



Financialisation and the limits of circuit theory

Finance and Society

2020, 6(1): 1-18

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10.2218/finsoc.v6i1.4405



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Abstract

The theory of the monetary circuit aims to provide a highly stylised account of the workings of a modern monetary production economy. While there may have been a time when it succeeded in this aim, that time is over. The key development in the monetary sphere of capitalism over recent decades is the advent of financialisation, a phenomenon that circuit theory cannot explain other than by omitting some of its most important characterising features while indiscriminately dismissing those features that it does address as dysfunctional outgrowths. The fact is that a theory that has the aggregate monetary circuit as its methodological framework and whose sole focus is on the financing needs of firms is simply not flexible enough to accommodate the new reality of financialisation. To make that accommodation what is needed is a framework that is sufficiently elastic as to be able to encompass a broad range of socio-economic factors, most notably those associated with demographic change, as co-drivers of financialisation. This article argues that a framework based on Marx's commodity principle meets this requirement.

Keywords

Financialisation, circuit theory, demographic change, Marx's commodity principle

Introduction

It can happen that the congruence between an economic theory and economic reality at one point in capitalism's history abruptly gives way to incongruence at a later point in that history following the emergence of new phenomena. Two interpretations of such an occurrence are possible. The first is to lay the blame at the door of the phenomena in that they can be said to represent dysfunctional and thus transient aspects of capitalism's development. The second interpretation is to lay the blame at the door of the theory in that it can be said to have been rendered obsolete by the new phenomena. What is not possible is to advance both

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interpretations simultaneously, that is, to maintain that the economic theory in question continues to be valid even while acknowledging that the new phenomena are entirely in keeping with capitalism's underlying logic. It is the central thesis of this article that just such a conundrum characterises the relation between the theory of the monetary circuit on the one hand and the reality of financialisation on the other.

Simply put, the financialisation of today's capitalist economy signifies the growth of financial securities relative to the underlying productive sector. When the reality was that the securities markets were comparatively small, circuit theory had little difficulty in accommodating that reality in its idealisation of the triangular relations linking banks, firms and households: the securities markets simply constituted an auxiliary space where firms sold shares to recoup the money from households not spent on consumption, thus enabling the former to repay their debt to banks.

By contrast, circuit theory does have difficulty in accommodating the new reality of financialisation. This is because the growth in the scale of securities markets cannot be reconciled with firms' production motive, which in the theory is that which sets in motion the whole monetary circuit process because of firms' need to finance investments and pay wages through bank borrowing. To get around the problem of excessive financial scale, circuit theorists have tried two tactics: one is to confront the problem head on, but dismiss it as a dysfunctional outgrowth of contemporary capitalism; the other is to incorporate into the theory certain new features of the securities markets while leaving out the most important new feature of all, namely, that of scale. Neither tactic works. If one is to explain financialisation, one has to explain why the world's securities markets have grown to a size where they now completely dominate the world's material output base on which they rest. At the same time, given that the majority of financial securities are held by organisations that are not ordinarily identified with potentially dysfunctional activities such as short-term speculation, it follows that one has to explain how the huge scale of the securities markets is necessary to the functioning of capitalism in its current stage of development. In short, to explain financialisation one has to explain the *functionality of financial scale*. Such an explanation requires an analytical apparatus whose scope and reach is sufficiently elastic as to extend beyond a narrow focus on the financing needs of production. This article will argue that Marx's commodity principle fits this requirement.

The article is structured as follows. Section one provides a brief outline of circuit theory and of its first approach to financialisation: *i.e.*, financial scale as dysfunctional. Section two briefly discusses circuit theorists' second approach to financialisation: *i.e.*, financial scale ignored. Section three provides data indicating the importance of demographic change to the financialisation process. Section four provides an account of financialisation based on the extension of Marx's commodity principle to financial securities, and section five concludes.

Circuit theory: First approach to financialisation

The theory of the monetary circuit as developed by heterodox economists drawn principally from Italy and France aims to provide a highly stylised account of the workings of a modern production economy.¹ The theory eschews any form of methodological reductionism in favour of an aggregative approach that focuses on the triangular relations linking together three major sectors of the economy: banks, firms, and households. Given the essentiality of money to the modern economy and given that banks are the dominant suppliers of money, one can see why circuit theorists assign primacy to the bank-based credit relation in the triangular relational chain. Circuit theory has a distinctive take on a number of other subject areas

including those of income distribution, employment determination, economic stability, and monetary policy. However, its highly aggregative approach to the study of the economic system and its prioritisation of the credit relation in particular are the only characterising features of the theory that really matter for the present investigation into how it approaches the subject of financialisation. The fundamental question in this regard is this: does circuit theory provide as robust an account of today's 'financialised' capitalism as it did of yesterday's 'industrialised' capitalism? To answer this question, we look at a first way in which circuit theorists adapted their theory to explain financialisation, taking as our example a 2013 article by Mario Seccareccia.²

Figure 1 reproduces Seccareccia's illustration of the canonical model of the monetary circuit in the pre-financialisation era. The key links in the circuit are as follows: (1) the 'initial finance' or 'efflux' stage of the circuit is set in motion when banks lend money to firms [M] for the purpose of paying wages [Y] to households (the payment of wages to bank workers [Y_b] plus interest on deposits [iM] also constitute part of the efflux stage); (2) households allocate income between consumption [(1-s)Y] and savings [S], with [s] being the average propensity to save; and (3), while household consumption expenditure allows firms to repay bank loans, the 'final finance' or 'reflux' stage of the circuit will only be closed if firms can divert household savings away from bank deposits and into the securities [B] issued by the former.

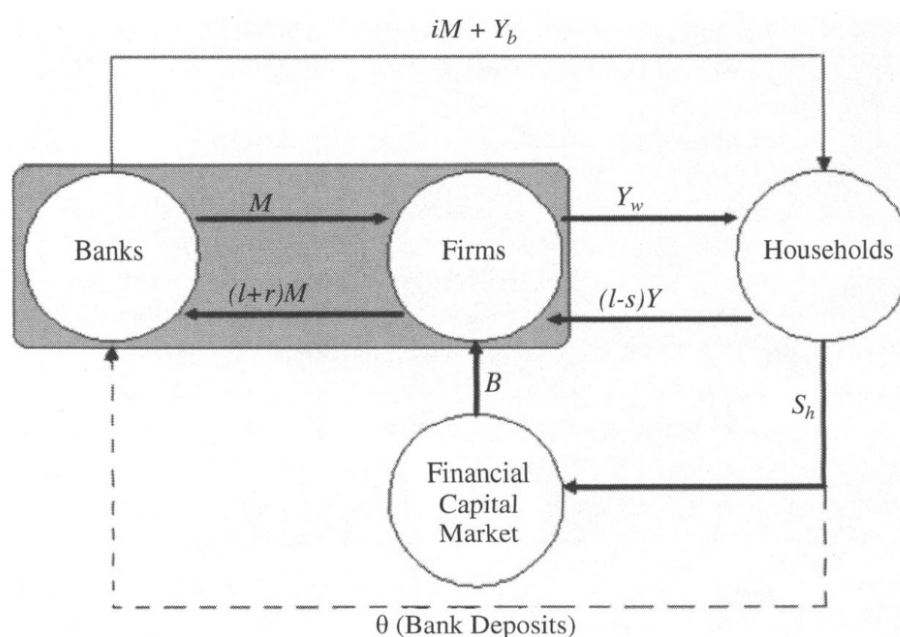


Figure 1. Traditional role of banks in the pre-financialisation era. *Source:* Seccareccia (2013).

Although one can disagree with this interpretation of the role of the securities markets in the pre-financialisation era, one cannot deny that it may have some plausibility: these markets are presented as small and peripheral because their primary purpose is not to raise funds for production, which is the province of the firm-bank nexus, but to recoup the money spent on wages, while the passivity of these markets is put down to the fact that the main buyers of securities are households who have a vested interest in firms' long term investment plans. What has far less plausibility is the interpretation of the role of the securities markets in the financialisation era.

Figure 2 below reproduces Seccareccia's illustration of the monetary circuit in the new era. The financial markets are now depicted as having the central dominant position in the circuit, first because firms, faced with growing profits and declining investment opportunities, are directing substantial proportions of these profits into share buy-backs and purchases of other securities, and, second, because the banks, eager to exploit the opportunities for boosting their own profits, are feeding firms' demand for securities through sales of securitised household mortgage and other credit loans and through sales of derivatives.

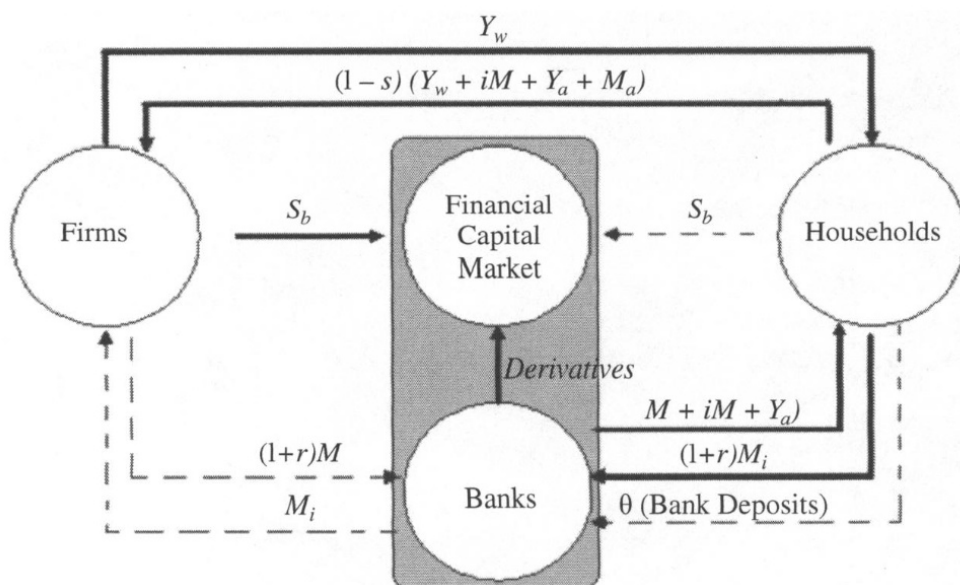


Figure 2. Strategic role of banks during the financialisation era. Source: Seccareccia (2013).

The monetary circuit under financialisation still involves the same three sectors, firms, banks, and households, and it still essentially consists of a chain of counterparty relations. The difference is that both the content of this relational chain and its underlying motivational force are now the exact opposite of what they once were: firms are now net lenders rather than net borrowers; households are now net borrowers rather than net lenders, and banks, while still occupying a central, strategic role, do so less as lenders of money to firms to finance their production than as sellers of derivatives and other financial products to accommodate firms' speculative excesses. As Seccareccia (2013: 186) puts it, summing up what he perceives to be the essence of financialisation:

Owing to the corporate sector's position as net lender, rentier speculative behaviour (that Keynes had so vehemently criticised in *The General Theory*) has slowly prevailed in the financial sector and has probably been the largest impetus in pushing this financialisation frenzy into hyper drive over the last decade. It is, therefore, in large part due to the growing proportion of corporate saving that has been directed towards speculative ventures in a way that household and even, say, group pension funds would be less likely to do, because of legal restrictions imposed on portfolio managers regarding the risk structure of their portfolio of pension assets.

This characterisation of financialisation and of its driving forces is inaccurate. The reason is not that the particular facts produced in support of this characterisation are questionable so much as that other important facts concerning both the supply and demand sides of the financial securities markets have been omitted. Most notable amongst the omissions on the supply side are the following: First, while it is true that there has been a sharp rise in share buy-backs over the past two decades, the corporate sector taken as a whole continues to be a net borrower of funds as attested by the continuing growth of the corporate bond markets. Second, while the volume of asset-backed securities created by the banking sector has grown in recent years, this still remains small when compared with the volumes of outstanding financial bonds, that is, bonds issued by commercial banks for reasons to be explained below. Third, and this is the most conspicuous omission, there is no reference to the growing importance of governments as suppliers of bonds. Turning to the demand side, firms are not among the most important buyers of equity and debt securities. Rather, the top group of security buyers are the institutional asset managers: the pension and mutual funds, and the insurance companies.

The upshot of these observations is that while Seccareccia is correct in saying that the current scale of these markets is excessive when viewed from the standpoint of the production needs of firms, he is incorrect in fully attributing the excess in scale to “rentier speculative behaviour” (2013: 186). This is not to say that there is no such behaviour in the securities and other financial markets. Hedge funds and other speculative vehicles, funded in large part by the world’s super rich individuals, do indeed play a highly active, and often highly destabilising, role in the financial markets. Rather, it is to say that speculative behaviour cannot be the overall characterising feature of the current scale of financial market activity because much of that activity is conducted by organisations that are neither rentiers nor speculators.

Circuit theory: Second approach to financialisation

We now turn to circuit theorists’ alternative approach to circumventing the problem of the functionality of financial scale, which is to accept the functionality of financialisation but ignore the issue of scale. A good example of this can be found in Malcolm Sawyer’s 2016 article, “Grazianis’ analysis of the circuit: Does it extend to the era of financialisation?” Sawyer has other articles that attempt to accommodate financialisation within the circuit theory framework (Passarella and Sawyer, 2014; Sawyer and Passarella, 2015), but it is this 2016 article that, as signalled by its title, puts the question of viability in its most direct form.

According to Sawyer (2016: 303), the article “presents a development of a circuit analysis in which some features of financialisation are incorporated”. Before incorporating these features, he summarises the central aim of circuit theory and the reason behind its distinctive logical framework. The aim is to investigate the financial requirements for production to occur. As Sawyer (2016: 306) states: “The circuitist approach is indeed a theory of *monetary production*: it focuses on the financing requirements for production to occur, for firms to acquire materials and labour”. The reason for developing a framework in which firms are linked together with banks and households in a circular chain of relations is that both of the latter sectors are key to the financing of production: banks in that they are the providers of ‘initial finance’, i.e., of bank loans to firms that enable production to be undertaken, and households in that they are instrumental to the ‘final finance’ phase of the circuit, i.e., firms need to collect liquidity from the sale of commodities or securities to households in order to repay their debt to banks.

When approaching the question as to whether circuit theory can extend to financialisation, Sawyer (2016: 304) insists “that the central feature of the circuitist analysis based on the distinction between initial finance and final finance remains in place” and all that is needed are certain amendments “which relate to the direction of flow of funds between the three sectors (banks, firms and households” and which involve bringing into the analysis “investment banks, savings banks and non-bank financial institutions (NBFIs, now often put under the label of ‘shadow banks’)”.³ Figure 3 below illustrates circuit analysis as amended to extend to financialisation. As shown in the figure, the amendments to circuit theory relate primarily to the final finance phase of the monetary circuit. Commercial banks are still the key providers of initial finance, but where previously in the simple circuit firms would sell securities directly to households to collect the liquidity needed to discharge their debts, in the modified and more complex circuit firms sell securities to two sets of financial intermediaries, savings and investment banks on the one hand and NBFIs on the other, who in turn collect savings from households through the sale of their various investment services.

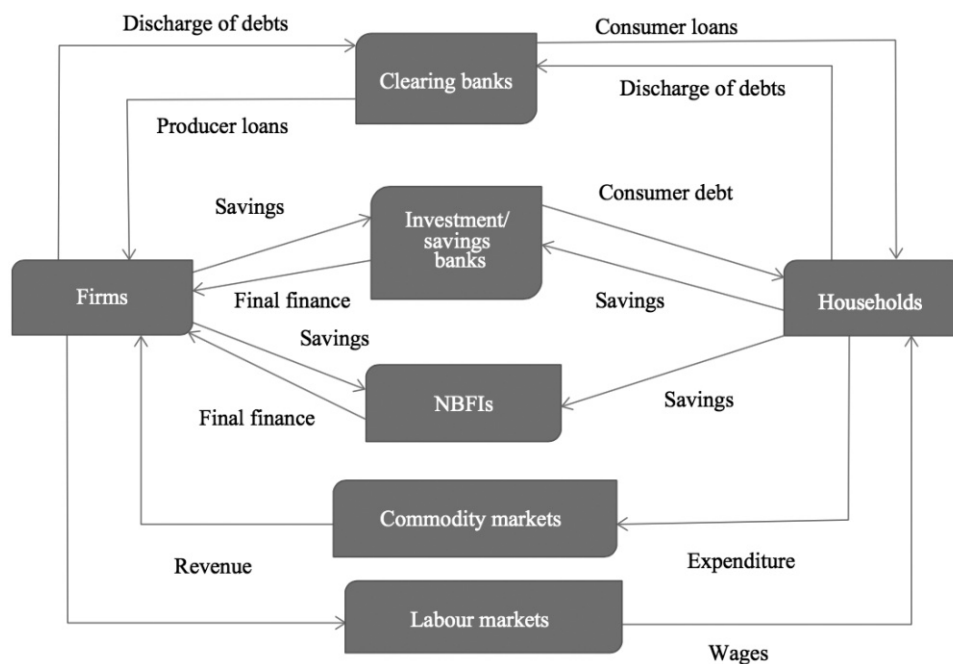


Figure 3. A more complex circuit. Source: Sawyer (2016).

On the surface there would appear to be nothing wrong with the incorporation of savings and investment banks and NBFIs inside the monetary circuit, thus creating a more complex circuit. These latter institutions are, after all, financial intermediaries that exist to facilitate, as Sawyer (2016: 312) states: “two related roles: one is the matching of savings with the volume of new financial assets (which would include new equity, savings, deposits), and the other, at the micro level, is the matching of the demand to hold different financial assets with the willingness of the financial sector and firms to issue different financial assets”. That the incorporation of these financial institutions inside the circuit is essentially wrong, however, becomes evident the moment one seriously addresses the current scale of the financial securities markets.

Sawyer (2016: 312) briefly refers to the “volume of new financial assets”, but that is all that it is: a brief reference. Earlier in the article, he draws attention to the fact that the

financial assets now held by UK households is large compared to UK GDP, after which he then states: “This level of assets and liabilities (and their general growth) is another reflection of a general tendency for financial assets and financial liabilities to grow faster than GDP and the capital stock” (Sawyer, 2016: 310). The statement that there is “a general tendency for financial assets and financial liabilities to grow faster than GDP” is correct but, once again, that is all that it is: a statement. There is no elaboration, no explanation as to the reasons why financial securities volumes are growing faster than GDP and no explanation of the composition of these growing volumes of financial securities. These aspects of financial scale are omitted from discussion because they simply cannot be reconciled with the financing needs of production, which, as Sawyer reminds us, is the central focus of attention in circuitist analysis. The securities issued by corporations are certainly related, one way or another, to the financing of production. However, this is not the case as regards the securities issued by governments and a significant proportion of the securities issued by banks. The recent sharp growth of these particular segments of the global securities markets have more connection with the exigencies of demographic change than with the funding needs of corporations, as will now be explained.

The importance of demographic change as a driver of financialisation

Financialisation signifies the growing size of the financial sector relative to the real sector but, having said this, not all financial sub-sectors have grown at the same rate.

	1980	1990	1995	2000	2005	2010	2012
World Deposits (US\$ trillion)	9	23	26	35	42	57	62
World GDP (US\$ trillion)	11	22	30	33	46	64	72

Table 1. Growth of world deposits and world GDP. *Source:* Kaltenbrunner and Lysandrou (2017).

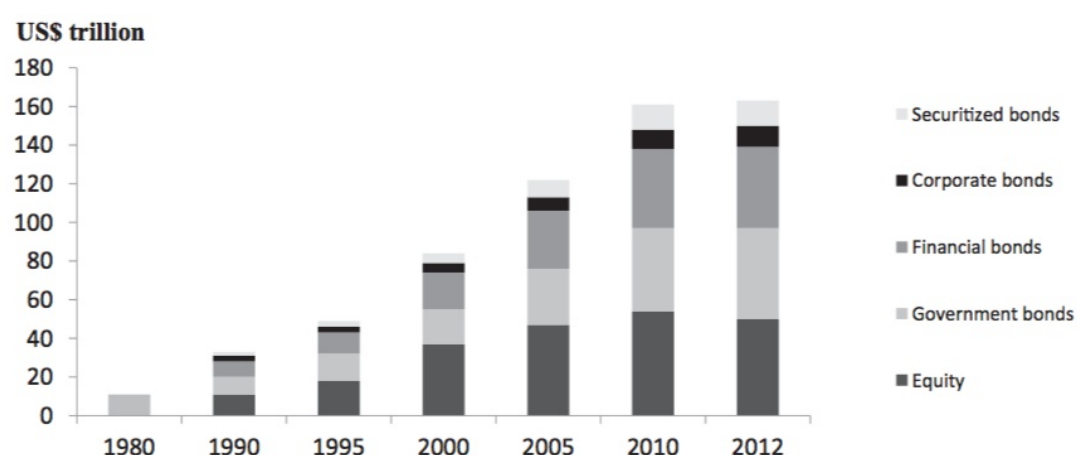


Figure 4. Growth of world securities markets. *Source:* Kaltenbrunner and Lysandrou (2017).

The global amounts of bank deposit money on the one side and of global equity stocks on the other have grown more or less in line with the growth of world GDP. By contrast, global bond volumes have grown at an appreciably higher rate so that where the aggregate value of these volumes amounted to less than half of that of world GDP in 1980, they came to match world

GDP by 2000 and now average about one and a quarter times the size of world GDP (thus in 2018, global bonds outstanding amounted to about \$103 trillion as compared with world GDP of \$86 trillion for that year [SIFMA, 2019]). Although this bond market growth has been a worldwide development, the overwhelming proportion of outstanding bond volumes continue to be accounted for by the US and other advanced market economies (AMEs). Thus in 2018 these economies accounted for 85% of the world total of \$103 trillion, the US on its own accounting for 40%, while all of the emerging market economies (EMEs) accounted for the remaining 15%. It is this heavily skewed geographical breakdown of global bond volumes, coupled with the fact that it is the AME governments and banks that continue to be the leading suppliers of bonds, which indicates the importance of a broad range of socio-economic related factors, most notably those associated with demographic change, as contributory drivers of financialisation.

As regards demography, what sets the AMEs apart is their low and in some cases even negative rate of population growth (which contrasts with the high rate of population growth registered in most of the world's EMEs) combined with a high rate of population ageing. Thus, for example, the median age of the population in North America and Western Europe rose from 32 in 1980 to 41 in 2010, while the median age in Africa over that same period only rose from 18 to 20 (UN DESA 2019). This combination has inevitably led to a trend rise in old-age dependency ratios across the AMEs (defined as the number of individuals aged over 65 per 100 individuals aged between 20 and 64). Thus, according to recent OECD estimates the dependency ratio across all OECD countries roughly doubled from 13.9 in 1950 to 27.9 by 2015 and is expected to reach 35.2 by 2025.⁴ Closely correlated with population ageing and the rise in old-age dependency ratios over recent decades has been the rise in government social spending as a percentage of GDP (from an average percentage share of just 8% in 1960, that share had risen to an average of 17% across the OECD countries by 1990 and to an average of 20% in 2018),⁵ and as a percentage share of total government expenditure (the average share for the EU-28 countries in 2018 was 40%, but closer to 50% for the UK and other Northern European countries, a figure similar to that for the US) with pensions and health care provision being the two largest components of government social spending (Ortiz-Ospina and Roser, 2016; OECD, 2019a; Kenworthy, 2019).

Faced with rising pension and healthcare costs in addition to other spending commitments, while at the same constrained from increasing tax revenues at a commensurable rate due to the falling percentage numbers of working taxpayers, AME governments have had to increase their rate of bond issuance to make good their budgetary gaps. Government dependence on the bond markets is not new, but where prior to 1980 governments would typically issue small amounts of securities or, if issuing large amounts would only do so as a temporary measure to confront a particular emergency or to fund a particular project, their dependence on the bond markets has since then become both significant and permanent, with the need to cope with the exigencies of demographic change being a key factor in this development. The AME commercial banking sector has faced a similar predicament. Commercial banks have traditionally relied primarily on household deposits to fund their loans to businesses and households, but the fact that households, who are living longer after retirement, are increasingly shifting their retirement savings out of bank deposits and into financial market investments in the search for yield means that banks have had to considerably increase their issuance of long term bonds and short term money market instruments to fill the gaps in the liability side of their balance sheets.

This sharp growth in the rate of government and bank bond issuance has required investors with a large enough absorption capacity on the demand side of the bond markets.

There are now several types of such large investors including central banks, sovereign wealth funds, and high net worth individuals, but the biggest group when taken collectively are the institutional asset managers, the pension and mutual funds and the insurance companies. Once a small cottage industry catering for the wealthy, institutional asset management has become in many countries a mass industry catering for the welfare needs of large sections of the population. With this growth in scale has come a corresponding growth in the need for investable assets, value containers into which clients' monies can be poured and from which monies can be extracted to pay clients. Although there are many other types of assets that serve as investables, including real estate, gold, and other natural commodities, financial securities necessarily comprise the majority proportion of institutional asset holdings because what sets them apart from other asset classes is their ability to combine a *value storage* property with the properties of *liquidity* (i.e., they can be converted into cash with minimal impact on price) and *tradability* (i.e., they can be circulated without restriction amongst investors). These latter two properties are important to institutional asset managers because they all need to frequently engage in rebalancing trades to keep portfolios to a specified investment rule or target while at the same accepting fresh cash inflows from clients or disbursing cash to clients. In addition to liquidity and tradability, the finite maturity of bonds is another property that makes them particularly attractive to insurance companies and pension funds, who have fairly predictable amounts of liabilities periodically falling due and who thus need assets containing equivalent amounts of value to match those liabilities.

Despite the fact that institutional asset management is now undergoing rapid growth in all regions of the world, the bulk of assets under management continues to be concentrated in the US and Western Europe.⁶ The transformation of asset management into a mass industry first occurred in these countries in the 1970s and 1980s, the major catalyst behind this transformation being the governmental shift away from universal forms of welfare provision towards more selective forms that concentrate provision on the poorest and most vulnerable sections of the population. It is because increasing numbers of middle-income households in these countries are now forced to make their own pension and healthcare arrangements, in addition to any expectations that they may have of a longer post-retirement life, that explains why they are moving their savings funds out of bank deposits and into securities in the search for higher yield, while the fact that most of these households remain risk averse explains why savings are typically channelled into securities via professional asset managers. Having helped to create a large body of demand for bonds in addition to other securities, AME governments have been more than ready to tap into this demand. The tightening of monetary policy from about 1980 onwards ties in with this development because if inflation targeting is the major aim of this monetary tightening, a major reason for containing inflation is to help contain the interest costs on rising government borrowing volumes.

In helping to boost the asset management industry, AME governments have helped to create a strong and stable demand not only for their own bonds and for those of the commercial banks but also for the bonds issued by the non-bank corporate sector. Although this sector continues to account for a smaller percentage share of global bond supplies as compared with those of the government and banking sectors, the overall size of the non-bank corporate bond market has nevertheless increased significantly in recent decades. In an era of rapid technological change and thus ever intensifying competition, business corporations must have constant access to large external sources of funds to finance research and product development, or to finance mergers and acquisitions, or to finance any of the other measures needed to ensure their survival. Corporations have always tended to rely on a mix of debt and equity forms of external finance to supplement their funding needs, in order to avoid an

excessive concentration of risk on the one hand and an excessive dilution of the benefits of ownership and control on the other. What is now happening is that while the ratio of debt to equity forms of external funds raised by corporations remains fairly stable, the ratio of bank borrowing to security market forms of funding is declining. The fact that bonds are tradable in a way that bank loans are not, and thus the fact that institutional investors do not need to be compensated for loss of liquidity in the way that banks must be when they extend loans, means that large corporations are increasingly relying on the bond markets for all but very short period borrowing requirements.

To summarise, the observed volume growth of the world's securities markets since 1980, coupled with the distinctive geographical and sectoral breakdown of this volume growth, gives strong indication that broad socio-economic related factors, most notably those associated with demographic change, are as important a driving force of financial scale as are the narrower firm-related factors. Strip out the socio-economic related factors and the large size of the global securities markets in excess of corporate production needs becomes something that is difficult to explain. Only when the non-firm related factors are incorporated into an explanation of security market size can that explanation allow for the functionality of financial scale. However, this interpretation of the empirical data raises the question as to how it can be reconciled with capitalism's logic as a generically distinct economic system in which production is geared to the market rather than to self-subsistence, and in which market supplies and demands are matched through decentralised monetary exchanges rather than through a central price setting authority. In raising the bank-firm credit relation to the status of a third generic feature of capitalism, circuit theorists may not be able to give a satisfactory explanation of financialisation, but they are at least right in attempting to locate this explanation in an economic theory of capitalism. In our view, one such theory that can be adapted to the present to accommodate both the socio-economic and firm-related drivers of financialisation is Marx's theory of capitalism as a system of commodity exchange.

The extension of Marx's commodity theory to the present

Marx's analysis of the different phases of the capital circuit is usually cited as one of the major sources of inspiration for modern circuit theory (see Bellofiore, 1989; Bellofiore and Realforzo, 1997 and Bellofiore et al., 2000).⁷ While not wishing to denigrate the desire to list Marx as one of the illustrious forbears of circuit theory, it has to be pointed out that his analysis of the capital circuit is only developed in Volume II of *Capital* and thus cannot be seen to be his analytical point of departure. Marx instead begins with a disaggregated category, a single unit of analysis, the commodity. One purpose of this distinctive form of methodological reductionism is to establish a generalising insight into the capitalist economic system: to reduce the system to a single representative unit is to see across the system and identify what all its constituent parts have in common, and that is not the credit relation or any other fixed counterparty relation so much as the impersonal commodity exchange relation. Only having first established this generality of commodity exchange relations does Marx then proceed to discuss particular types of counterparty relations, beginning with the production relation in Volume I of *Capital* and subsequently the credit relation in Volume III. Indeed, even in the capital circuit analysis developed in Volume II, the capitalist-worker relation underpinning P, the productive phase of the circuit, is sandwiched between two money and commodity phases, M-C and C'-M', that are both based on impersonal exchanges.

Marx's methodological reductionism serves a further fundamental purpose, which is to allow one to see how the capitalist system evolves over time. As the distinguishing

characteristics of households, firms, and banks do not change substantially over time, it follows that any aggregative macroeconomic theory that focuses on these sectors and on their interlinking relations, such as circuit theory, runs the risk of missing any new emergent phenomena under capitalism. By contrast, Marx's reductionist commodity principle permits an understanding of emergent phenomena because what is unique about the definition of that principle is that it is at once more *exclusive* and more *inclusive* than is usual.

The exclusivity of the commodity principle is readily apparent in regard to material products. Thus, where all goods and services are usually classified as commodities on account of their materiality, this is not the case with Marx. Only those that are priced and exchanged against socially sanctioned production standards qualify as commodities, whereas those that are priced and traded on privately negotiated terms do not so qualify. This exclusivity property of the commodity principle explains the essentiality of money in Marx's commodity theory: in a decentralised production and exchange economy it is only through the functions of money that production and pricing standards are set and become binding on producers.

Conversely, the inclusivity of Marx's commodity principle lies in the fact that the principle can encompass entities other than material products. Notable amongst these, to begin with, are the capacities for production, the capacity for labour that is sold for a wage, and the capital capacity, the ability to combine human and nonhuman inputs together to produce outputs for a profit. It is in regard to the inclusivity property that the historically contingent element in Marx's commodity principle can be seen to be as important as its socially contingent element: entities may have the potential to become commoditised but it is only under specific circumstances that this potential is realised, as was the case with the labour power and capital capacities. These capacities have long had the potential to become commoditised because their deployment pre-dates the advent of industrial capitalism, but it was only with the agrarian and industrial revolutions of the eighteenth century, which enabled the formation of mass markets, that the deployment and pricing of these capacities became subject to socially sanctioned market standards.

Commodity systems in Marx's time remained restricted in two senses: in a geographical sense, in that such systems only operated in a few regions of the world, and in a categorical sense, in that these regional systems were only comprised of the labour power and capital capacities and their material outputs. Both of these restrictions have since been lifted. Following the collapse of colonialism in the mid-twentieth century and the collapse of communism at the end of that century, production for the market and against market standards is now the norm in virtually all of the world's national economies. Globalisation has been defined in many ways, but from a Marxian commodity perspective it can be defined as the globalised extension of the commodity principle along the axis of geographical space (see Figure 5). On the categorical front, the closing decades of the twentieth century also saw the further expansion of the commodity principle to encompass not only capacities and their material outputs but also equity and debt securities, an expansion that tied in with the rise of large institutional investors as the dominant investor type in the securities markets. Financialisation represents the growing size of the world's securities markets relative to the world's product markets, but from a Marxian commodity perspective, this same phenomenon can be said to represent the extension of the commodity principle along the axis of time inasmuch as its application to the financial claims on the future outputs of capacities means nothing other than the annexation of the future as an auxiliary space of economic activity. This spatialisation of the future may seem to be an impossibility, given that the future can never be known with certainty, but such a position underestimates the transformative power of the commodity principle as newly applied to securities. This will be explained below, but what must

first be addressed is the question as to why it was only in the closing decades of the twentieth century, following the rise of institutional investors, that securities became commoditised in the sense that their value storage capacity was henceforth to be determined against socially enforced standards. After all, financial securities have just as long a history of serving as stores of value for household savers as they have of serving as financing instruments for the governments and corporations issuing them. The answer to this question lies in the manifold difficulties that have to be overcome in establishing the type of standards required for the commoditisation of financial securities.

As securities have no intrinsic value, they can only acquire a tangible value storage capacity if the issuing organisations are tied to two distinct sets of behavioural standards: governance standards and production standards. Production standards are necessary for the obvious reason that without some demonstrable commitment to them on the part of security-issuing organisations, there can be no reasonable guarantee of the size and stability of the income flows against which claims are made. However, while necessary to the commoditisation of securities, production standards are not sufficient. Corporations can excel in production but decide not to distribute cash to investors for one reason or other. Similarly, governments can excel in service provision and generate tax revenues accordingly but still give a low priority to the payment of interest on bonds. For these reasons, governance standards are an additional precondition for the commoditisation of securities.

Broadly defined, the governance of an organisation concerns the way in which it conducts its affairs so as to meet the different priorities of its various stakeholders. From the standpoint of institutional investors, the question of corporate or public sector governance essentially comes down to the level of priority given to their interests as shareholders or bondholders: high priority means that there is a reasonably good guarantee that cash will be returned to them in the required amounts and at the required intervals, whereas a low priority means that there is no guarantee that cash will be returned.⁸ Thus, where compliance with production standards determines the *ability* of security-issuing organisations to return cash, compliance with governance standards determines the *readiness* to return cash. A further crucial point is that governance standards serve not only as constraints for *controlling* the behaviour of security-issuing organisations, but also as benchmarks for *comparing* that behaviour and hence for estimating the degree of risk that has to be factored into securities' prices. In the absence of such benchmarks, risk can only be calculated and priced into financial instruments on an associative and privately negotiated basis, which then makes it difficult if not impossible to trade these instruments away from their initial conditions of issuance. By contrast, it is only when the behavioural risks that are priced into securities are calculated against socially sanctioned governance benchmarks that securities then effectively become stand-alone stores of value that can be continuously traded away from the initial conditions of issuance and, as already noted, institutional investors need to engage in continuous trading for portfolio rebalancing purposes.

While production and governance standards stand on a par as preconditions for the commoditisation of financial securities, there is no corresponding parity as regards the processes by which these contrasting standards become established. The emergence of production standards is relatively straightforward in that these are perpetually altered and set in the course of market competition. The opposite is the case with governance standards because there is no straightforward process by which these standards that are key to the commoditisation of securities become socially sanctioned. They do not emerge spontaneously out of any competitive process, and nor are they enforced through hard law because there is no law that explicitly requires corporations or governments to prioritise the interests of

investors over the interests of all other groups who have a stake in their operations.⁹ Indeed, a further complication is that security-issuing organisations have strong reasons for objecting to being tied to strict behavioural rules and constraints because these can narrow down their room for manoeuvre when executing their production or service provision activities.

In view of all these difficulties, it follows that only that group of investors for whom the commoditisation of financial securities is absolutely essential to their investment function will have the motive and determination to bring into existence the type of governance infrastructure necessary to that commoditisation. That group are institutional investors, not household investors. If the prospective yields on securities compare favourably with those on other asset types, households can add financial securities to their mix of savings assets. However, if the yields on securities compare unfavourably, there is nothing stopping household investors from withdrawing their savings from securities altogether because there is nothing in their role as households that requires them to hold at all times a significant proportion of their assets in the form of financial securities. This is in sharp contrast to institutional asset managers, whose large size requires them to hold large volumes of investable assets, but also whose role as financial intermediaries requires them to hold the majority proportion of these assets in the form of financial securities.¹⁰ These are the only assets that can combine a value storage property with the properties of liquidity and portability, and they can only achieve this combination on the back of a supporting governance infrastructure.

It is here that we come to the *spatialisation of the future*, for it is at the point in capitalism's history where financial securities begin to circulate alongside material commodities as commodities in their own right that the future also becomes a space in its own right, a space that is both dependent on physical space inasmuch as this is where organisations produce the material outputs to which financial securities lay claim, and at the same time distinct from physical space inasmuch as it is a social construction that owes nothing to nature. The crux of the matter is the indispensability of the commodity principle to the value storage capacity of financial securities. Strip securities of their commodity attributes and they reduce to nothing but air. The security-issuing organisations may promise to repay the borrowed sums with interest on the expectation that their sales of products or services will generate the necessary revenues, while the investors that lend the sums expect those promises to be kept. However, in the absence of any comprehensive system of governance rules and constraints that help to reinforce any legal obligations, the promises to return cash remain just that: promises. Only when there is a comprehensive system of governance rules and constraints in place do securities acquire a certain solidity as determinate quantities of value. It is this solidity that allows us to say that the future has become spatialised, because in acquiring a secured quantitative value storage capacity that they cannot otherwise have in the absence of a supporting governance infrastructure, equities and bonds in effect become the individual building blocks from which the future is constructed as a habitable space. Devoid of matter when only existing subjectively in the minds of agents forming expectations about future possibilities and outcomes, the future now becomes a space filled with matter through the objectification of expectations about the future in the form of commodities. Uncertainty and risk are by no means eliminated because they can never be eliminated, but what a dense infrastructure of governance rules and constraints does do is to allow uncertainty and risk to be sufficiently managed and controlled so as to make the future fit for permanent occupation.

Where it is the portfolio needs of institutional investors that lead to a system of standards and constraints that constitute the infrastructure of the future as an economic space, it is the financing needs of governments, banks, and non-bank corporations that determine the mass of securities that fill that space. Given that the various behavioural rules and constraints that

security-issuing organisations must comply with are now far tighter than anything seen in the past and, as noted, restrict the degree of discretion that the latter can exercise in the course of their activities, there has to be a good reason why they are prepared to accept these rules and constraints. That reason, stripped down to essentials, is that borrowing costs can be contained even while borrowing volumes are systematically increased. The point is that the borrowing organisations not only do not have to compensate investors for loss of liquidity, but also that they are not constrained by the time scale of repayments to the same extent that they are when resorting to other forms of borrowing. Equities are undated, while bonds have finite maturities, but the maturity range of bonds is now wider than ever with 30-year, 50-year and even 100-year bonds now being acceptable to institutional investors. Thus, while substantial sums can be raised immediately at the point of sale of the securities, the repayments of these funds can be spread over long spans of time, with some being made in the near future and the rest at intermittent points into the distant future. In short, the upside to the acceptance of the restrictive conditions necessary to the commoditisation of financial securities is that the issuing organisations can thereby use the future as a repository in which to store their liabilities until redemption, just as, on the other side of the equation, institutional investors need to hold those liabilities so as to meet their own liabilities as and when they fall due.

In this way, financialisation viewed through a Marxian commodity lens is a process that is at once compatible with the logic of capitalism as a commodity exchange system and functionally necessary to this system's development in the contemporary era. It is logically compatible because the continuing growth of the securities markets relative to the underlying production base, which is the hallmark of financialisation, is entirely contingent on the application of the commodity principle to equities and bonds. It is functionally necessary because the spatialisation of the future made possible by the commoditisation of securities allows major public and private organisations to offload much of their growing financial burdens into this space. To what extent the global financial securities markets will continue to grow in scale is a question to which we do not know the answer. As securities are nothing other than claims on future material outputs, there has to be a limit to global financial market scale. However, we do not know what this limit is because history offers no lessons in this regard. What is certain is that, having just begun in recent decades and being mainly confined thus far to relatively few advanced market economies, financialisation will not only persist for some time to come but will also continue to develop as it extends its hold over many of the world's other market economies. It will do so because as these economies continue to grow and mature, and the financial pressures on their major organisations grow accordingly, so too will these organisations be forced to colonise the future so as to make it take the overspill of those financial pressures they face in the present.

Conclusion

This article has briefly presented two contrasting approaches to the contemporary financialisation process, the circuitist approach and a Marxian commodity approach. Originally developed in the 1980's, circuit theory may continue to provide useful insights into a number of economic areas. However, the area of financialisation is not one of them. Circuit theory's highly aggregative macroeconomic approach, and its concentrated focus on the financing needs of corporations in particular, prevent it from being able to accommodate the continuing growth in scale of the global financial markets other than by dismissing a substantial part of that growth as dysfunctional. As argued at the outset, an explanation of the functionality of financial scale requires an analytical apparatus whose scope is sufficiently elastic as to

include broader socio-economic factors, notably those associated with demographic change, as co-drivers of financialisation. This article has sought to show that Marx's commodity principle fits this requirement.

Acknowledgments

I would like to thank Amin Samman and two anonymous referees for their helpful comments on earlier drafts of this article, which was originally presented at the 24th Annual Post Keynesian Workshop at SOAS, University of London (Lysandrou, 2014).

Notes

1. Italian circuit theory is most closely associated with Graziani (1988; 2003). See Realforzo (2006) for a review. Parguez (1996; 2001) is an important figure in French circuit theory, but for a review of both earlier and later contributors to this branch, see Gnos (2011).
2. Given that financialisation represents one of the most important developments in the monetary sphere of capitalism over the past two decades, it is curious that so few of the leading circuit theorists have addressed this phenomenon. Graziani makes only small reference to it in his *Theory of Monetary Production* (2003), but he could be forgiven for this in light of the fact that financialisation was only then just beginning to merit serious attention from heterodox economists. There have been some heterodox economists since looking at financialisation from a circuitist standpoint, such as Sawyer (2013) and Passarella (2014), more on whom below, but of those who have been closely associated with the development and propagation of circuit theory, only Seccareccia (2013) has been prepared to confront financialisation head-on from a circuitist perspective.
3. Sawyer's bracketing together of all non-bank financial institutions under the label 'shadow banks' is clumsy on two counts. The first is that the whole point of applying the term 'shadow' to off-balance sheet entities such as special purpose entities (SPEs), structured investment vehicles (SIVs), and conduits is that these entities fall outside the scope of financial regulation. By contrast, pension funds and other institutional asset managers are subject to prudential regulation. The second count is that one of the primary functions of the shadow banks is the securitisation of bank loans, with SPEs and SIVs specialising in the creation of long-term securities such as asset backed securities (ABSs) and collateralised debt obligations (CDOs), and the conduits specialising in the creation of short-term securities and asset backed commercial paper (ABCP). By contrast, pension funds and other institutional asset managers do not engage in securitisation. For further discussion, see Lysandrou and Nesvetailova (2015) and Lysandrou and Shabani (2018).
4. Old-age dependency ratio, in OECD (2017). A further striking statistic concerns the number of individuals aged over 80 as a percentage share of the population. In 1950 less than 1% of the global population was aged over 80, whereas by 2050 that share is expected to quadruple to 4%. The more important increase, however, is expected for the OECD countries, where by 2050 some 10% of their population will be over 80 (see Colombo et al., 2011).
5. General Government Spending, OECD Data (Annual Series); OECD (2019a).
6. Although institutional asset management is now undergoing most rapid growth in the EMEs of Latin America and South East Asia, the bulk of assets under management (over 80%) continue to be concentrated in the AMEs of North America and West Europe (Haldane, 2014; EFAMA, 2017).
7. This section draws on ideas first published in Lysandrou (2016) and Lysandrou (2019).
8. According to the World Economic Forum (2019), the individual governance institutions that comprise a country's governance infrastructure (the first 'pillar' of a country's economic

competitiveness) broadly divide into two categories: the public institutions that include efficiency of legal framework, judiciary independence and reliability of police, and the private institutions that include investor protection, protection of minority shareholder interests, auditing and reporting standards, and efficacy of corporate boards. It is well established that public institutions are a key determinant of a country's business sector success: the higher their quality, the lower are the various risks of doing business. The point to be emphasised here is that for pension funds and other institutional asset managers, who need to hold diversified portfolios and are thus necessarily minority shareholders or bondholders in firms, it is the quality of the private institutions in addition to that of the public institutions that is essential to limiting the risks on their investments.

9. To quote Simon Deakin (2018: 26): "shareholder primacy ... is not so much the result of the core content of company law, but rather the cumulative impact of changes in complementary regulation of corporate governance in recent decades. The relevant changes are mostly to be found in 'soft law' codes and standards, made by financial actors themselves, principally institutional shareholders, to which governments have ceded rule-making authority".
10. Thus, according to a recent OECD report on pension funds: "In most countries, bonds and equities are the two main asset classes in which pension assets were invested at the end of 2018, accounting for more than half of all investments in 32 out of 36 OECD countries, and 39 out of 46 other reporting jurisdictions" (OECD, 2019b: 29).

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