

**DEPARTMENT OF ECONOMICS
YALE UNIVERSITY**

P.O. Box 208268
New Haven, CT 06520-8268

<http://www.econ.yale.edu/>



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**Credit, Indebtedness, and Speculation in the Marxian
Paradigm: A Reassessment**

Miguel D. Ramirez
Trinity College, Hartford, CT

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Credit, Indebtedness, and Speculation in the Marxian Paradigm: A Reassessment.

By

Miguel D. Ramirez

Trinity College, Hartford, CT USA

Abstract

This paper argues that, in Chapters XXIX and XXX of Volume III of *Capital*, Marx develops an incisive conceptual framework in which excessive credit creation, indebtedness, and speculation play a critical and growing role in the reproduction of social capital on an extended basis; however, given the decentralized and anarchic nature of capitalist production, it does so in a highly erratic and contradictory manner which only postpones the inevitable day of reckoning. The paper also draws important parallels between Marx's analysis of debt-fuelled crises and the events leading up to the subprime debacle of 2007-08. Finally, the paper contends that had Marx lived to re-write Vols. II and III, he would have explicitly connected the expanding role of credit [which he associated with the development of capitalism] to a significant reduction in the turnover period of capital, thereby boosting the rate of surplus-value, and countering in a highly erratic and contradictory manner, the fall in the rate of profit. The growing role of credit has been ignored in the Marxian literature as an important counteracting factor to the law of the declining rate of profit. It is not mentioned at all by Marx in his famous Chp. XIV, Vol. III of *Capital* where he discusses other important counteracting forces, nor by Engels [in this particular context] who edited both Vols. II and III.

JEL Classification: B10; B14; B24.

I. Introduction.

Without a doubt, Marx's discussion of credit and speculation and its connection to the reproduction and turnover of capital on an extended basis was left in an unfinished and, at times, confused state for Friedrich Engels to edit and organize into a rather coherent and compelling work; in particular, Marx's analysis in Chapters XIII, XIV, XV, XXIX, and XXX of Volume III of *Capital* does contain a number of incisive and prescient insights on the role of credit nurturing and sustaining the illusion of a smooth and continuous reproduction process of capital up to the eve of the crisis that present-day economists and students of the business cycle can profit and learn from. One of the more important, yet relatively neglected, points to emerge from Marx's discerning analysis of the recurring and ever-expanding circuit of social capital in both Vols. II and III of *Capital*, and Engels's presentation of it in Chp. IV of Vol. III, is the decisive and contradictory role of credit on both the turnover of capital and in counteracting the law of the declining rate of profit. Marx discussed this 'law' in the context of cyclical crises, and although some Marxist scholars contend that Marx viewed the fall in the rate of profit as the sole or primary explanation for the onset of economic crises (e.g., see Kliman, 2011; Dobb, 1973; and Mandel, 1971 [orig., 1968]), other scholars strongly disagree and argue that Marx had several competing explanations for business (industrial) cycles, including explanations based on disproportions between the various branches of production arising from the anarchy of capitalist production as well as those /associated with under-consumptionist tendencies (see Brewer, 1990; Howard and King, 1985; Ramirez, 2007; Sherman and Evans, 1984; Sowell, 1967; and Sweezy, 1970 [1942]) .

This paper contends that if Marx had lived to re-write Chapters XIII, XIV and XV of Vol. III of *Capital*, it is more than likely that he would have explicitly included the effect of the turnover period on the rate of profit and connected it to the growing use of credit (in the form of bills of exchange, bank notes, and loan advances) associated with the development of capitalism, which he foresaw well ahead of his contemporaries (and is discussed in Chapters XXIX and XXX of Vol. III). The shortening of the turnover period of capital, and its crisis-prone reproduction on a global scale, is both a direct result of the growing use of credit via the “financialization” of the accumulation process and the ever-rising social productivity of labor which expresses itself both in a marked reduction in both the time of production and circulation, thus boosting both the rate of surplus-value and profit.

This article is organized as follows: Section II below discusses the role of credit in the development of capitalism, particularly its role in expediting the realization of surplus-value as well as its changing and destabilizing effect over the course of the industrial (business) cycle. It also draws important parallels with the events leading up to the onset and aftermath of the debt-fueled subprime debacle of 2007-2008 that hit severely and unexpectedly the mature capitalist economies of the world. Section III highlights Marx’s analysis of the circuit of money capital and Engels’s discussion of the turnover period of capital on the law of the declining rate of profit. Section IV is the conclusion and summarizes the main points.

II. The Role of Credit and the Development of Capitalism.

With the development of capitalism [and the rising social productivity of labour], Marx never tired of pointing out throughout the three volumes of *Capital* (and also in *Theories of Surplus Value, Part II* and the *Communist Manifesto*), that the compelling forces of “money-making”

and competition would drastically reduce both the time of production and circulation, thus endogenously generating a powerful offset to the fall in the rate of profit. According to Marx, with the development of commercial and banking credit, money begins to serve more and more as a means of payment in the sense that commodities are not sold for actual money, but for a written promise to pay at some agreed upon future date (essentially a derivative financial instrument). Marx, and his contemporaries, referred to these “promises” as bills of exchange, and they were commonly used by capitalists to settle debts, purchase goods, or presented to banks for actual money, albeit at a discount—essentially a bank loan. That is, the steel producer gives his iron ore and coal suppliers a promissory note or draft rather than cash payment, and the latter, in turn, redeem these bills at a discount (deducting interest) with their respective bankers. When the promissory note comes due (say, in three months), the steel producer pays the amount stated on the bills to the respective bankers. Thus, the bankers have essentially lent the suppliers a certain amount of money for three months, enabling them to reduce by three months the circulation time of their capital (and also the steel producer who receives credit from his suppliers only because the latter have received credit from their bankers).

Marx emphasized correctly that the expanded use of credit in the form of (discounted) bills of exchange, bank notes, bonds, and advances (loans) on current account [the “derivatives” of his time] would reduce significantly the time during which commodities are in transit (circulation time), thus expediting their sale (realization of surplus-value) and increasing the rate of surplus-value (and profit) [see Chp. XVI of Vol. II; and Chps. XXIX and XXX of Vol. III]. Moreover, he dubbed these various forms of capital “fictitious” because once interest-bearing capital in the form bills of exchange, bank notes, government bonds, and shares of stock become the norm, then it appears that any periodic revenue stream is interest on some capital, whether it is real or

not. In Marx's words, "The formation of a fictitious capital is called capitalization... For example, if the annual income is \$100 and the rate of interest is 5%, then the \$100 would represent the annual interest on \$2000, and the \$2000 is regarded as capital-value of the legal title of ownership on the \$100...All connection with the actual process of capital [production of surplus-value] is thus completely lost, and the concept of capital as something with automatic self-expansion properties is thereby strengthened" (Vol. III, p. 466). He goes on to argue that even when these paper assets represent claims on real assets such as railroads, the shares of stock themselves are fictitious because the real capital consists of the actual capital invested in rails, locomotives, trellises, etc., and not the capital-value of titles of ownership that are traded continuously in the market and subject to bouts of speculation. For Marx, "The independent movement of the value of these titles of ownership, not only of government bonds but also of stocks, adds weight to the *illusion* [my emphasis] that they constitute real capital alongside of the capital or claim to which they may have title" (Vol. III, p. 467).

In this connection, O'Hara (2000) correctly observes that, although Marx viewed the sphere of money and credit (broadly defined) as relatively autonomous from the sphere of production (where surplus-value is actually created or produced), he nevertheless believed that the development of the credit system had a decisive direct effect on the time of circulation and thus an indirect one on the reproduction of surplus-value (on this, see Barba and de Vivo, 2012; Nelson, 1999; and Mandel, 1971).¹ For example, Marx declared that, "...credit accelerates the velocity of the metamorphoses of commodities and thereby the velocity of money circulation...and with it an acceleration of the process of reproduction in general" (1894, p. 436). Commercial and banking credit not only reduces the cost of circulation by reducing that part of

¹ Barba and de Vivo (2012) also suggest that Marx "conceives a possible positive influence of credit on the average rate of profit (e.g., when it allows the capital to circulate more rapidly)" (p. 1486).

capital value that must be held in the form of money, but, according to Marx, by concentrating the reserve funds of industrialists, merchants and the small idle money savings of all classes in the bankers' hands, it centralizes the money savings of society and thus enables associated industrial capitalists (borrowers) to renew the process of production on an ever-larger scale, culminating in the formation of joint-stock companies (Vol. III, pp. 436-37). In Marx words, "The credit system is not only the principal basis for the gradual transformation of capitalist private enterprises into capitalist stock companies, but equally offers the means for the gradual extension of co-operative enterprises on a more or less national scale. The capitalist stock companies should be considered as transitional forms from the capitalist mode of production to the associated one" (Vol. III, p. 440).

In Chp. XXVII of Vol. III entitled, "The Role of Credit," Marx is almost prophetic in his discussion of the formation of joint stock companies and the separation of ownership from management, and implicitly hints at the important role of moral hazard in the excessive speculation that emerges just before the onset of the crisis. He writes, "The credit system appears as the main lever of over-production and over-speculation in commerce because the reproduction process...is forced to its extreme limits, and is so forced because a large part of the social capital is employed by people who *do not own it* [my emphasis] and consequently tackle things quite differently than the owner, who anxiously weighs the limitations of his private capital in so far as he handles it himself" (p. 441). Marx's warnings reminds the reader of Keynes's own insightful observations decades later in Chp. 12 of the *General Theory* where he argues that the separation of ownership and management which characterizes organized investment markets tends to generate destabilizing speculation because of "the fetish of liquidity, the doctrine that it is a positive virtue on the part of investment institutions to concentrate their resources upon the

holding of “liquid” securities ...[forgetting] that there is no such thing as liquidity of investment for the community as a whole” (p. 155).

Later, in Chp. XXX of Vol.III, Marx connects explicitly the expanded use of credit with the development of the productive power of social labour and production on an expanded scale for distant markets. The latter development necessitates that credits must be prolonged (a longer run for bills of exchange) and this, of course, opens the door for “the speculative element” to dominate transactions to an ever-greater and perilous extent. He observes that, “Production on a large scale and for distant markets throws the total product into the hands of commerce; but it is impossible that the capital of a nation should double itself in such a manner that commerce should itself be able to buy up the entire product with its own capital and sell it again. Credit is...indispensable here; credit, whose volume grows with the growing...value of production and whose time duration grows with the increasing distance of markets...The development of the production process extends the credit, and credit leads to an extension of industrial and commercial operations...the speculative element must thus more and more dominate the transactions” (p. 481).

Credit and the Industrial Cycle

It is readily apparent from the textual evidence presented in Vol.III (and in Vol. II of *Capital*) that Marx viewed the credit system as playing a critical (and contradictory) role in shortening the turnover time as well as expanding both the scale of domestic production (via joint-stock companies) and the circuit of capital beyond national borders. He also believed, correctly, that credit and indebtedness would assume a more important and decisive role in the various phases of the industrial (business) cycle as capitalism developed, as well as become a conduit for the transmission of crises internationally (contagion) [see Vol. III, pp. 491-93] . However, in Marx’s

dynamic and disequilibrium perspective (dialectal approach), it would occur in a highly contradictory and chaotic manner; that is, the excessive and speculative use of bank and commercial credit enables capitalist production to expand (momentarily) beyond its natural limits (as determined by the financial needs of productive accumulation) before the inevitable and often unexpected crisis occurs; that is, the “financialization” of the economy via excessive credit intermediation nurtures and sustains the illusion of a smooth and continuous reproduction process of capital up to the eve of the crisis. The “sudden stop” and crash is mistakenly attributed to financial causes such as a banking crisis when, in reality, it is primarily the result of the reproduction process being strained beyond its capitalistic limits in terms of both demand and supply-side factors, thus culminating in a crisis of overproduction (“a superabundance of industrial capital”).

In fact, it is precisely at this critical juncture in Chp. XXX that Marx asks the reader to conduct a thought experiment and consider an economy comprised of only workers and industrial capitalists devoid of price fluctuations and “the sham transactions and speculations” associated with the pervasive use of credit. Under these conditions, Marx believes that a generalized crisis can only arise as a result of a disproportion of production between branches I (consumption goods) and II (producer goods) and/or a disproportion between the consumption and production of capitalists. As matters stand in reality, he seems to suggest that the reproduction of capital is primarily dependent on the “consuming power of the non-producing classes,” that is, money lenders, financiers, bankers, and a rentier class who live on fixed incomes. For example, towards the end of the Chapter XXX, Marx notes that the effective demand of “the unproductive classes and of those who live on fixed incomes” is undermined on the eve of the crisis and is a contributing factor in the downturn because “during the inflation of prices which goes hand in

hand with over-production and over-speculation...their consuming capacity diminishes relatively, and with it their ability to replace that portion of the total reproduction which would normally enter into their consumption” (p. 491).

Workers, on the other hand, cannot be relied to solve the deficiency in aggregate demand because the moment that they can no longer be used profitably, that is, the moment when a rise in their wage share (relative wages) threatens the production of additional relative surplus-value for profitable accumulation, a crisis erupts and they are summarily discarded by industrial capitalists. It is in this particular context that Marx stated his often-quoted and controversial sentence, “The ultimate reason for all real crises always remains the poverty and restricted consumption of the masses as opposed to the drive of capitalist production to develop the productive forces as though only the absolute consuming power of society constituted their limit”(Vol. III, p. 484). Obviously, the capitalist reproduction process, aided and abetted by the credit system, is constrained by the *relative* (and absolute) consuming power of society, namely, one whose antagonistic class-based nature can only profitably serve industrial capitalists as long as it does not reduce the amount of additional surplus value available for accumulation, and thus threaten the *raison d’etre* of the capitalist mode of production.

In Chp. XXX of Vol. III, Marx analyzes the role of loanable money-capital and the movement of interest rates over the course of the industrial cycle. Although some of the discussion in this chapter, as well as others dealing with the role of commercial and bank credit is in an unfinished and, at times, confused state, it does contain the outlines of a coherent framework of analysis for understanding how credit, in a contradictory manner, both promotes and retards real capital accumulation over the course of the business cycle. Marx, at first, poses the important question of whether the mere accumulation of loanable money-capital, as reflected

in the movement of the interest rate, represents an abundance or scarcity of real capital accumulation. He answers negatively by pointing out that in the period immediately following an economic and financial crisis, the rate of interest is at its minimum and there is a plethora of loanable money-capital precisely because "...the spirit of enterprise is paralyzed...as a result of [the vast] contraction ...of industrial capital" (Vol. III, p. 485). On the other hand, Marx notes that when interest rates are at their highest, during the crisis period proper, huge quantities of commodities are unsaleable, factories are closed, and credit is almost non-existent; he writes perceptively that following a crash "...everyone has products to sell, cannot sell them, and yet must sell them in order to meet payments; it is not the mass of idle and investment-seeking capital, but rather the mass of capital impeded in the reproduction process, that is greatest when the shortage of credit is most acute ...nothing is more erroneous ..than to blame a scarcity of productive capital for such a condition. It is precisely at such times that there is a superabundance of productive capital, partly in relation to the normal, but temporarily reduced scale of production, and partly in relation to the paralysed consumption" (Vol. III, p. 483). A shortage or scarcity of real capital, according to Marx, can only arise in developed capitalist nations such as England as a result of "...general crop failures, either in the principal foodstuffs or in the principal industrial raw materials" (Vol. III, p. 484). In Marx's view, the only phases of the business cycle where a relatively low interest rate (above its minimum) coincides with real capital accumulation are, first, in the period of prosperity and growing confidence associated with the initial recovery from the crisis, and, second, that phase of prosperity "which precedes that of overexertion [and crisis]" when the "rate of interest reaches its average level, exactly midway between the minimum and maximum" (p. 489).

To summarize, at the beginning of the cycle, a low rate of interest and superabundance of loan capital coincides with a contraction of industrial capital; this is then followed by a period of recovery and prosperity during which money and loan capital are readily available to meet the growing requirements of industrial capital and the rate of interest reaches its average level. The final phase of the cycle takes place when the crisis sets in, credit suddenly stops, payment are suspended, and the rate of interest reaches its maximum; the reproduction process comes to a standstill and a superabundance of industrial capital arises alongside an absolute scarcity of loan capital (see Vol. III, p. 488). In other words, an abundance of or scarcity of loanable capital should not be confused with an abundance or scarcity of real industrial capital.

For Marx, excessive credit creation, indebtedness and speculation, fueled by moral hazard and the financial innovations of his time in the form of discounting bills, bank notes, and making advances (loans), played a critical and growing role in the reproduction of social capital not only in any one country but internationally as well; however, given the decentralized and anarchic nature of capitalist production, it did so in a highly erratic and contradictory manner which only postponed the inevitable day of reckoning. In Chapter XXX of Vol. III Marx's writes that, "the whole [credit] process becomes so complicated, partly by simply manipulating bills of exchange, partly by commodity transactions for the sole purpose of manufacturing bills of exchange [speculative excess], that the semblance of a very solvent business with a smooth flow of returns can easily persist even long after returns actually come in only at the expense partly of swindled money-lenders and partly swindled producers. Thus business always appears almost excessively sound right on the eve of a crisis...Business is always thoroughly sound and the campaign in full swing, until suddenly the debacle takes place" (pp. 484-85). Moreover, the crisis is transmitted via the world market (contagion) when a massive drain of gold resulting from an unfavorable

balance of payments in England (the epicenter of the crisis) is transmitted to every other commercially developed nation. Marx writes discerningly that “it becomes evident that all these nations have simultaneously over-exported (thus over produced) and over-imported (thus over-traded), that prices were inflated in all of them, and credit stretched too far. And the same breakdown takes place in all of them. The phenomenon of a gold drain takes place successively in all of them and proves precisely by its general character 1) that gold drain is just a phenomenon of a crisis, not its cause; 2) that the sequence in which it hits the various countries indicates only when their judgment-day has come” (p. 492).

This inherent tendency of a bank-based system of credit intermediation to create periodic cycles of excessive credit, indebtedness, and speculation that are decoupled from the real accumulation of capital at the peak of the boom is a hallmark of mature capitalism. At this juncture, one is again reminded of Keynes’s own discerning analysis in Chapter 12 of the *General Theory* where he remarks that “Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes the by-product of the activities of a casino, the job is likely to be ill-done” (p. 159).

Marx did not remain content to just analyze the pernicious effects of excessive credit, debt, and speculation in an advanced capitalist economy such as England, but his dynamic and dialectical approach led him to identify during the course of the business cycle both supply-side (falling rate of profit) and demand-side (underconsumptionist tendencies) constraints that set up real barriers and limits to the further expansion and reproduction of industrial capital. At the height of the boom, the growing financialization of the economy via excessive credit creation and speculative bubbles enables the capitalist system to surmount these barriers momentarily, but

one that calls forth a strong reaction in the form of a sudden and devastating crisis (see Vol. III, p. 508). But these crises of ever-greater intensity are incapable of resolving the fundamental contradiction of the capitalist mode of production which is its tendency to develop the social productivity of labor regardless of the conditions under which capitalist production takes place; thus, the financialization of the economy is a major and novel method by which capitalists production checks the fall in the rate of profit and/or the strong underconsumptionist tendencies that endogenously arise via the relative and, at times, absolute impoverishment of the active part of the working class. Still, as Marx is quick to point, this is all for naught because, “The *real barrier* of capitalist production is *capital itself*. It is that capital and its self-expansion appear as the starting point and the closing point, the motive and the purpose of production...The limits within which the preservation and self-expansion of the value of capital resting on the expropriation and pauperization of the great mass of producers [which] come continually into conflict with the methods of production employed by capital for its purposes, which drive toward unlimited extension of production...towards unconditional development of the social productivity of labour” (Vol. III, p. 250.)

Parallels and Lessons for Today.

In light of Marx’s trenchant analysis in Chp. XXX of Vol. III of *Capital*, one cannot help but draw parallels with the events leading up to the onset and aftermath of the subprime debacle of 2007-2008. For example, Palley (2009; and 2013), and other prominent scholars such as Foster and Magdoff (2009) and Sweezy (1997) before him, have persuasively argued that increased access to credit and debt under the economic and political domination of financial sector interests after 1980 has created a “new business cycle” where “... asset price inflation provided consumers and firms with collateral to support-debt financed spending” to overcome the growing

structural (aggregate) demand gap that has arisen since 1980 as a result of “financial neoliberalism” redistributing income from labor to capital (see pp. 18-30). In this connection, Foster and Magdoff present evidence that, over the thirty year period from 1975 to 2005, the driving force behind the less than stellar economic growth of the United States has been the dramatic increase in consumer debt, both in absolute and relative terms. Table 1 below shows that consumer debt, as a percentage of disposable income, rose from 62 percent in 1975 to 127.2 percent by 2005, with an acceleration of indebtedness in the five year period just before the housing bubble was punctured in 2006 (see Shiller, 2006).²

Table 1. Outstanding Consumer Debt as a Percentage of Disposable Income (in billions of dollars).

Year	Consumer Debt (1)	Consumer Disposable (2) Income	(1)/(2) (%)
1975	736.3	1,187.4	62.0
1980	1,397.1	2,009.0	69.5
1985	2,272.5	3,109.3	73.0
1990	3,592.9	4,285.8	83.8
1995	4,858.1	5,408.2	89.8
2000	6,960.6	7,194.0	96.8
2005	11,496.6	9,039.5	127.2

Source: Foster and Magdoff (2009), Table 1.1, p. 29.

² Shiller (2008) places much greater weight than either Palley or Foster and Magdoff on the housing boom of the 2000s as the major culprit of the subprime crisis and the broader economic crisis. He reports that between 1997 and 2006 real home prices for the United States rose by 85 percent, and observes that “ratios of home prices to building costs had soared in the run-up to the peak of the market in 2006, as had ratios of home prices to rent and home prices to personal income” (see p. 34, and Figure 2.1).

Moreover, as emphasized by Minsky's financial instability hypothesis (1986), the events leading up to the onset and aftermath of the 2008 crisis, particularly the housing bubble, confirm that the financialization of irrational exuberance generated by an increasingly decoupled system of finance (based on mortgage-backed securities and CDOs) was bound to terminate in insolvent debt accumulation and a major crisis (see Shiller, 2008, pp. 41-48). In essence, Minsky believes that financial systems are inherently flawed and unstable, and over the course of the business cycle, particularly during its latter stages when strong growth and rising profits are prevalent, the financial system is captured by speculative and Ponzi borrowers whose irrational exuberance leads them to throw caution to the wind, thus paving the way for recurring financial and economic crises.

Once the crisis asserts itself, in its often sudden and devastating fashion, financial and banking institutions are consolidated and re-organized via bankruptcy proceedings, mergers and acquisitions, and new regulatory and supervisory institutions emerge to prevent these types of disastrous "Minsky moments" from arising again. But, according to Minsky and Kindleberger (1989), to no avail because once a sufficiently long period of time has passed and the previous crisis has become a distant memory in the mind of investors, regulators and the public, the economic and social environment becomes, again, ripe for new financial innovations and technologies which exuberant investors claim makes "this time different" from the past! The "This-Time-is-Different Syndrome," coined by Reinhart and Rogoff (2011) in their recent seminal work, are the four most expensive words in financial history and, to a large extent, paved the way for the irrational exuberance that accompanied the debt-fueled housing and stock market boom that culminated in the subprime debacle and its devastating world-wide recession.

Structural Keynesian such as Palley, and Marxists such as Foster and Sweezy, although in agreement with Minsky and Kindleberger on the critical role played by finance in exacerbating these crises, would beg to differ in regard to the causal role they attribute to the financial system. Instead, they contend that, although the financial system plays a key role by propping up aggregate demand via debt and asset price inflation in place of real wage growth, it is just one factor, albeit an important one, in a much larger crisis confronting mature capitalist economies such as the U.S. (see Palley,2009, p. 2).

In particular, Palley (2013) contends that the virtuous Keynesian growth model of the post-World War II period was replaced after 1980 with a neoliberal model ushered in by Reagan and Thatcher that 1) abandoned any commitment to full-employment and replaced it with a fixation on low inflation; and 2), severed the link between productivity and wage growth which had sustained demand growth, investment, and employment during the “Golden Age” of capitalism, viz., the 1945-69 period. Furthermore, Palley argues that the new neoliberal growth model based on financialization has undermined unions by promoting “right to work laws,” free trade, and off-shoring, thus undermining the bargaining power of labor vis-à-vis corporate and banking interests. The latter, in turn, have used their renewed economic power to further influence the political process and enact policies that promote their pecuniary interests and increase the reliance of the economic system on excessive credit and asset price inflation as the new engines of economic growth. Tables 3 and 4 below, reproduced from Palley (2013), showing, respectively, the GDP share of the Finance, Insurance, and Real Estate (FIRE) sector and the ratio of financial to non-financial profits, support Palley’s contention that the financialization of the U.S. economy up until 2007 coincided with a clear shift in income toward capital, and more importantly, it was skewed toward the financial and banking interests of the capitalist sector as

attested by the rise in both the GDP share of FIRE and the ratio of financial to non-financial profits between 2000 and 2007.

Bellamy and Foster, on the other hand, echoing the work of Magdoff and Sweezy, emphasize the lack of profitable investment outlets for the prodigious economic surplus generated by mature capitalism--one dominated by monopolistic firms in both the real and financial sectors of the economy.

Table 2. GDP share of the FIRE sector

Year	GDP (\$ bns)	FIRE (\$ bns)	FIRE/GDP (%)
1979	2,566.4	369.7	14.4
1989	5,482.1	981.0	17.9
2000	9,951.5	1,997.7	20.1
2007	14,028.7	2,857.0	20.4

Source: Palley (2013), Table 2.7, p. 25.

Table 3. Financial and Non-Financial Profits.

Year	Financial Profits (\$ bns)	Non-Financial Profits (\$ bns)	Financial/Non-Financial Profits (%)
1979	30.9	157.0	19.7
1989	59.5	226.8	26.2
2000	163.2	415.7	39.3
2007	309.5	694.1	44.6

Source: Palley (2013), Table 2.11, p. 29.

In their view, and on this point Marx would be in general agreement, the major contradiction of mature capitalism is that it is a system that “...has no endogenous means to guarantee an adequate level of private investment, yet by the same token, cannot tolerate any rise in wages that would erode the profits of the owning class. This has left the system dependent upon ...credit-driven booms and bubbles followed by crisis once the expansion of financial claims [ends abruptly]” (see Beitel, 2008, p. 42; see also Barba and de Vivo, 2012).³

To buttress their position, Foster and Magdoff (2009) present compelling evidence which shows that there has been massive redistribution of income and wealth in the United States—the leading mature capitalist economy-- from the bottom 90 percent of income earners to those at the very top of the income pyramid, viz., the top 0.01 percent (see also Palley 2009, pp. 5-6). For example, they report that from 1990 to 2002—even before the debt-fueled housing boom of the 2000s—“for each added dollar made by those in the bottom 90 percent, those in the uppermost 0.01 percent (today around 14,000 households) made an additional \$18,000...[Moreover] the top 1 percent of wealth holders in 2001 together owned more than twice as much as the bottom 80 percent of the population. If this were measured simply in terms of financial wealth, i.e., excluding equity in owner-occupied housing, the top 1 percent owned more than four times the bottom 80 percent” (p.130). More recent data (and analysis) provided by the work of mainstream economist Thomas Piketty (2014) reveals the explosion of U.S. inequality since 1980. His systematic and meticulous examination of the income and wealth data for the U.S., and other mature capitalist economies such as England and France, reveals that “The upper decile’s share [of national income] increased from 30-35 percent of national income in the 1970s to 45-50

³ Mandel (1971) is one of the few Marxian scholars to emphasize that, “credit makes possible a considerable reduction in the rotation-time of capital...by stimulating the circulation and consumption of commodities over and beyond the real purchasing power available, credit puts off the date of the periodical crises, aggravates the factors of disequilibrium, and therefore makes the crisis more violent when it breaks” (p. 238). However, he does not explicitly identify it as an important counteracting factor to the law of the declining rate of profit.

percent in the 2000s—an increase of 15 points of national income” (p. 294). According to Piketty, this massive internal income transfer between groups (of the order of fifteen points of U.S. national income) is a much more worrisome economic and social imbalance than the much talked about trade (and current) account deficit which the U.S. ran during the 2000s (of the order of 4 to 5 points of national income).

Turning to more recent data on total family wealth in the U.S.--which is considerably more skewed than income--Table 4 below breaks down the share held in the U.S. by the bottom 90 percent, top 10 percent, and top 1 percent for survey years during the 1995-2010 period. Not surprisingly, it mirrors the trend in income inequality and shows that, since 1995, the bottom 90 percent has experienced a drop of almost 10 points in its share of total family wealth, while the top 10 percent has experienced a concomitant rise with a slight acceleration during the housing bubble years from 69.5 percent in 2004 to almost 72 percent in 2007—the eve of the crash of 2008.

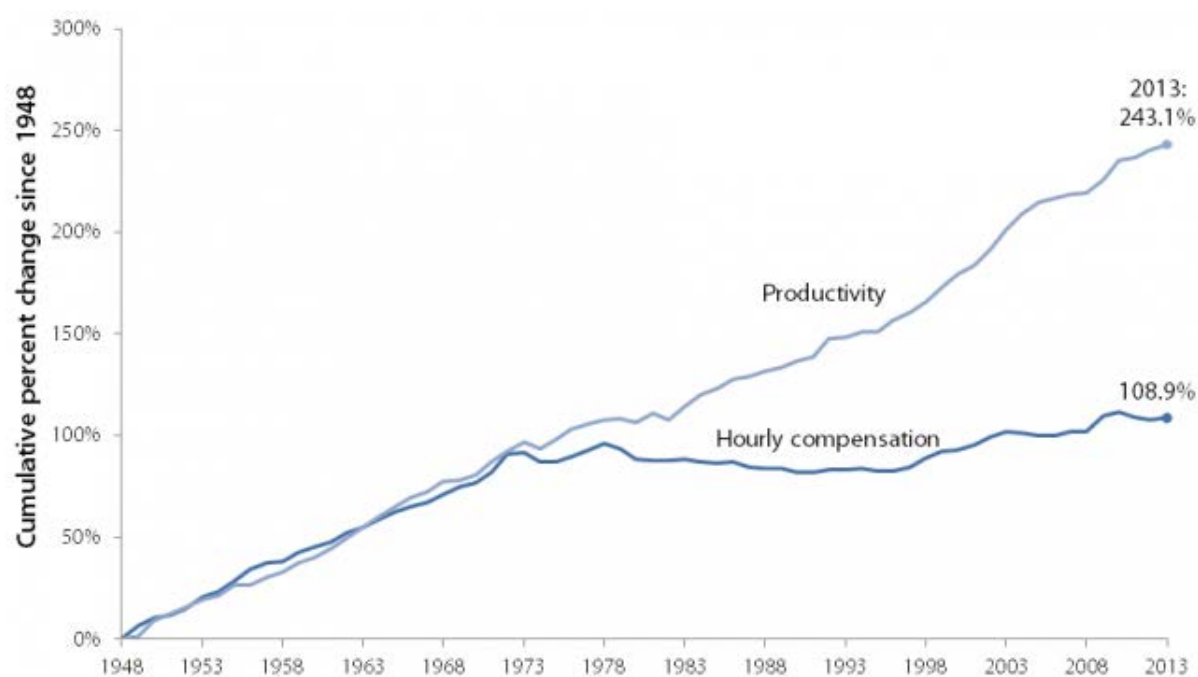
Table 4. Percentage of Total Family Wealth Held by Different Groups, Survey Years, 1995-2010.

Year	Bottom 90 %	Top 10 %	Top 1%
1995	32.2%	67.8%	34.6%
1998	31.4	68.6	33.9
2001	30.2	69.8	32.7
2004	30.4	69.5	33.4
2007	28.5	71.5	33.8
2010	23.3	76.7	35.4

Sources: Mishel et al. (2012) *The State of Working America* 12 ed., Economic Policy Institute; and Piketty (2014), *Capital in the 21st Century*, Cambridge: Harvard University Press.

In view of the anemic growth in real hourly compensation (wages and benefits adjusted for inflation) relative to the productivity of production/non-supervisory workers since the late 1970s shown in Figure 1 below, the only way that households were able to maintain their consumption during the 2000s was on the basis of a sharp increase in mortgage-based debt made possible by the debt-fueled housing bubble.⁴ Mainstream economist Piketty agrees here with the analysis of economists Foster, Magdoff, and Palley, and contends that there is no doubt that the dramatic

Figure 1. Cumulative Change in Total Economy Productivity and Real Hourly Compensation of Production/Nonsupervisory Workers, 1948–2013



Source: Economic Policy Institute, *The State of Working America, 12th ed.* Authors' analysis of Total Economy Productivity data from Bureau of Labor Statistics Labor Productivity and Costs program, wage data from BLS Current Employment Statistics program, and Bureau of Economic Analysis National Income and Product Accounts.

⁴ According to the Economic Policy Institute, during the 1973-2011 period, economy-wide labor productivity rose 80.4 percent while the real median hourly compensation (including all wages and benefits) increased by just 10.7

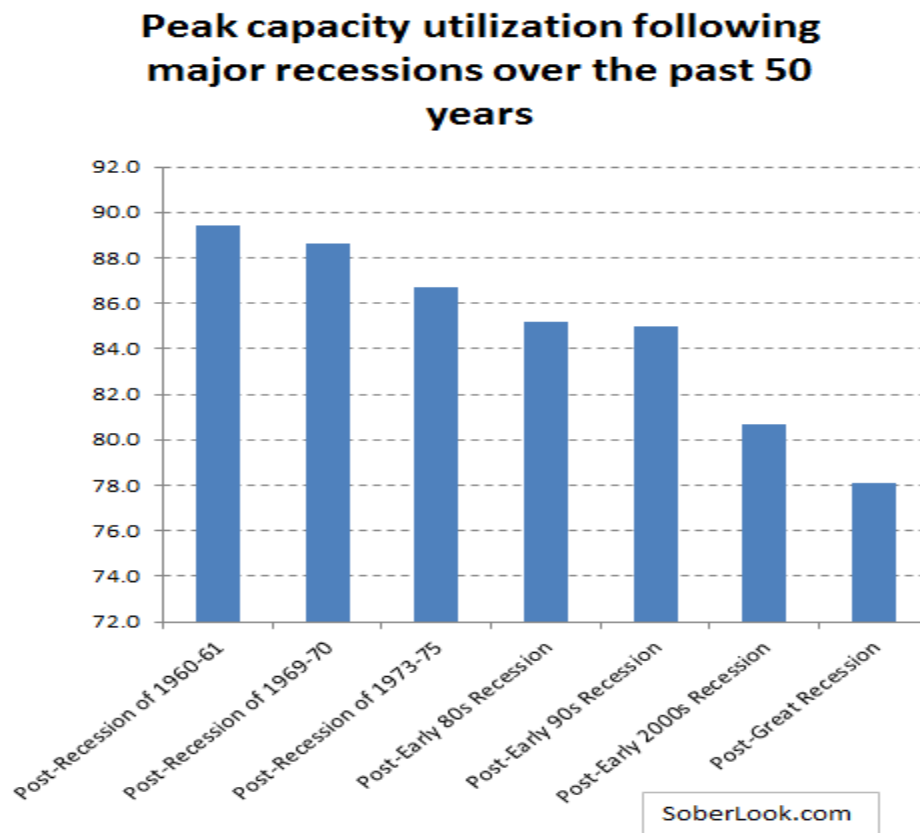
rise in inequality during the 2000s contributed to the debt-fueled housing bubble and financial crisis because in his words, “one consequence of increasing inequality was virtual stagnation of the purchasing power of the lower and middle classes in the United States, which inevitably made it more likely that modest households would take on debt, especially since unscrupulous banks and financial intermediaries, freed from regulation and eager to earn good yields on the enormous savings [read economic surplus] injected into the system by the well-to-do, offered credit on increasingly generous terms” (p. 297).

Meanwhile, non-financial corporations, unable to find an effective demand for their prodigious output, as reflected in a long-run decline in peak capacity utilization in U.S. industry after each major recession (see Figure 2 below), have, according to Foster and Magdoff, instead, redirected their vast accumulated economic surplus into financial speculation where “the financial sector seemed to generate unlimited types of financial products [e.g., mortgage-backed securities, CDOs, credit default swaps, etc] designed to make use of this money capital” (p. 132).⁵ As proof of this turn of events, Foster and Magdoff argue that there has been a dramatic decoupling of profits from net investment as a percentage of GDP in recent years, “with net private nonresidential fixed investment as a share of national income falling over the [1980-2005] period, even while profits as a share of GDP approached a level not seen since the late 1960s/early 1970s” (p. 132). In their view, the financialization of the U.S. economy is a natural response of advanced monopolistic capitalism to the stagnation of the real economy resulting from the lack of effective demand by *both* workers and capitalists; it is a necessary (and logical) outcome of a sophisticated and nuanced version of the underconsumptionist perspective

⁵ Foster and Magdoff (2009) report evidence (obtained from the Economic Report of the President, 2008, Table B-54) which shows a long-run decline of industrial capacity utilization from around 85.5 percent in 1975-75 to 78.1 percent in 2007 (p. 132).

advanced first by Baran and Sweezy (1966) in their seminal work and also, one may add, to be found in Marx's analysis in Vols. II and III (see Ramirez 1990, pp. 161-62). In other words, for

Figure 2. Industrial Capacity Utilization for the United States.



Foster and Magdoff [and Palley], the financialization of the U.S. economy represents a structural shift in Marx's original formula for capital from "M (money)-C (commodities)-M' (original money plus surplus value), in which commodities [including producer goods] were central to the production of profits—to a system increasingly geared to the circuit of money capital alone, M-M', in which money simply begets more money with no relation to production" (p. 133).

III. The Turnover Period of Capital.

The full importance of the role played by credit in the Marxian reproduction scheme cannot be understood unless the reader realizes from the outset that the turnover period of total money-capital comprises *both* the time of production of surplus-value and the time of circulation of commodities, including labour-power (L) and means of production (MP). In Marx's notation, the circuit of money capital is: $M—C (L \& MP) \dots P \dots C'—M'$, where M and C denotes money and commodities, respectively, and the dots indicate that the process of circulation is interrupted by the production of surplus-value; “and C' and M' designates C and M increased by surplus-value” (see Marx, 1885, Vol. II, p. 23). The whole point of capitalist production is to continuously reproduce and expand the circuit of capital-value in the form of money to such a degree that “...The process of production appears merely as an unavoidable intermediate link, as a necessary evil for the sake of money-making” (*Ibid.*, p.56). It should be emphasized that it is the entire continuous, repeating, and expanding circuit of money-capital that defines capital-value; in other words, capital is a *process* and not a thing embodied in particular use-values such as tools, machinery, and equipment (in the manner in which the present-day economics profession treats the concept). Only if these use-values (including money) are used or function in a manner in which they generate surplus-value through the exploitation of labour-power (the capacity to work)--during the labour process--are they denoted as capital-values or money-capital; the latter term is consistent with the way in which most business people use the term “money” when it is intended to make more money.

Marx, to his credit [no pun intended], devoted the better part of Vol. II of *Capital* to analyzing the various metamorphoses of capital and their individual circuits (e.g., the circuits of productive

and commodity capital), and although it would take us too far afield to discuss them in any depth in this paper, it is important to note that he believed that with the development of capitalism both the time of production and circulation would be shortened significantly. For example, he correctly observes in Chp. XIII of Vol. II that the time of production is--due to interruptions in production and physical and chemical changes--inherently longer than the actual working time (labour-process) during which surplus-value is actually created or produced; anything, therefore, that decreases the time of production, such as investments in new plant and machinery (fixed capital) as well as technical and chemical improvements, will *ceteris paribus* shorten the turnover period of capital, thus boosting the creation of surplus-value and profit. Insofar as the time of circulation is concerned, he contends that when capital-value is tied up in the form of money-capital or commodity-capital, the length of the turnover period is lengthened and the creation of surplus-value and profit is thereby reduced (since it takes place only in the sphere of production, more precisely, the labour-process). Improvements in transportation and communication, as well as any institutional innovations that reduce the time and labour required to buy and sell commodities, such as the expanding use of credit in the form of bills of exchange bank notes, and loan advances (as discussed above), will shorten the turnover period of capital and boost the creation of surplus-value, *ceteris paribus* (see Marx, 1885, Vol. II, Chps. VI and XIV).

Engels, who, except for the title, edited all of Chp. IV, Vol. III of *Capital*, observes that the turnover period of capital has been significantly reduced via improvements in the “methods of producing steel iron and steel, such as the processes of Bessemer, Siemens,...etc., [which have] cut to a minimum at relatively small costs the formerly arduous processes. The making of alizarin, a red dye-stuff extracted from existing coal-tar, requires but a few weeks, and this by

means of already existing coal-tar dye-producing installations, to yield the same results which formerly required years” (p. 71). Similarly, the rising productivity of labour has reduced the time during which commodities are in transit via dramatic improvements in means of communication and transportation. He notes that, “The last fifty years have brought about a revolution in this field, comparable only with the industrial revolution...On land the macadamized road has been displaced by the railway, on sea the slow and irregular sailing vessel by the rapid and dependable steamboat...and the entire globe is girdled by telegraph wires. The Suez Canal has fully opened East Asia... to steamer traffic. The time of circulation of a shipment of commodities to East Asia, at least twelve months in 1847, has now been reduced to almost as many weeks” (Ibid).

More precisely, if we have two capitals (A and B) with the same value composition (c/v), equal rates of surplus-value, and equal working-days, then “the rate of profit of the two capitals are related inversely as their period of turnover” (Ibid., p. 72). A numerical example, borrowed from Engels’ exposition in Chp. IV, Vol.III will elucidate this important idea. Suppose that capital A is composed of a value of $80c + 20v = 100C$, and rotates twice per year with a rate of surplus value of 100 percent. At the end on year, the total value produced is : $160c + 40v + 40$, and the profit rate over the advanced capital, $100C$ --not the turned-over capital of 200 --is 40 percent. Capital B, on the other hand, has the same rate of surplus value and value composition as capital A, viz., $160c + 40v = 200 C$, but is turned over only once per year, and yields a profit rate over the advanced capital of only 20 percent, half as much as capital A. The analysis can also be easily modified to include fixed capital so that only a portion of the existing fixed (e.g., machinery, warehouses) constant capital (as opposed to circulating constant capital), say 10

percent, is transferred to the commodities produced in any given number of turnovers of capital (see Vol. II, pp. 293-4).⁶

Engels, through his meticulous editing of the unfinished and almost illegible scattered manuscripts left behind by Marx, is also more precise and consistent than Marx was in Vol. III—Marx actually wrote Vol. III before Vol. II-- in laying out algebraically an alternative formulation to Marx's formula for the rate of profit below,

$$p' = s'v/(c + v) \quad (1)$$

where p' is the rate of profit, s' the rate of surplus value (s/v), and v in the numerator is the variable capital advanced in each turnover (a flow variable), while the v in the denominator is variable capital *initially* advanced (a stock variable). In this formulation, the two v 's are only equal if the turnover time is precisely one year and Marx in Vol. III was not always altogether clear or consistent about this. Engels' more precise formulation for the profit rate, based on Marx's analysis of the annual rate of surplus-value in Chp. XVI, Vol. II of *Capital*, is given in Chp. IV, Vol. III, p. 74 as follows,

$$p' = s'nv/C \quad (2)$$

where n refers to the number of turnovers and C is the total stock of capital initially advanced, *including* fixed capital. The product $s'nv$ represents the surplus-value produced during a given

⁶ It is possible for a significant "increase in the total outlay [of fixed] capital from the installation of expensive machinery" to raise the value of the advanced capital and thus lead to a fall in the profit rate which is calculated on the total capital [see Chp. 4, Vol. III, p p 70-71]. However, with the advance of capitalism, there is also a considerable increase in the social productivity of labour in both the consumer and capitals goods' industries. This latter development could conceivably cheapen the value of the advanced capital despite the massive increase in its material (physical) elements. In an important respect, this counter-argument can also be levied against Marx's contention that "the compensation of the reduced number of labourers [from 24 to 2 in his famous example] by intensifying the degree of exploitation has certain insurmountable limits It may... check the fall in the rate of profit, but cannot prevent it altogether" (Vol. III, p. 247). Why? Because the capital advanced to employ two workers may be the same or smaller than that required for 24 workers. The capital-value of $(c + v)$ in the denominator of the rate of profit formula, p' , could remain the same if the fall in v is just offset by the rise in c , or, actually decrease if both $(c + v)$ fall due to a substantial cheapening of the material elements of constant capital. The latter is aided and abetted by the expanding role of foreign trade in the evolution of capitalist development which, according to Marx, further cheapens the material elements of c and v "...[and] tends to raise the rate of profit by increasing the rate of surplus-value and lowering the value of constant capital "(see Vol. III, p. 237).

time period (year), and, *ceteris paribus*, the greater the number of turnovers, the greater the amount of surplus-value generated per year and thus the higher the profit rate. By comparison, in Marx's formulation given in Chp. XVI, Vol. II of *Capital*, the annual rate of surplus-value produced during a given time period is calculated relative to the variable capital initially advanced, *viz.*, $S' = s'nv/v$, and Marx observes that "Only when n is equal to 1, that is, when the variable capital initially advanced is turned over once a year, and hence equal to the [variable] capital employed or turned over during a year, the annual rate of surplus-value [S'] is equal to its real rate [s']" (Vol. II, p. 305). It is clear that had Marx lived to re-write Vol. III, he would have adopted Engels' more precise formulation of the profit rate which is consistent with his own analysis in Vol. II for the annual rate of surplus-value (for further detail, see Ramirez 2014).

IV. Conclusion.

This paper has discussed Marx's important and, at times, prophetic views on the role of credit in the development of advanced capitalism, particularly its part in expediting the realization of surplus-value as well as its changing and ultimately destabilizing effect on the industrial (business) cycle. The discussion also highlighted Marx's relatively neglected but highly important analysis of the separation of ownership from management in the advanced capitalism of his day, England, and its modern-day implications for excessive risk-taking and debt-fuelled speculation up until the eve of the crash. The analysis further showed that Marx did not remain content to just describe the pernicious effects of excessive credit, debt, and speculation in an advanced capitalist economy such as England, but he also tried to identify both supply-side (falling rate of profit) and demand-side (underconsumptionist tendencies) factors that set up real barriers and limits to the further expansion and reproduction of industrial capital over the course

of the business cycle. Moreover, Marx's analysis was not just confined to any one nation, but, far ahead of his contemporaries, he viewed the business cycle and the recurring crises as a world-market phenomenon and outlined how contagion took place in the commercially advanced nations of his day. Next, following the lead of progressive and radical economists Palley, Foster, and Magdoff, and Shiller, the paper draws important parallels between Marx's insights into the business cycle and crisis theory and the events leading up to the onset and aftermath of the debt-fueled subprime debacle of 2007-2008 that severely and unexpectedly buffeted the mature capitalist economies of the world. Finally, the paper discusses how the expanding role of credit in the course of capitalist development acts as a powerful but contradictory lever countering the law of the declining falling rate of profit; this is an important and neglected countering factor to the so-called law of the falling rate of profit, viz., the effect of the turnover of total capital—comprising both its production and circulation periods. It is shown that Marx did not explicitly include the turnover of total capital as a counteracting factor in his famous Chp. XIV of Vol. III of *Capital* where he discusses other prominent offsetting forces; nor, for that matter, did Engels who failed to include an explanatory note in Chp. XIV when editing the work for publication, despite his own thorough discussion of the turnover period in Chp. IV of Vol. III.

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