the price level but assumed to have no impact on relative prices. Is this realistic?

Firstly, when an exogenously-induced addition to the volume of money occurs it is unlikely that it will be distributed proportionately across all market agents. Yet, it is this miraculous

³ The stringent preparations for Basle III, *ringfencing* proposals, or the recent establishment of the Financial Stability Board, are further examples of this trend.

⁴ The notion of *reflexivity* is that both variables can instigate cause and effect relations.

coincidence that is necessary in these models. Secondly, as Potts notes, the capitalist economy is *not* a barter economy it is a monetary one. A Walrasian (barter) exchange auction, in order to establish price ratios, is simply not an adequate explanation of the reality (Potts 2005). Thirdly, simultaneous models assume that production (and demand) conditions change, leading to a new equilibrium, rather than allowing for an (endogenous) price changes from whimsical commercial agents to disturb the ratios. Yet, prices go up because *people* put them up, as firms jostle for position. It is normal to expect that this is a *continuous* process in the real world, and one *not* (necessarily) determined by changes in the volume of money, and should be taken into consideration by a model that purports to explain the operation of a monetary economy. Fourthly, money can be hoarded (and re-introduced from hoards) and, agents can choose randomly to abstain from purchases during circulation periods. It is simply not appropriate, as Freeman noted, to assume Say's law in the social process of exchange (Freeman 1996). Fifthly, as the *circuitists* have emphasized (and argued here), monetary factors *per se* can have an *instigative* impact on new investment (and, therefore, equilibrium) that would otherwise not occur (Graziani 2003). Money cannot just simply be ignored. Finally, it is assumed in simultaneous models that the money supply determines the price level. Yet, many (including some mainstream thinkers) have argued causality is the other way round. Marx adhered to this view where the overall price of goods (including money), in other words the price level, determines the value of (commodity) money and therefore the quantity required for circulation purposes (De Brunhoff 1976).⁵

Yet, is the *neutrality* of money confined to the neo-classical monetary model? Freeman explains how it is not possible to allow an operational role for money in *all* simultaneous models, including the models of the neo-classical (Keynesian) synthesis. Here the economy is separated into a real goods market, with output determined by simultaneous method and autonomous of monetary factors (except the interest rate), and a money market which is seen in isolation (Freeman 1996). These ideas found expression in the Hicks analysis of IS/LM curves. The IS curve is derived from a locus of points where the level of output is equilibrated with total spending, at a certain interest rate, and investment spending (with multiplier/accelerator impact) rises at lower rates due to expected returns. The LM set of points, conversely, are derived from the (liquidity preference) 'demand for money' at varying government-fixed (exogenous) money supplies (Harris 1981). Yet, 'money matters' in the *real* world of markets, currencies and financial contracts and therefore needs to be considered as integrated with the real economy. In addition, it is simply not appropriate to consider an exogenous money supply with endogenous interest rates when, as the post-Keynesians have noted, the real world contains neither (Wray 2004).

Notwithstanding, mainstream economists generally assume this notion of neutrality, when discussing the business (and credit) cycle, and identify random exogenous shocks as responsible for contractions. Rational expectations theory, for instance, maintains that there can be no *deterministic* business cycle at all, in the absence of shocks, since economic agents will be able exploit arbitrage opportunities through their accurate prediction of future events.⁶ On the other hand, Friedman (p.678), interestingly, did *appear* to give emphasis to money factors and cited monetary phenomena (in the absence of large supply shocks) in order to explain declines in output (Friedman 1993). Yet, on closer examination, it is apparent

⁵ Potts further notes that prices go up and down across the cycle, in contrast to the Ricardo view, regardless of what happens to the money supply. He recognises, however, that a paper issue can also raise prices

⁶ The *efficient market hypothesis* assumes that the arbitrage (and, therefore, the reliable pricing) is dependent on the level and quality of information pertaining to the asset Fama, E. (1970). "Efficient Capital Markets - A Review of Theory and Empirical Work." *Journal of Finance* 25: 383-417.

Friedman did not really abandon the neutrality of money, since he was simply referring to a sharp drop in liquidity that restrains market actors (which economists of all persuasions can agree upon) and relates to the supply conditions of credit. Whereas, heterodox arguments suggest, a *range* of monetary factors can provide signals that *real* economic agents respond to and are, hence, driving outcomes.

In the years following the Great Depression, the Keynesian synthesis mainstream began to develop business (and credit) cycle theories that focused more on endogenous explanations that emphasized under-consumption (or insufficient demand). This naturally led, of course, to policy prescriptions that sought to manipulate aggregate demand and/or installed automatic stabilizers. Yet, as Kliman points out (following Marx), despite the practical benefits of these policies, the ideas fail to convince as a theoretical *explanation* of crisis. This is because it is tautological to state that a crisis is caused by insufficient demand since this merely describes the *characteristics* of crisis (Kliman 1999).⁷ In more recent times, after the Keynesian revolution, there has also been a revival of neo-classical views on the business cycle with *real business cycle theory*. These notions emphasise the role of *technology* shifts in accounting for fluctuations in output (Long 1983). Yet, given the empirical reality of consistent cycles, these (and other) mainstream ideas reveal a scarcity of plausible explanations on the subject.

Post-Keynesian Theory

Post-Keynesian (PK) theory offers a much richer explanation of the operation of a monetary economy and, therefore, the business (and credit) cycle and seeks to restore Keynes' original intended ideas.⁸ The PK notion of money begins with an emphasis on its *social* features, which establishes the 'money of account' as an accepted convention which liberates the economy from the constraints of barter. In the modern era, following Hawtrey, bank deposits (created *ex nihilo* by lending) circulate as money (Hawtrey 1919). Credits and debits can be cleared through the use of the common unit, in the form of credit-money, affording a key role to the banks and the general demand for loans. Next, the post-Keynesians emphasise the *nominality* of the 'money of account', that is determined by the monetary authorities responsible for the jurisdiction. In line with the chartalist notion of money, following Knapp, the PK's further posit the accepted legitimacy of the monetary unit, derived from its acceptance by the state for the payment of taxes (Knapp 1924).

PK economics emerged in the seventies as a response to the post-war 'bastardisation' of Keynes (and the monetarist challenge), with its separate monetary and goods sectors, and aims to (re)establish Keynes as a monetary economist who was seeking to explore the (integrated) role of money in the productive economy (Tily 2006).⁹ In particular, PK theorists have sought to develop the notions of endogenous credit money, money (time) contracts and the role of uncertainty. The stated intention, in contradistinction to the mainstream IS/LM approach, is to restore a measure of reality to economic analysis (Davidson 2002). This PK

⁷ The point Kliman was making is that the 'underconsumptionist' ideas of Robert Brenner made 'little effort' to explain the fall in aggregate demand. It is noted, however, that Keynes himself went into more elaborate detail in order to illustrate the mechanics that led to the shortfall.

⁸ The section draws heavily on the work of Geoff Tily. Tily, G. (2007). *Keynes General Theory, the Rate of Interest and Keynesian Economics*, Macmillan.

⁹ The loanable funds theory, for instance, with its savings constraint, is replaced by Keynes' original notion of endogenous credit creation that was not dependent on savings. In addition, in the IS/LM formulation, the interest rate is determined by income and investment rather than the reverse. Ibid.

emphasis on uncertainty, for instance, in terms of firms' investment decisions and holders of money, is important since it means there is no system pre-disposition towards full-employment equilibrium, at a static point in time or over the cycle. Liquidity preference schedules determine interest rates which then, *sequentially*, determine the level of investment (according to the marginal efficiency of capital).¹⁰ This investment is then added to the consideration of aggregate demand (that includes the multiplier and accelerator principles) which determines, in turn, output and employment.

In terms of the business cycle *per se*, as Tily notes (p.233), Keynes came from the school of thought that identified the credit cycle and monetary drivers, which was based on respect for the work of Hawtrey and Fisher (Hawtrey 1919; Fisher 1933; Tily 2007). *Excessive* credit expansion in booms is seen to create *unsustainable* economic activity (and asset bubbles), as the expectancy of reduced returns and default (raising interest rates) looms (the Minsky moment) so credit tightens, instigating a deflation and output decline or (worse) crisis. In this sense, as Tily notes (p.233), *cheap* money is seen to *facilitate* the business cycle but, *dear* money *causes* it. Tily (p.234) puts forward the notion that, in order to stabilise the cycle, Keynes had a particular view of a *correct* (underlying and, therefore, longer term) marginal efficiency schedule, against which short-term aggregate demand (driven by whim) could be appropriately evaluated (Tily 2007):

The real dimension concerns the trajectory of investment during the economic cycle, and the associated forces dictating that trajectory. In the short period, investment demand may be dominated by animal spirits. But there are underlying forces related to the potential yield of an investment at each rate of interest that define whether any investment demand will be sustainable in a timeframe that looks beyond the short period. The discussion shows that to boost short period without taking into account these considerations can lead to instability

The expanding credit phase simply meets the demands of the (short-term) aggregate demand. Yet, according to Keynes, as the marginal efficiency of capital fluctuates (in conjunction with other variables) the trade cycle is determined, as this passage (p.235) indicates (Tily 2007):

I suggest that more typical, and often the predominant, explanation of the crisis is, not primarily a rise in the rate of interest, but a sudden collapse in the marginal efficiency of capital (*CW VII, p.315*)

Keynes is thus indicating that the short-term expectations (determining the MEC) were not always synchronised with the underlying *correct* expectation, leading to an *excessive* expansion of credit. This is a really important insight since it suggests that Keynes is actually citing *productive* sector factors as *drivers*, which in turn lead to the *financial* factors that are normally identified by debt deflation theory. It is *this* analysis that led Keynes to his policy position of a comprehensive (state) debt management strategy for (short-term and long-term) securities, in order to stabilise the short and long-run interest rates (and expectations of future rates), in order for the state to *steer* the economy towards the *correct* marginal efficiency reference point.¹¹ However, when Kliman asked the question “with reference to *what* has it [debt] become excessive?” (whilst discussing debt-deflation theories), most thinkers have been unable to provide a satisfactory answer (Kliman 1999). Furthermore, whilst Keynes (conversely) *has* been able to provide plausible explanation of underlying factors, in the form of expectations, these are somewhat subjective, subject to time-lags and shy of measurement.

¹⁰ The liquidity preference and marginal efficiency schedules both shift in response to changing expectations in uncertainty Ibid.

¹¹ These then, in turn, influence the other rates of interest across the spectrum.

There is no doubt that this PK analysis gives us valuable insight in to the working of a capitalist (integrated) monetary economy, and proffers policy prescriptions in a political environment that is intent on maintaining the capitalist production mode. Yet, this is predicated on the assumption that capitalism can work, indeed that it is possible (in the words of Tily p. 244) to reach “a state of tranquillity” with high and sustainable output (Tily 2007). Marx (p.123), on the other hand, is cynical in his remarks about those who (generally) advocate cheap (or completely interest-free) credit, as the passage below suggests, since (as stated above) the inherent contradictions (in this case, private property) of capitalism will still remain unscathed (Marx 1973):

The notion of *credit gratuit*, incidentally, is only a hypocritical, philistine and anxiety-ridden form of the saying: property is theft. Instead of the workers *taking* the capitalists’ capital, the capitalists are supposed to be compelled to *give* it to them.

The (heterodox) Austrian school is also concerned with interest rates in the banking system and their impact on the business (and credit) cycle, yet from a rather different perspective.

Austrian School

The Austrian school (AS), like the PK’s, attribute the business cycle to endogenous financial factors, except they suggest that state-managed cheap money, in conjunction with a private banking sector that practices fractional reserve banking, is the key factor driving the process (de Soto 2009). In the first instance, of cheap money, the AS regards credit expansion to be more excessive than would otherwise occur, fuelling asset bubbles, inflation and (most notably) a distortion in prices/returns between sectors. This last point stems from the AS view that money is non-neutral, as new money is not distributed across agents proportionately.¹² As a consequence, the AS school advocates market-determined interest rates that, they contend, will allocate credit more appropriately. In addition, they consider that the cheap credit leads to *malinvestment*, in the sense that firms are incentivized to engage in capital expenditure that is more risky. When inevitable recession sets in, many of these resources are liquidated. The AS argues, therefore, that *natural* rates of interest will mitigate the fluctuations of the cycle, through more sensible investment. Secondly, according to the AS, fractional reserve banking (FRB) is unsustainable since, *ex nihilo* credit expansion, rather than being subjected to reflux, is ‘rolled over’ leading to more credit and, the subsequent distortions and *malinvestment* mentioned above.¹³

Yet, the Austrian school is subject to the same criticism that can be leveled at the post-Keynesians, in that it is assumed that the business (and credit) cycle can be overcome and the capitalist mode of production will thus be able to function harmoniously. The only difference (in this context), of course, is that the AS prefer unfettered free markets and the PK’s favour the economic management of the state.

In addition, the AS also stresses the importance of the *lack* of currency diversity, as a key contributing factor to business (credit) cycle fluctuations. A single (credit-money) currency

¹² The AS business school theory is also known as the ‘circulation credit theory’ de Soto, J. H. (2009). *Money, Bank Credit and Economic Cycles*. USA, Ludwig von Mises Institute.

¹³ It is worth noting that FRB, despite imperfections, does provide credit in response to demand and, has served capitalism reasonably well for the last few hundred years.

monopoly creates a monetary dependence that often becomes the focus of the problem in a financial crisis (Mouatt 2010). This idea draws on the work of Hayek *et al* who had posited the dangers of centralized planning in general, suggesting that inefficiency and information deficiency hindered effective decision-making. Hayek extended this idea to the fragile functioning of a single currency (credit-money) system and, consequently, recommended *free banking*, which encourages currency diversity, instead. The greater competition would (he argued) lead to the more appropriate (and trusted) currencies becoming established and sustained (Austrian monetary thinking tends to prefer commodity money) at a community or business level (Hayek 1990).¹⁴ In the following passage, when referring to the greater use of bank deposits (as money), and the society dependence on [single currency] credit from banks who (in turn) need to ensure their adequacy of reserves, he pointed out that this would lead to liquidity fluctuations and a disturbed business cycle – revealing its fragility (Hayek 1990):

This unfortunate development came about because for a long time it was not generally understood that deposits subject to cheque played very much the same role [as banknotes], and could be created by the commercial banks in exactly the same manner, as bank notes. The consequent dilution of what was still believed to be a government monopoly of the issue of all money resulted in the control of the total circulation of money being divided between a central bank and a large number of commercial banks whose creation of credit it could influence only indirectly. Not till much later did it come to be understood that the ‘instability of credit’ [R.G.Hawtrey] under that system was a necessary outcome of this feature; that liquid means was mostly supplied by institutions which themselves had to keep liquid in terms of another form of money, so that they had to *reduce* their outstanding obligations precisely when everyone else desired to be *more* liquid. By the time this kind of structure had become so firmly established that, in spite of the ‘perverse elasticity of the supply of credit’ [L.Currie] it produced, it came to be regarded as unalterable. Walter Bagehot had clearly seen this dilemma a hundred years ago but despaired of the possibility of remedying this defect of the firmly established banking structure. And Wicksell and later von Mises made it clear that this arrangement must lead to violent recurring fluctuations of business activity – the so-called ‘trade-cycle’...Not the least advantage of the proposed abolition of the government monopoly of the issue of money is that it would provide an opportunity to extricate ourselves from the *impasse* into which this development had led.

Yet, notwithstanding currency diversity, which certainly resonates with many from the liberal tradition, keen to see the dismantling of an exploitative private banking cartel, the AS does not recognize (or give credence to) the particular contradictions (falling profit rate and market concentration) of capitalism that specifically contribute towards the known business (and credit) cycle fluctuations of concern in this study. Surely, the Marxists will be clearly presenting productive *real* factors as *key* drivers of the business (and credit) cycle?

Marxism and the Temporal Single System Interpretation

Well, this is not (in the main) the case and many have cited monetary factors as explanations. Marxists have been particularly busy since the onset of the financial crisis, and some view the securitization revolution (of recent decades) as evidence of a vibrant financial sector that, as Toporowski stated, can ‘depress capital accumulation or agitate capitalism with credit cycles’ in a manner akin to the ideas of Hyman Minsky (Toporowski 2010).¹⁵ Marx had clearly felt

¹⁴ Bernard Lietaer, also adheres to the view that currency diversity will lead to a more resilient financial order since there will be ‘slack’ in the system that enables it to cope with random shocks more appropriately Lietaer, B. (2010). Monetary Monopoly as a Structural Cause for Systemic Financial Instability. *The Corporate and Social Transformation of Money and Banking: Breaking the Serfdom*. S. Mouatt, & Adams, C., Palgrave, Macmillan.

¹⁵ Some members of the *financialisation* working group of the International Initiative for Promotion of Political Economy, and thinkers like Ben Fine, Costas Lapavistas and Jan Toporowski, are examples of this work.

that the existing social relations of production would be unaffected by monetary factors, whilst recognizing the role that finance played in production. Yet, it is (perhaps) a misguided suggestion that finance now has a *dominant*, rather than subordinate, role in relation to production.¹⁶ There is, conversely, empirical evidence (with the growth of corporate finance and non-banks) to suggest that the reverse is true, in that the productive sector is actually ‘subjugating’ the financial sector by stealth instead (Mouatt 2011). In addition, the Temporal Single System Interpretation (TSSI), with its (empirical and theoretical) restoration of the falling rate of profit that contracts investment, which then impacts financial sector speculative activity (prior to crises), provides further evidence of productive *drivers* of the business (and credit) cycle. Kliman notes (p.3), interestingly, that Marx himself viewed these developments as the *single* most important aspect of political economy (Kliman 2009). Furthermore, the rising *organic* concentration of capital, in the manner predicted by Marx, is also a contributory factor towards the likelihood of productive factors *driving* the business (and credit) cycle.¹⁷ Kliman also explains how the *simultaneous* Marxist method, leads directly to calibration of profitability based on *productivity* (Kliman 2007). This allows for, as Potts notes, alternative theories of the business cycle (that focus on monetary factors) to be adopted, such as the *financialisation* school (Potts 2011b)

The TSSI emerged in the early eighties, as a refutation of the simultaneous models adopted by many Marxists, which posited that Marx’s schema needed to be interpreted sequentially (in the manner Marx intended) and that prices and values (in abstract labour terms) were inter-dependently determined (Kliman 2007). In this sense prices and values reciprocally determine each other in a succession of periods of production and circulation. Prices determine the value magnitudes of production inputs and the general (labour value) rate of profit determines the tendential ‘prices of production’ (although realized prices normally differ) in circulation (Kliman 2007). In this conception it is the money actually *spent* on C+V at the start of production that matters, and forms the representation of value (in labour terms) for purposes of further analysis. Conversely, virtually all of the modern Marxist interpretations suggest that value is transferred to new commodities from constant (means of production and raw materials) and variable capital, where the input value measured uses *transformed* (labour) values (at prices of production) so that these inputs equal outputs in a simultaneous equilibrium. This means that there are two separate ‘cost prices’ in this system, one that is based on monies actually spent and the other determined by the *transformed* (labour) inputs in money terms. Simultaneous Marxists argue that if the quantities differ in these systems the monies paid can be ignored since the ‘real’ prices of the inputs, at *transformed* prices that equal outputs, are the ones that are significant (Kliman 2007). There is, therefore, no attempt at all to create a model that reflects the reality. In these dualist interpretations, the prices of production are established first and then market prices may (and are expected to) revolve around them as axes. Yet, as Carchedi noted, in the *real* world the market prices are established first and then the prices of production (tendential prices) may gradually emerge, providing there are no counter-tendencies, over successive production periods (Carchedi 1996). Proponents of the TSSI, when abstracting to formulate models, posit (following Marx) that (subjectively-led) price formation (above or below ‘prices of production’) takes place *during* the production period that, in turn, determine the inputs of the (immediate) next production period. The post-production circulation, therefore, does not add any value in exchange or adjust the price ratios/level. The Carchedi/TSSI view thus presents

¹⁶ Toporowski, for instance, recently concluded that finance was now *dominant* (Toporowski 2010).

¹⁷ As constant to variable capital ratios evolve, for instance, market concentration leads to liquidations that are disruptive and send significant signals to economic agents. In addition, rising unemployment is another cyclical feature of the capitalist trajectory. These all contribute to cyclical fluctuation.

Marx with a logical, realistic, and non-neutral, view of the role of money in successive production periods. In the TSSI, therefore, the *integrated* significance of money (in terms of real payments) has been reclaimed. Monetary factors in circulation (whilst formed during production) are no longer secondary and also, *do* determine *real* outcomes.

This means that monetary factors can perform a (reflexive) deterministic role in a monetary economy, in terms of the business (and credit) cycle, without taking the centre stage. The key advantage of this TSSI approach towards understanding Marx is that, as Potts illustrates (p.67), his postulates work consistently and the tendency for the rate of profit to fall can be demonstrated (Potts 2011). We can, therefore, point to the falling profit rate (as an endogenous productive factor), in order to explain a contraction in investment, that (indirectly) determines output and employment fluctuations across the cycle. In order to clarify, Kliman explains (as stated earlier) that Marx did *not* claim the falling profit rate was a *direct* cause (through investment contraction) of an economic crisis *per se*. Instead, *financial* activity *follows* investment decline, prior to output decline (Kliman 2009). In short, the TSSI manages to reclaim the methodological foundation, on which Marx based his political economy, and restores the central notion of capitalist *contradiction* that drives the business (and credit) cycle. In addition, the theory is able to account for *reflexive* determination of monetary *and* productive factors, in an integrated (non-neutral) monetary economy.

Conclusion

In seeking to assess whether credit cycles are, in fact, *freewheeling*, *driven* or *driving*, this paper concluded that mainstream notions (in the main) view money as neutral and attribute business (and credit) cycle fluctuation to exogenous factors, rather than conceiving an integrated and reflexive monetary economy. This conclusion also extends to the theoretical framework of the Keynesian synthesis. Secondly, the dominant view, especially after the recent financial crisis, is one that tends to span the ideological spectrum and identifies (varying) financial factors that are instigative in terms of determining cyclical fluctuation. This has found expression in a number of recent national (and international) policy initiatives.

The investigation of post-Keynesian monetary theory, conversely, revealed much richer analysis that (notably) identifies productive factors (in relation to the changing marginal efficiency schedule) as independent variables driving the (normally cited) financial factors that determine output fluctuation. Yet, it was concluded that these, in turn, were predicated on subjective notions of expectation, and a *correct* MEC schedule, that is difficult to quantify. In addition, the assumption that the capitalist process can be harmonious ignores the fundamental contradictions identified by Marxian analysis. The Austrian school, similarly, has no pre-disposition to question the logic of capitalism *per se*, and assumes that if FRB and state 'cheap money' policy can be eradicated, the economic system will operate smoothly.

In the consideration of Marxist analysis, the paper begins by dismissing *simultaneous* methodology, and the *financialisation* school, since these have tended to lead (arguably, in opposition to Marx) to *financial* sector explanations of business (and credit) cycles. Instead, the paper explores the *Temporal Single System Interpretation* of Marx, that (it is posited) most closely resembles Marx's own approach to political economy. In this regard, a falling rate of profit and investment contraction, leads to financial sector activity and (indirectly) to output fluctuation. This serves to restore a falling profit rate to the heart of the analysis.

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